

# Divided we fail

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I bring nearly 35 years of experience of trying to make my grasp of biomedical science useful to the astonishingly diverse population of Kentish Town in north London. And in *Mrs Dalloway*, Virginia Woolf describes one of the compensations of growing old as being ‘the power of taking hold of experience, of turning it round, slowly in the light.’<sup>1</sup> As I do this, I find myself thinking about dualism and dichotomy and whether these are destructive or synergistic.<sup>2</sup> In this Oration, I will explore divisions within the medical profession, dualistic views of the human body, divisions within society, and the implications of each of these for the future of medicine.

Writing in the programme for a production of JM Synge’s *The Playboy of the Western World*, Fintan O’Toole wrote:

*Synge’s realism lies in ... his search for an Ireland to which he could belong. He grasped, long before anyone else did, that such a country would never be the pure and simple place of the nationalist imagination, but a place defined by the interplay of opposites.*<sup>3</sup>

In perhaps somewhat the same way, throughout my career, I have been searching for a medicine to which I can belong. For me, medicine will never be a pure and simple place and I will argue that a much more complex but creative and useful place can be defined by the interplay of opposites.

## The profession

The crucial division between GPs and specialists that we see in the UK today, and which has been recreated to a greater or lesser extent around the world, is a gift of history and appeared in Britain during the years between the Apothecaries Act of 1815 and the Medical Act of 1858. At this point, specialists took control of the newly built modern hospitals. GPs were excluded and the principle of referral from GPs to hospital specialists was established. As a result:

*The physician and surgeon retained the hospital but the general practitioner retained the patient.*<sup>4</sup>

This gradually became translated into the distinction that we teach medical students:

*In hospitals diseases stay and people come and go; in general practice people stay and diseases come and go.*

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The Harveian Oration is delivered annually at the Royal College of Physicians under an indenture of William Harvey in 1656. This article is based on the 2011 oration delivered on 18 October 2011 by **Iona Heath CBE**, president of the Royal College of General Practitioners

In hospitals and universities, specialists began their ever more detailed elaboration of biomedical science, slowly constructing taxonomies, unravelling aetiologies and experimenting with various modalities of treatment. And all of this has brought enormous technical advances, increasingly effective treatments and, as a direct result, much relief of suffering.

Meanwhile, GPs remained close to their patients and communities and were able to observe the generation and progression of illness and disease within particular life contexts and stories. They saw disease affecting a succession of unique individuals and came to understand the extent to which individuality modulates disease so that no two individuals ever experience either illness or disease in the same way – a phenomenon that Tolstoy describes so well in *War and Peace*:

*... no complaint affecting a living being can ever be entirely familiar, for each living being has his own individual peculiarities and whatever his disease it must necessarily be peculiar to himself, a new and complex malady unknown to medicine ...*<sup>5</sup>

GPs developed a rich understanding of the inconsistent relationship between symptomatic illness and biomedical disease, between suffering and pathology. Then, whenever patients were referred to specialist colleagues, these patients would usually return to their GPs and recount their experiences of specialist and hospital care. As a result, as biomedicine made its advances, GPs became more and more aware of the power of scientific medicine for both good and harm; more aware of the dangers as well as the benefits and, as a direct result, they developed a cautious, parsimonious approach to investigation, diagnosis and referral. These instincts almost certainly contribute to explaining the findings of Barbara Starfield and her team at Johns Hopkins University that a strong system of primary care produces better health outcomes at lower cost and with less health inequity.<sup>6</sup> Such a system provides:

*first contact accessibility and use, identification with a regular source of care that is person (rather than disease) focused care over time, comprehensiveness of services available and provided, and coordination (when care from other places is required).*<sup>7</sup>

The division between specialists and GPs seems to have helped both to thrive in Britain, the latter to an unprecedented extent. During the second half of the 20th century the British model of GP care was adopted by many other healthcare systems. There is still substantial international interest<sup>8,9</sup> but it remains to be seen whether this interest, and the international prestige that it brings

to Britain, can survive the current political determination to reorganise care yet again and to open it up to the predations of commercial profit.

There are also worrying signs that the UK is beginning to follow the global trends that are tipping the balance of provision away from primary care and general practice towards hospitals and specialists. In 2004, for the first time ever, the number of consultant grade specialists in the NHS overtook the number of GP principals and by 2010, all GPs, including those still in training, represented only 27% of all doctors working in the NHS.<sup>10</sup> This matters because Barbara Starfield's findings suggest that a relative increase in the number of specialists leads to an increase in mortality.<sup>11</sup> Why, when specialists have knowledge, skill and immense dedication, might this be so? The problem seems to have much to do with the desire to do good with the tools and interventions available, because medicine is dangerous: occasionally brilliantly effective, often helpful, sometimes disappointing and too often damaging. In his great novel *Chance*, Joseph Conrad describes:

*the trouble of transcendental good intentions, which, though ethically valuable, I have no doubt cause often more unhappiness than the plots of the most evil tendency.*<sup>12</sup>

Surgeons provide the easiest example. As Jack Wennberg explains:

*Few surgeons are hesitant believers in the efficacy of the operations they perform, nor do they doubt their clinical necessity. Most patients are convinced that the benefits of surgery exceed the risks by a wide margin. Yet in the face of such certainty and conviction, it is remarkable how much medical opinion on the need for surgery can vary from place to place, and how much uncertainty there is concerning what the risks and benefits are and what treatments patients actually want.*<sup>13</sup>

Wennberg pays tribute to the work of J Alison Glover who, getting on for 100 years ago, drew attention to the very rapid rise in the frequency of tonsillectomy operations in the early part of the last century associated with an enormous variation in the rate of operation in different school districts:

*A child living in Bexhill would seem to enjoy climatic and cultural advantages at least equal to those of a Birkenhead child, yet he is twenty-seven times more likely to be submitted to operation.*<sup>14</sup>

Glover could find no explanation for this variation in terms of need and correctly attributed it to the beliefs and behaviour of different surgeons. As Starfield reminds us, none of this is benign: between 1931 and 1935, 424 school children in England and Wales died following tonsillectomy. In the context of general practice, each death represents a devastated family with repercussions lasting years. No wonder GPs are so clear about potential harms of medical intervention and have a tendency to be sceptical of received wisdom.

Good intentions continue to drive variations in the rates of intervention. The optimal level of, for example, caesarean sections, or spinal surgery for back pain or magnetic resonance imaging (MRI) scanning for headache, is very difficult to establish. However, not surprisingly, the number of specialists is directly associated with the number of interventions.<sup>15</sup> More specialists mean more interventions, both diagnostic<sup>16</sup> and therapeutic, especially in systems that reward interventions through payment for performance. More intervention implies both costs to the taxpayer and the possibility of profit but it is not necessarily a good thing. Furthermore, properly informed, shared decision making, facilitated by decision aids for patients, about accepting or rejecting major elective surgery, have demonstrated reductions in the more invasive surgical options by 25%, with no adverse effects on patient satisfaction or health outcomes.<sup>17</sup>

Today we see the seductive possibility of preventing disease ratcheting up good intentions and the wishful thinking which too often underpins them. As Ilana Löwy says:

*Professional and lay understanding of cancer was and continues to be shaped by the aspiration of identifying and eliminating precancerous lesions. The extraordinary viability of this idea reflects its plausibility, its ability to address well-entrenched fears, and its capacity to channel activities of multiple constituencies. It also points to risks of excessive simplification of complex phenomena.*<sup>18</sup>

The evidence is now overwhelming that cancer screening causes significant harm through overdiagnosis, and the stress and sequelae of false positives.<sup>19,20</sup> And yet this harm is caused by good doctors striving to prevent people from succumbing to horrible diseases. Doctors and patients collude in obscuring the problems of overdiagnosis, preferring to present patients as having been 'saved' from cancer. And the whole messy situation is compounded by the fact that overdiagnosis leads directly to improved survival figures, which are much appreciated by clinicians and policymakers alike, while leaving mortality rates unchanged.<sup>21</sup> This is yet another manifestation of what the epidemiologist Alvan Feinstein described as the Will Rogers phenomenon. Will Rogers (1879–1935) was an American humorist, himself from Oklahoma, who claimed that:

*When the Okies left Oklahoma and moved to California they raised the average intelligence level in both states*

and so inspired a whole genre of similar jokes referring to different geographical locations. A similar phenomenon occurs whenever the range of biomedical abnormality is extended.<sup>22</sup> As more and more people previously considered normal are included within the definition of, for example, hypertension or diabetes, outcomes appear to improve: rates of hypertensive stroke and diabetic foot amputation appear to fall. Increasing the denominator, by extending the definitions of disease and lowering the thresholds for preventive interventions, creates the illusion of improved population outcomes while there is no

difference at all in the outcomes for affected individuals. Jack Wennberg argues the urgent need to:

*grapple with the cultural bias that more care is better and that physicians must know best.*<sup>23</sup>

The simplistic diagram shown in Fig 1 attempts to illustrate the importance that GPs attach to scrutinising the border between illness and disease, shown by the grey vertical bar. Stressful life experience and the symptoms of illness are in constant flux, with symptoms of headache or abdominal pain or palpitations, to give just a few of the more common examples, being just as likely to be caused by oppressive social conditions or interpersonal strife as by anything that biomedical theory would recognise as disease.

The interface between illness and disease is where the huge undifferentiated burden of human distress and suffering meets the classifications of scientific medicine which have been developed with the aim of enabling humanity, to a still very limited extent, to understand and control the experience of illness. Illness is a perception of something being wrong, a sense of unease in the functioning of the body or mind; disease is a theoretical construct, a unit in the taxonomy of scientific medicine, which offers both the benefits and the risks of that endeavour. GPs see much more illness than disease but for specialists, the opposite is true. The demise of religious and philosophical explanations for the arbitrariness of human suffering has left the modern world with limited means of understanding and coping. Illness is one of the few valid outlets for human distress but if such illness is wrongly interpreted as disease all kinds of damage can be done. And all this is made much more difficult by the collective hubris of doctors which fuels ever-increasing public expectations of perfect health and consistent longevity, which are eagerly exploited by both journalists and politicians, and, most of all, by the pharmaceutical industry.

GPs have learnt from experience the benefits, to both the individual and to society, of holding the border between subjective illness and the disease categories recognised by biomedical science; of confining people within those categories only when such labelling will be positively useful to them; and of deliberately minimising exposure to the harms of medical technology. In this way, general practice attempts to direct both the power and the rising costs of biomedical science where it can help

rather than where it harms. Holding the border between illness and disease underwrites the cost effectiveness of the health service to a far greater extent than gatekeeping at the point of referral, shown by the blue vertical bar.

As patients move along the trajectory which begins with their own assessment of their illness symptoms, and moves on to the decision to see a GP and then, perhaps, to a referral to a specialist, the prevalence of biomedical abnormality increases at each stage and diagnostic tests work more robustly. The predictive value of any biomedical test, be it a question in a formal history, an element of the clinical examination, a blood test or a sophisticated radiological examination, is dependent on the prevalence of the given condition in the population that is tested; the higher the prevalence, as in specialist practice, the greater the predictive value; the lower the prevalence, as in general practice, the lower the predictive value.<sup>24</sup> Biomedical science is proportionately less robust in an unselected population with low prevalence of serious disease. And one of the principal achievements of general practice is to provide very broadly based diagnostic skills which can select, through the referral process, high prevalence populations for specialist practice and thereby ensure the effectiveness of specialists. Given the low levels of prevalence with which GPs work, it is perhaps more remarkable that they get things right as often as they do, not that they sometimes get it wrong.

The trajectory of the patient, however good their medical care, will always, eventually, end in death. And here again, the experience of specialists and GPs diverges. When, last year, I despaired of the prevailing talk of an epidemic of non-communicable disease and asked what we wanted to die from and whether we would prefer to die in accidents or from infections,<sup>25</sup> I received this very wise response from a specialist:

*We, as consumers and providers of health care, know all too well about the certainty of death. We pretend and lead our lives trying to ignore this inevitability. And, it is becoming easier to do so. We concentrate on one cause of morbidity, devise dubious early diagnoses, tout treatments focusing on proxy measures and set aside competing comorbidities. We have come to believe, either sincerely or otherwise, that death from causes outside of our own dedication or specialty is*

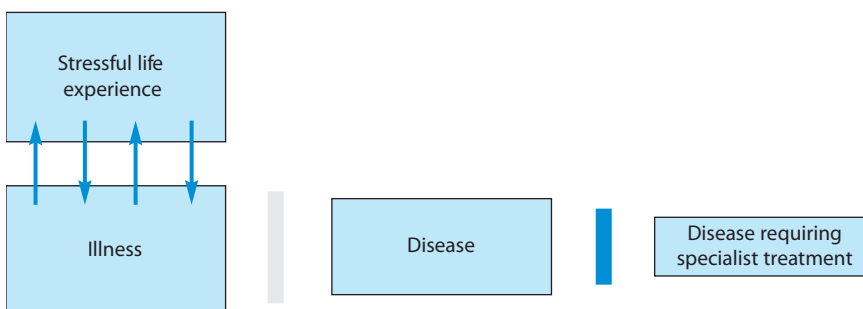


Fig 1. The borders between illness and disease.

*tantamount to success and mission accomplishment. We know better, but the material rewards are generous for ignoring the whole human condition. Diverting attention towards minor gains is rather enriching.*<sup>26</sup>

So a death from a non-cardiac cause can be regarded as a triumph for a cardiologist, but all deaths fall within the remit of the GP. Both specialists and generalists need perhaps to look more honestly at the effects of these postures of denial on those we care for and on society more generally.

The UK has achieved something precious: a single but dualistic profession with common initial training, equal status and useful reserves of mutual respect. Specialists and GPs, though sometimes perceived as opposites, are inextricably dependent on each others' skills and, crucially, most are keenly aware of the extent of this interdependency. GPs can only work safely to the limits of their knowledge and skill if they can refer easily and promptly to their specialist colleagues when those limits are reached. Specialists can only use their skills maximally if they are enabled to work with a highly selected population for whom their particular skills are appropriate. There is an almost perfect complementarity between the two parts of the profession and the interface between GP and specialist care needs to be seen primarily as a means of extending the effectiveness of both.

Regrettably, the latest rounds of political manipulation of the National Health Service in England have seemed intent on substituting competition for cooperation in the relationship between specialist and generalists. Medical specialists employed by acute hospital trusts are now working within a framework of incentives which provides 'Payment by results'<sup>27</sup> while medical generalists are being encouraged or coerced into undertaking commissioning,<sup>28</sup> the intention of which is to keep patients away from costly hospital services. These policies are driving a wedge between specialists and generalists and making it more and more difficult for the two parts of the profession to work collaboratively in the interests of patients.

How can clinicians trapped within these ideologically imposed structures respond? Many of the early symptoms of serious disease are worryingly common in general practice. When such symptoms do not run the most probable self-limiting course, a GP can feel rapidly out of his or her depth and needs ready access to trusted specialist expertise. It is entirely to be expected that individual GPs with different ranges of experience will need to resort to different rates of referral and these rates will vary across different specialties according to the practitioner's varying level of knowledge and confidence. Any financial incentive aimed at limiting referrals is likely to prove dangerous for patients and practitioners alike. At the point of referral, serious problems can arise. The whole machinery of 'Choose and book' and referral management centres has made it increasingly difficult to refer to a named consultant. A referral should have the nature of a personal introduction mediated by trust. Instead, it has all too often become the lottery of computer dating.

Health service bureaucrats seem to have little understanding of the importance of personal relationships in healthcare:

between doctors with different skills and between doctor and patient. Specialists and GPs have much to learn from each other and this potential for mutual education for the benefit of all is proportionately more powerful the more it is linked to the care of particular patients. As clinicians, it is our professional and moral responsibility to build these relationships because it is increasingly clear that no one in the politics or bureaucracy of the health service is prepared to build them for us.<sup>29</sup>

## The body

There are many different ways of viewing and interpreting the human body but there is a specific dualism that characterises medicine, with the body viewed both as a standardised human object, defined by biology, and as a unique human subject, created by biography. Only the doctor contains this dualism within his or her own body, combining scientific knowledge of the body as an object, with the subjective experience of living within the capabilities and constraints of a particular body.<sup>30</sup> Biomedical science has made prodigious advances by viewing the body as a standardised object. Yet, as we have seen, although this works relatively well in some aspects of specialist practice, it works much less so in general practice. Alongside the undeniable progress, all clinicians are becoming more and more aware of the limitations of treating human individuals as interchangeable units at almost the same time as the bureaucracy of healthcare seems more and more driven by the attractions of this model and its attendant guidelines, quality indicators and payment for performance.

## Science and poetry

In 1887, Anton Chekhov, who was of course not only a great writer but also a doctor, wrote in a letter:

*I remember having read two or three years ago some story by a French author who describes a minister's daughter and gives, unsuspectingly, a clinically accurate picture of hysteria. I thought then that the sensitivity of the artist may equal the knowledge of the scientist. Both have the same object, nature, and perhaps in time it will be possible for them to link together in a great and marvellous force which is at present hard to imagine.*<sup>31</sup>

He anticipates another almost perfect complementarity: this time, between science and art, which has the potential to translate into complementary views of the body based on biology and biography.

In an essay written in the 1940s, the great francophone poet from Martinique, Aimé Césaire, argues that:

*Poetic knowledge is born in the great silence of scientific knowledge.*<sup>32</sup>

To explain further, he quotes an earlier essay by Aldous Huxley:

*We all think we know what a lion is. A lion is a desert-colored animal with a mane and claws and an*

expression like Garibaldi's. But it is also, in Africa, all the neighboring antelopes and zebras, and therefore, indirectly, all the neighboring grass ... If there were no antelopes and zebras, there would be no lion. When the supply of game runs low, the king of beasts grows thin and mangy; it ceases altogether, and he dies.<sup>33</sup>

And Césaire continues:

*It is just the same with knowledge. Scientific knowledge is a lion without antelopes and zebras. It is gnawed from within. Gnawed by hunger, the hunger of feeling, the hunger of life.*

Poetic meaning emerges from combinations of words and thought. Experience, ideas and language reinforce and change each other in a continuously evolving process described by George Steiner as 'the informing reciprocities between grammar and vision'.<sup>34</sup>

The American William Carlos Williams was both a GP and a poet and he experienced the words spoken by his patients, in the privacy of the consulting room, as the closest that many of them would come to the creation of poetry: words welling up from what is anything but a standardised bodily object, words chosen to express the deepest of feelings and fears.

*We begin to see that the underlying meaning of all they want to tell us and have always failed to communicate is the poem, the poem which their lives are being lived to realise. ... And it is the actual words, as we hear them spoken under all circumstances, which contain it. It is actually there, in the life before us, every minute that we are listening, a rarest element – not in our imaginations but there, there in fact. It is that essence which is hidden in the very words which are going in at our ears and from which we must recover underlying meaning as realistically as we recover metal out of ore.<sup>35</sup>*

Patients' presentations of their symptoms emerge rather than result from their experience of the symptoms themselves. Each individual chooses and uses words differently and gives different expression to his or her symptoms. Each patient attempts, with more or less success, the aspiration described by Wordsworth in the Twelfth Book of *The prelude*:

*and I would give, While yet we may, as far as words can give, Substance and life to what I feel<sup>36</sup>*

Each dyad of doctor and patient generates a different response to the particular patient's predicament. William Carlos Williams again:

*The physician enjoys a wonderful opportunity actually to witness the words being born. Their actual colors and shapes are laid before him carrying their tiny burdens which he is privileged to take into his care with their unspoiled newness. He may see the difficulty with which they have been born and what they are destined*

*to do. No one else is present but the speaker and ourselves, we have been the words' very parents. Nothing is more moving.*

What our patients tell us when they find the words to speak the poem of their lives, when they struggle to give expression to some of their deepest feelings and most difficult thoughts, touches on what it is to be human. The great poets have the skill to express feelings that many others, as patients, as doctors, as human beings, will experience at some time in their lives. In this way poetic knowledge makes us feel less alone and can provide comfort, especially in situations where science can do nothing. Great poetry is grounded in the intransigence of nature and the contingency of experience and allows no room to good intentions or wishful thinking. Take a single poem by the Scottish poet Norman MacCaig:

*Myself after her death*

*I'm exiled from what used to be my country. It welcomed me with gifts of peace and of storms, with heights of mountains and altitudes of joy. Not now.*

*No, says the wall, and I turn back.*

*No, says the mountain*

*And I sit sad in the valley*

*Listening to the river that says*

*Trespasser, trespasser, trespasser.*

*I stubbornly say, All the same*

*It's still beautiful.*

*And I know that's true*

*But I know also*

*Why it fails to recognise me.*

This captures all the bewildering disorientation of bereavement, yet, at the same time, reorientates the reader because as Seamus Heaney points out:

*The world is different after it has been read by a Shakespeare or an Emily Dickinson or a Samuel Beckett because it has been augmented by their reading of it.<sup>37</sup>*

Robert Frost describes poetry as 'the shortest emotional distance between two points: the writer and the reader'. And this is often the intensity of connection that doctors need if they are to come to an appropriate diagnosis, assuming that concept is taken in its broadest sense. Scott Murray and colleagues conducted interviews with 20 people, recently diagnosed as having inoperable lung cancer. They discovered that laying the transcript out as poetry gave it an immediacy and an impact that was lacking in prose:

*Now we were getting ready*

*To go on our holidays*

*And I'm losing weight,*

*Losing weight*

*Losing weight.*

*I was 15 stones*

*And I went down to 12.*

*And that was in two months.  
And that's when I knew  
There was something wrong with me.*<sup>38</sup>

With their discovery of how readily the transcripts 'fell into the rhythms and cadences of poetry',<sup>39</sup> the researchers appear to confirm the validity of Robert Frost's assertion, William Carlos Williams' observation and Chekhov's aspiration.

### *Biology and biography*

I have tried to show that there is more to medicine than science and that poetic knowledge is as important as scientific knowledge in the territory of human suffering. It is too easy for those who pride themselves on the hardness of their science and the robustness of their thinking to dismiss these sorts of insights as sentimental and overly emotional but the more we discover the power of biography to modulate biology, the less this position is tenable.<sup>40</sup> Biography, if it is to be included in the consultation, must be elicited as narrative and the more painful and damaging the story, the harder it is to tell. Doctors have much to learn, not only from poets but also from novelists whose special province is narrative.

The American philosopher Martha Nussbaum reminds us of the features of the novel:

*its commitment to the separateness of persons and to the irreducibility of quality to quantity; its sense that what happens to individuals in the world has enormous importance; its commitment to describe the events of a life not from an external perspective of detachment, as the doings and movings of ants or machine parts, but from within, as invested with the complex significances with which human beings invest their own lives.*<sup>41</sup>

She describes the commitment of the novel:

*to the moral relevance of following a life through all of its adventures in all of its concrete context.*

And science is beginning to show that there is also a medical relevance. Lives wound bodies and wounds leave deep bodily scars that never fully heal. They are caused by trauma including terrible accidents and injuries but they are also caused by abuse, misery and humiliation, especially when these occur in early childhood. The patients we cannot cure, the ones who return again and again, have wounds and all too often we remain ignorant of their nature. In her retelling of the story of the Greek warrior Achilles, Elizabeth Cook writes:

*Each wound a story. ... He learned how to spin a story from link to link, from scar to scar. These, the stories of his father's body, were his first.*

She is describing the child, Achilles learning stories from the scars on Peleus' body. Our patients' scars have the potential to reveal their stories in a similar way but only if we, as doctors, look and only if we ask.

*Our bodies – not remade from scratch every seven years but constantly eroding and renewing until the*

*renewal stops. What persists most is what is least alive. Scar tissue for example – intractable, durable stuff. Once the body has rallied to repair itself the site of repair becomes fixed unable to renew itself any more. The more durable, the less living.*<sup>42</sup>

The Achilles story is about the scars of battle but many of our patients have scars which are more physiological than anatomical and so may not be readily visible but which also record stories of violence and trauma.

It is only in recent years that science has begun to document the extent to which physiology can be scarred, so that it becomes more and more clear that violence, trauma and chronic stress should be viewed as fundamental causes of disease and premature ageing.<sup>43</sup> Biology itself is gradually extending our understanding of how experiential wounds damage bodies. Allostasis is the process by which physiological functions respond to challenge – derived from the Greek word 'allo' for variable: so, remaining stable by being variable. Allostasis seems to be mediated by multiple physiological processes, but the body's capacity for allostasis is limited and can be overloaded by continuous and excessive stress. Allostatic overload is the physiological equivalent of Peleus' battle scars: the adaptive functioning of the body loses its flexibility and becomes fixed.

*The brain is the key organ of the response to stress because it determines what is threatening and, therefore, potentially stressful, as well as the physiological and behavioral responses which can be either adaptive or damaging. Stress involves two-way communication between the brain and the cardiovascular, immune, and other systems via neural and endocrine mechanisms. Beyond the 'flight-or-fight' response to acute stress, there are events in daily life that produce a type of chronic stress and lead over time to wear and tear on the body ('allostatic load'). Yet, hormones associated with stress protect the body in the short-run and promote adaptation ('allostasis'). ... Stress and stress hormones produce both adaptive and maladaptive effects ... throughout the life course. Early life events influence life-long patterns of emotionality and stress responsiveness and alter the rate of brain and body aging.*<sup>44</sup>

It is also clear that chronic stress damages and erodes telomeres and by this means seems to precipitate premature ageing in those affected. Telomeres shorten with age in all replicating somatic cells. Thus, telomere length can serve as a biomarker of a cell's biological (versus chronological) 'age'.<sup>45</sup> The association between chronic stress and shortened telomeres has been shown for the caregivers of people with Alzheimer's disease,<sup>46</sup> mothers looking after chronically sick children and women exposed to intimate partner violence.<sup>47</sup>

Telomerase increases telomere length and low telomerase levels have been shown to be associated with smoking and significantly greater abdominal adiposity, higher resting heart rate, fasting glucose, low-density lipoprotein and total cholesterol,

and total/high-density lipoprotein cholesterol ratio.<sup>48</sup> Similarly, telomere length is significantly shorter in those with mood disorders, representing as much as 10 years of accelerated ageing. This provides preliminary evidence that mood disorders are associated with accelerated ageing and may suggest a plausible mechanism for much of the morbidity and mortality that is associated with these disorders.<sup>49</sup>

All of this research, and of course I describe only the tip of an enormous iceberg, is very exciting to GPs because it seems to explain much of the great difficulty that we face in trying to improve the health status of the poor, the damaged and the traumatised patients for whom we care. It becomes absolutely clear that the established biotechnical means at our disposal must be supplemented by biographical understanding. However, the enthusiasm within medicine for perpetuating the mind–body split is proving to be a major handicap in making further progress.<sup>50</sup>

*we are held back by the concept [of psychosomatics], because it implies that some diseases are psychosomatic and others are not. It perpetuates dualistic thinking and prevents us from seeing that all human distress is always that of an integrated organism.*<sup>51</sup>

The evidence suggests that mind and body are totally integrated as they are within human experience. I do not sense my body as being separate from myself, and damage in either of these putatively separate arenas causes damage in the other. A truth that Laurence Sterne recorded in his own inimitable manner more than 250 years ago:

*A man's body and his mind, with the utmost reverence to both I speak it, are exactly like a jerkin, and a jerkin's lining; – rumple the one, – you rumple the other.*<sup>52</sup>

The problem, as the Norwegian GP, Anne Luis Kirkengen, puts it, is that medicine:

*misinterprets the body, which is defined as matter rather than history. It seeks 'solutions' detached from the lived life.*<sup>53</sup>

She finds this particularly problematic for patients suffering chronic pain which so often makes much more sense in the context of biography rather than biology. To give just one example, a history of pelvic pain or gynaecological surgery is significantly associated with reported childhood sexual abuse.<sup>54</sup> When symptoms rooted in a traumatic and damaging biography are treated as biotechnical problems, medicine has an alarming tendency to cause more harm than good. Patients with chronic pain tend to be defined as somatisers and the Danish researcher, Peter Fink, has shown that those identified in this way were exposed to more frequent and more extensive surgery and other medical intervention than non-somatisers; most of the operations were abdominal or gynaecological; and three out of four operations did not have the intended effect.<sup>55</sup>

In 1995, Richard Horton, the editor of the *Lancet*, wrote a paper about the French philosopher Georges Canguilhem in the *Journal of the Royal Society of Medicine*. Horton noted that:

*Canguilhem asks us to examine the content of a patient's experience rather than to begin with a biological translation of that experience.*<sup>56</sup>

For Canguilhem, as for Kirkengen, the definition of the abnormal should be grounded in human experience not in statistically deviant biological metrics:

*pathology implies pathos, the direct and concrete feeling of suffering and impotence, the feeling of life gone wrong.*<sup>57</sup>

Adverse experiences early in childhood include physical, emotional, or sexual abuse; witnessing domestic violence; growing up with household substance abuse, mental illness, parental divorce, or an incarcerated household member. Such experiences all too often evoke feelings of life gone wrong and have been shown to predict future premature mortality, to the extent that people with six or more adverse childhood experiences died nearly 20 years earlier on average than those without any.<sup>58</sup> Also such experiences appear to predict adult autoimmune disease which is consistent with recent biological studies on the impact of early life stress on subsequent inflammatory responses.<sup>59</sup> In the context of a damaging childhood, the developing brain is cumulatively exposed to repeated stress responses with resulting impairment in multiple brain structures and functions. Adverse childhood experiences markedly increase the risk of smoking, alcohol and substance misuse, obesity, depression, self-harming and suicide, and multiple sexual partners. As Kirkengen puts it:

*Children who, more than anything, have learned that they are worthless and not appreciated turn into young people who know neither their right to be protected nor how to protect themselves.*

This seems to echo the words of the poet John Clare, written in the asylum in Northampton in about 1844:

*I am – yet what I am none knows or cares.*<sup>60</sup>

The Adverse Childhood Experiences (ACE) Study<sup>61</sup> pyramid summarises the current state of understanding. Adverse childhood experiences lead to social, emotional and cognitive impairment, which in turn lead to the early adoption of risky health behaviours. These play out in disease, disability and social problems, and culminate in early death. Finally, there is evidence that damage can be passed on from generation to generation<sup>62,63</sup> to the extent that it seems possible that the grotesque trauma of slavery is still present in the relatively poorer health of descendent populations today.<sup>64,65</sup> However, prevalence rates for type 2 diabetes are strikingly lower for people now living in the Caribbean compared with those living in the USA or in Britain which suggests that ongoing racism and socioeconomic inequality continue to play the major role.<sup>66</sup>

Trauma is a breakdown of the predictability and therefore the security of the world and, in this context, it is interesting that the word 'trauma' comes from the Greek for wound with all of its connotations of bodily harm. Natural disasters like earthquakes,

floods or avalanches, cause immediate injury but, beyond that, they defy our quotidian expectations, disrupt our sense of safety in the world and so cause lingering trauma. Much more commonly, human beings do terrible things to one another and in doing so have the potential to wound, scar and traumatise human bodies and undermine health at every level of functioning. Such interpersonal wounding disrupts our sense of safety much more fundamentally and is proportionately more damaging, as the philosopher Simone Weil so clearly understood:

*At the bottom of the heart of every human being, from earliest infancy until the tomb, there is something that goes on indomitably expecting, in the teeth of all experience of crimes committed, suffered, and witnessed, that good and not evil will be done to him. It is this above all that is sacred in every human being.*<sup>67</sup>

As doctors, I think that we understand that the mind is socially constructed; now we are being challenged to see the body in the same way.

The pressing question is, how should the medical profession respond?

## Society

The biology of biography makes the structural violence of unjust societies of immediate relevance to doctors. The medical anthropologist Nancy Scheper-Hughes defines structural violence as:

*violence that is permissible, even encouraged. It refers to the invisible social machinery of inequality that reproduces social relations of exclusion and marginalization via ideologies, stigmas, and dangerous discourses attendant to race, class, sex, and other invidious distinctions. Structural violence 'naturalizes' poverty, sickness, hunger, and premature death, erasing their social and political origins so that they are taken for granted and no one is held accountable except the poor themselves.*<sup>68</sup>

Poverty, racism and 'other invidious distinctions' create chronic emotional stress and directly damage the functioning of bodies, leading to profound health inequalities and early death. In her extraordinary essay on *The Iliad*, Simone Weil writes:

*To define force – it is that x that turns anybody who is subjected to it into a thing. Exercised to the limit, it turns man into a thing in the most literal sense: it makes a corpse out of him.*<sup>69</sup>

Structural violence exerts just this force. When someone is turned into an object or a thing, they are no longer acknowledged as being fully human. Weil continues:

*The idea of a person's being a thing is a logical contradiction. Yet what is impossible in logic becomes true in life, and the contradiction lodged within the soul tears it in shreds. This thing is constantly aspiring to be a man or a*

*woman, and never achieving it – here, surely, is death but death strung out over a whole lifetime; here, surely, is life, but life that death conceals before abolishing.*

When society and medicine combine to exert this kind of force, atrocities become almost inevitable. Medicine has an infamous history of collaboration in the demonisation and persecution of those perceived as 'other' and almost every possible dimension of otherness has been used as the pretext: indeed, I wonder whether we are now beginning to see it in relation to obesity. The great medical historian Charles Rosenberg argues that:

*In some ways disease does not exist until we agree that it does – by perceiving, naming, and responding to it. These acts of agreement have during the past century become increasingly central to social as well as medical thought. What is often overlooked, however, is the process of disease definition itself – the fashioning of explanatory 'frames' for understanding disease – and the consequence of those definitions, once they are agreed upon, in the lives of individuals, in the making and discussion of social policy, and in the structuring of medical care.*<sup>70</sup>

He proposes that, because of this, we need much greater understanding of individual experience of disease in time and place, the relation of culture to the definition of disease, and the role of the state in defining and responding to disease. To a considerable extent, the 19th-century concepts of the deserving and the undeserving poor have been replaced by those that draw very similar distinctions between the deserving and the undeserving sick.

As doctors and as citizens, we need always to be terribly careful not to fall into these traps and not to contribute further to what the writer and novelist WG Sebald described as:

*the marks of pain which ... trace countless fine lines through history.*<sup>71</sup>

The socio-political construction of health inequality has become undeniable.<sup>72</sup> As society becomes ever more economically polarised, health is systematically damaged by the structural violence this entails and yet governments still appear to believe that health inequality can be tackled in isolation from the socioeconomic inequality that drives it. Doctors have seemed content to collude in this offloading of responsibility through the rhetoric of 'lifestyle medicine',<sup>73</sup> a sophisticated variant of the age-old game of victim-blaming. Paul Farmer argues that the central contributions of medicine and public health to 'future progress in human rights will be linked to the equitable distribution of the fruits of scientific advancement'.<sup>74</sup> How can we ensure that this is taken to apply to scientific advances in the biology of biography just as much as to advances in biotechnology?

How will doctors respond? For some the biology of biography cries out for a socio-political solution; for others it appears to represent a technological and economic opportunity. For me, the new understanding of the pathways between adverse experi-



ence and disease mean that doctors should lobby much more strenuously to protect the vulnerable and be prepared to advocate for all those on the losing side of a society divided by structural violence. The evidence suggests that society should invest much more heavily in the early years of childhood and in providing opportunities for families to thrive. The present situation should be considered completely unacceptable: society both neglects and demonises vulnerable families, ignores the continuous process of damage that is undermining the health of poor children and then blames, and again demonises, health and social care professionals when children die.

Yet, to date the vast majority of doctors have sought refuge in biotechnology. Instead of advocating approaches which would tackle the causes of the causes, medicine has tended to confine itself by intervening on the ACE pyramid at the level of risky health behaviours. At this point, intervention is likely to be relatively ineffective because the functioning of the body is already damaged. Clearly we should treat those who are sick but this should be as well as attempting to minimise violence and abuse, and promoting a much more equitable distribution of wealth, hope and opportunity within society, rather than instead. We now face a possible future which I find both disturbing and distressing. Returning to telomeres and telomerase, the brilliant research in this field<sup>75</sup> should lead to improved support for those who shoulder a disproportionate burden in the care of the sick, frail and demented and in providing protection for those exposed to intimate partner violence. Instead, there seems a real possibility of a market for expensive interventions designed to increase levels of telomerase. Once again we seem prepared to ignore the detail of lived human suffering, preferring to focus on the technological fix which treats the body as a standardised object.

Petr Skrbanek argues that:

*the reason why poverty is unacceptable is not that the lives of the poor are shorter, but that poverty is demeaning, cruel and unjust. People should be entitled to decent living conditions not because it would make them live longer (which would be a welcome by-product) but because in a humane society the principle of fairness and justice is paramount.*<sup>76</sup>

Perhaps we are simply stuck with Nabokov's observation of:

*fatal poverty and fatalistic wealth.*<sup>77</sup>

## St Luke and gentleness

William Harvey determined that this Oration should take place each year on, or as close as possible to St Luke's feast day, which is today. Being constitutionally irreligious, I had no idea, until I was asked to give the Oration, that St Luke is the patron saint of physicians or that he was himself a physician. I now understand that he is also the patron saint of artists, surgeons, students and butchers which shows an interesting and perhaps instructive range.

In the first book of *De Monarchia*, Dante Alighieri describes St Luke as 'scriba mansuetudinis Cristi' which was translated by

Aurelia Henry in 1904<sup>78</sup> as 'the writer of the gentleness of Christ'. St Luke's gospel includes six miracles and 18 parables which are not found in the other gospels. Many of these concern healing and kindness and he seems particularly concerned with the predicament of the poor and downtrodden. It is just possible that gentleness is the key to the future of medicine.

In 1979, the medical sociologist Aaron Antonovsky wrote his seminal text, *Health, stress and coping*,<sup>79</sup> in which he proposed that it is more important to attempt to identify and support people's resources and capacity to create health than to concentrate on risks, ill health, and disease; that the focus should be on salutogenesis rather than on pathogenesis.<sup>80</sup> He suggested that what he termed a 'sense of coherence' might promote salutogenesis by buffering the effects of chronic stress and so raising the threshold for allostatic overload and the consequent bodily harm. He defined the sense of coherence as:

*a generalized orientation toward the world which perceives it, on a continuum, as comprehensible, manageable and meaningful.*<sup>81</sup>

And he criticised the traditional dichotomised view of public health which describes curative medical care as fishing people out of the river downstream while preventative healthcare seeks to stop them falling in upstream. Antonovsky argued that health and sickness are not the opposites that this model would suggest and that:

*To remain with the metaphor: we are all, always, in the dangerous river of life. The twin question is: How dangerous is our river? How well can we swim?*

His thesis is that however dangerous the river, a sense of coherence helps people to swim.

It seems clear that Antonovsky's coherence is linked to John Bowlby's theory of attachment. Secure attachment to a principal caregiver in early infancy provides the foundation for a lifelong sense of coherence and a belief that it is possible to make sense of the world and to find meaning in one's place within it. On the other hand, disordered patterns of attachment precipitated by destructive or damaging parenting patterns make the world seem unsafe from the outset and it will be proportionately more difficult to find meaning, security and coherence. Those with such experiences will be beginning to move up the adverse child experience pyramid towards poor health and early death. Yet people who have been traumatised and who struggle to recover are frequently marginalised within healthcare systems, especially if the source of their trauma also causes shame and so is profoundly difficult to disclose. Dignity, respect or even interest are too often in short supply.

*'You do not interest me.' No man can say these words to another without committing a cruelty and offending against justice.*<sup>82</sup>

The clear implication is that physicians should play a much greater role in helping patients to cope with the challenge and stress of illness, by helping to make it more comprehensible,

manageable and meaningful. Kirsti Malterud and Hanne Hollnagel have shown how the use of key questions can help patients to identify and articulate their personal salutogenic resources<sup>83,84</sup> and to provide clues as to the nature of the diagnosis in both biotechnical and biographical terms.<sup>85</sup>

Relationships help to create meaning and are fundamental to human existence. Human beings seek to build enduring and trusting relationships in all spheres of life, and these qualities in the relationship between patient and doctor will be proportionately more important for those whose lives have been irreversibly marked by abusive and destructive relationships. One of the key roles of the doctor is to work with patients to find an explanation of what is happening to them. A coherent explanation that can be understood and given meaning by the particular patient within the individual context of their own life story helps them to feel less afraid and more hopeful. This optimism seems to actively promote recovery. Physiological processes, meanings and relationships are all interconnected and the interactions between patients and those who care for them can either diminish or exacerbate symptoms and suffering.<sup>86</sup> Meaning has biological consequences<sup>87</sup> and can both harm and heal.<sup>88</sup>

Harm becomes imprinted on the body through neuroplasticity but this is not a one-way process and the brain's capacity for adaptation can also be a means of making people better. Each of us constructs a more or less coherent autobiographical narrative which is constantly reviewed and refined. It is through narrative that we make sense of what is happening to us and begin to make sense of the world. The freedom and the delight is that narratives can be changed and doctors, by listening and by investing the experience and perspectives of patients with respect and dignity, can help to shift narratives which have become damaging and stuck. A story of failure and suffering can be recast as one of courage and endurance in the face of impossible odds; one of inability to cope at work can become one of exploitation and seeking solutions in forming alliances and activism.

*Families or individuals requesting therapeutic consultation often present in the context of an overwhelming history of stressful and negative life events. Frequently, the pressure of such events obliterates memories of strengths and successes. This is particularly true by the time people reach inpatient psychiatric settings.<sup>89</sup>*

The suppleness of narrative contrasts strongly with the fixed nature of much biomedical labelling. The longer I work in general practice, the more sceptical I become about the labels and diagnostic categories that we use all the time. Individual patients with diabetes or asthma, multiple sclerosis or cancer, are so different from one another and seem to experience their diseases so differently that I have sometimes wondered about the usefulness of the label. And this seems even more true of labels such as depression, schizophrenia or personality disorder. Commenting on a short story by Anton Chekhov, a GP from Finland, Raimo Puustinen, noted that:

*The patient gives her opinion of the problem by using a medical term 'palpitations', as if this simple diagnosis would completely decipher her malady.<sup>90</sup>*

It is not surprising that patients should adopt our labels and our vocabulary but it is one of the ways in which their stories become constrained.

We give people a label to put them in a group so we can learn more about the disease or condition that they have in common and, to this extent, the generalisation is constructive, but it is also destructive. The doctor, while actively using the generalisations of biomedical science, has a constant responsibility to refocus on the individual, the detail of their story and the meaning they attach to it: drawing on Simone Weil's conception of 'creative attention'.<sup>91</sup>

Vladimir Nabokov asserts that:

*... while the scientist sees everything that happens in one point of space, the poet feels everything that happens in one point of time.<sup>92</sup>*

And in his strange story *Tlön, Uqbar, Orbis Tertius*, Jorge Luis Borges suggests that nouns are about space and verbs about time<sup>93</sup> which implies that a single word will never do. Yet in medicine, much of the time, we try to make sense of the world with single words, albeit long ones. However, if we accept Borges, we must arrive at the conclusion that medical diagnoses are only about space and not about time, which is interesting, particularly as we try to link diagnosis to prognosis in a dangerously fatalistic way. Words used in diagnosis, as a kind of biomedical revelation, are fixed in time; words used in narrative, as a revelation of the human condition, stretch across time.

*we find that labelling is always a dangerous process ... because it connotes problems as fixed or invariant.<sup>94</sup>*

We need to work very hard to prevent our patients and ourselves becoming trapped within the words and the language that we use or that surrounds us. In an essay written in 1974, Primo Levi warned:

*Every age has its own fascism and we see the warning signs wherever the concentration of power denies citizens the possibility and the means of expressing and acting on their own free will. There are many ways of reaching this point, and not just through the terror of police intimidation, but by denying and distorting information, by undermining systems of justice, by paralyzing the education system, and by spreading in a myriad subtle ways nostalgia for a world where order reigned, and where the security of a privileged few depends on the forced labour and the forced silence of the many.<sup>95</sup>*

Nowadays we teach communication and consultation skills to medical students and young doctors. My worry is that we are teaching these as techniques to be used instrumentally, making the relationship between doctor and patients a means to an end

rather than an end in itself. George Steiner, in his book on Heidegger, writes:

*The vital relation of otherness is not, as for Cartesian and positivist rationalism, one of 'grasping' and pragmatic use. It is a relation of audition .... It is, or ought to be, a relation of extreme responsibility, custodianship, answerability to and for.*<sup>96</sup>

Finding meaning and a sense of coherence in the face of illness, suffering and loss can only occur within an ongoing relationship between two human subjects and if we are genuinely to be of use, we perhaps need to test ourselves against these standards of responsibility, custodianship, and answerability to and for. And perhaps also against St Luke's standard of gentleness.

Like Syngé's Ireland, medicine will never be a pure and simple place but its constant interplay of opposites makes space for

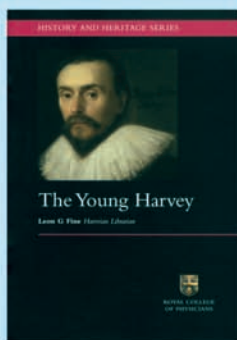
courage, joy, creativity and freedom and the possibility of making the world a better place. However, if beyond this, we cannot bring these opposites together into a more coherent, and in the case of society a fairer, whole, we will remain divided and we will fail.

**References are available in the full version of the Harveian Oration on the RCP website ([www.rcplondon.ac.uk](http://www.rcplondon.ac.uk)).**

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