

Bad Science

Ben Goldacre

Published by Harper Perennial

Extract

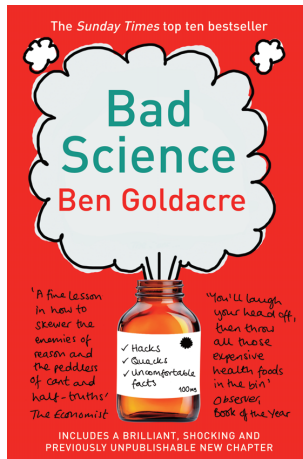
All text is copyright of the author

This opening extract is exclusive to Love**reading**.
Please print off and read at your leisure.

THE DOCTOR WILL SUE YOU NOW

by **Ben Goldacre**

The shocking and previously unpublishable
new chapter from his book *Bad Science*.



This is an extract from

BAD SCIENCE by **Ben Goldacre**

Published by Harper Perennial 2009. You are free to copy it, paste it, bake it, reprint it, read it aloud, as long as you don't change it – including this bit – so that people know that they can find more ideas for free at www.badscience.net

ISBN 978-0-00-728487-0



This work is licensed under the
Creative Commons Attribution-Non-Commercial-No Derivative Works 3.0 Unported License.
To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/>

The Doctor Will Sue You Now

This chapter did not appear in the original edition of this book, because for fifteen months leading up to September 2008 the vitamin-pill entrepreneur Matthias Rath was suing me personally, and the *Guardian*, for libel. This strategy brought only mixed success. For all that nutritionists may fantasise in public that any critic is somehow a pawn of big pharma, in private they would do well to remember that, like many my age who work in the public sector, I don't own a flat. The *Guardian* generously paid for the lawyers, and in September 2008 Rath dropped his case, which had cost in excess of £500,000 to defend. Rath has paid £220,000 already, and the rest will hopefully follow. Nobody will ever repay me for the endless meetings, the time off work, or the days spent poring over tables filled with endlessly cross-referenced court documents.

On this last point there is, however, one small consolation, and I will spell it out as a cautionary tale: I now know more about Matthias Rath than almost any other person alive. My notes, references and witness statements, boxed up in the room where I am sitting right now, make a pile as tall as the man himself, and what I will write here is only a tiny fraction of the fuller story that is waiting to be told about him. This chapter, I

Bad Science

should also mention, is available free online for anyone who wishes to see it.

Matthias Rath takes us rudely outside the contained, almost academic distance of this book. For the most part we've been interested in the intellectual and cultural consequences of bad science, the made-up facts in national newspapers, dubious academic practices in universities, some foolish pill-peddling, and so on. But what happens if we take these sleights of hand, these pill-marketing techniques, and transplant them out of our decadent Western context into a situation where things really matter?

In an ideal world this would be only a thought experiment.

AIDS is the opposite of anecdote. Twenty-five million people have died from it already, three million in the last year alone, and 500,000 of those deaths were children. In South Africa it kills 300,000 people every year: that's eight hundred people every day, or one every two minutes. This one country has 6.3 million people who are HIV positive, including 30 per cent of all pregnant women. There are 1.2 million AIDS orphans under the age of seventeen. Most chillingly of all, this disaster has appeared suddenly, and while we were watching: in 1990, just 1 per cent of adults in South Africa were HIV positive. Ten years later, the figure had risen to 25 per cent.

It's hard to mount an emotional response to raw numbers, but on one thing I think we would agree. If you were to walk into a situation with that much death, misery and disease, you would be very careful to make sure that you knew what you were talking about. For the reasons you are about to read, I suspect that Matthias Rath missed the mark.

This man, we should be clear, is our responsibility. Born and raised in Germany, Rath was the head of Cardiovascular Research at the Linus Pauling Institute in Palo Alto in California, and even then he had a tendency towards grand gestures, publishing a paper in the *Journal of Orthomolecular Medicine*

The Doctor Will Sue You Now

in 1992 titled 'A Unified Theory of Human Cardiovascular Disease Leading the Way to the Abolition of this Disease as a Cause for Human Mortality'. The unified theory was high-dose vitamins.

He first developed a power base from sales in Europe, selling his pills with tactics that will be very familiar to you from the rest of this book, albeit slightly more aggressive. In the UK, his adverts claimed that '90 per cent of patients receiving chemotherapy for cancer die within months of starting treatment', and suggested that three million lives could be saved if cancer patients stopped being treated by conventional medicine. The pharmaceutical industry was deliberately letting people die for financial gain, he explained. Cancer treatments were 'poisonous compounds' with 'not even one effective treatment'.

The decision to embark on treatment for cancer can be the most difficult that an individual or a family will ever take, representing a close balance between well-documented benefits and equally well-documented side-effects. Adverts like these might play especially strongly on your conscience if your mother has just lost all her hair to chemotherapy, for example, in the hope of staying alive just long enough to see your son speak.

There was some limited regulatory response in Europe, but it was generally as weak as that faced by the other characters in this book. The Advertising Standards Authority criticised one of his adverts in the UK, but that is essentially all they are able to do. Rath was ordered by a Berlin court to stop claiming that his vitamins could cure cancer, or face a €250,000 fine.

But sales were strong, and Matthias Rath still has many supporters in Europe, as you will shortly see. He walked into South Africa with all the acclaim, self-confidence and wealth he had amassed as a successful vitamin-pill entrepreneur in Europe and America, and began to take out full-page adverts in newspapers.

Bad Science

‘The answer to the AIDS epidemic is here,’ he proclaimed. Anti-retroviral drugs were poisonous, and a conspiracy to kill patients and make money. ‘Stop AIDS Genocide by the Drugs Cartel’ said one headline. ‘Why should South Africans continue to be poisoned with AZT? There is a natural answer to AIDS.’ The answer came in the form of vitamin pills. ‘Multivitamin treatment is more effective than any toxic AIDS drug.’ ‘Multivitamins cut the risk of developing AIDS in half.’

Rath’s company ran clinics reflecting these ideas, and in 2005 he decided to run a trial of his vitamins in a township near Cape Town called Khayelitsha, giving his own formulation, VitaCell, to people with advanced AIDS. In 2008 this trial was declared illegal by the Cape High Court of South Africa. Although Rath says that none of his participants had been on anti-retroviral drugs, some relatives have given statements saying that they were, and were actively told to stop using them.

Tragically, Matthias Rath had taken these ideas to exactly the right place. Thabo Mbeki, the President of South Africa at the time, was well known as an ‘AIDS dissident’, and to international horror, while people died at the rate of one every two minutes in his country, he gave credence and support to the claims of a small band of campaigners who variously claim that AIDS does not exist, that it is not caused by HIV, that anti-retroviral medication does more harm than good, and so on.

At various times during the peak of the AIDS epidemic in South Africa their government argued that HIV is not the cause of AIDS, and that anti-retroviral drugs are not useful for patients. They refused to roll out proper treatment programmes, they refused to accept free donations of drugs, and they refused to accept grant money from the Global Fund to buy drugs.

One study estimates that if the South African national government had used anti-retroviral drugs for prevention and treatment at the same rate as the Western Cape province (which defied national policy on the issue), around 171,000 new HIV

The Doctor Will Sue You Now

infections and 343,000 deaths could have been prevented between 1999 and 2007. Another study estimates that between 2000 and 2005 there were 330,000 unnecessary deaths, 2.2 million person years lost, and 35,000 babies unnecessarily born with HIV because of the failure to implement a cheap and simple mother-to-child-transmission prevention program. Between one and three doses of an ARV drug can reduce transmission dramatically. The cost is negligible. It was not available.

Interestingly, Matthias Rath's colleague and employee, a South African barrister named Anthony Brink, takes the credit for introducing Thabo Mbeki to many of these ideas. Brink stumbled on the 'AIDS dissident' material in the mid-1990s, and after much surfing and reading, became convinced that it must be right. In 1999 he wrote an article about AZT in a Johannesburg newspaper titled 'a medicine from hell'. This led to a public exchange with a leading virologist. Brink contacted Mbeki, sending him copies of the debate, and was welcomed as an expert. This is a chilling testament to the danger of elevating cranks by engaging with them.

In his initial letter of motivation for employment to Matthias Rath, Brink described himself as 'South Africa's leading AIDS dissident, best known for my whistle-blowing exposé of the toxicity and inefficacy of AIDS drugs, and for my political activism in this regard, which caused President Mbeki and Health Minister Dr Tshabalala-Msimang to repudiate the drugs in 1999'.

In 2000, the now infamous International AIDS Conference took place in Durban. Mbeki's presidential advisory panel beforehand was packed with 'AIDS dissidents', including Peter Duesberg and David Rasnick. On the first day, Rasnick suggested that all HIV testing should be banned on principle, and that South Africa should stop screening supplies of blood for HIV. 'If I had the power to outlaw the HIV antibody test,' he said, 'I would do it across the board.' When African physicians

Bad Science

gave testimony about the drastic change AIDS had caused in their clinics and hospitals, Rasnick said he had not seen ‘any evidence’ of an AIDS catastrophe. The media were not allowed in, but one reporter from the *Village Voice* was present. Peter Duesberg, he said, ‘gave a presentation so removed from African medical reality that it left several local doctors shaking their heads’. It wasn’t AIDS that was killing babies and children, said the dissidents: it was the anti-retroviral medication.

President Mbeki sent a letter to world leaders comparing the struggle of the ‘AIDS dissidents’ to the struggle against apartheid. The *Washington Post* described the reaction at the White House: ‘So stunned were some officials by the letter’s tone and timing – during final preparations for July’s conference in Durban – that at least two of them, according to diplomatic sources, felt obliged to check whether it was genuine.’ Hundreds of delegates walked out of Mbeki’s address to the conference in disgust, but many more described themselves as dazed and confused. Over 5,000 researchers and activists around the world signed up to the Durban Declaration, a document that specifically addressed and repudiated the claims and concerns – at least the more moderate ones – of the ‘AIDS dissidents’. Specifically, it addressed the charge that people were simply dying of poverty:

The evidence that AIDS is caused by HIV-1 or HIV-2 is clear-cut, exhaustive and unambiguous ... As with any other chronic infection, various co-factors play a role in determining the risk of disease. Persons who are malnourished, who already suffer other infections or who are older, tend to be more susceptible to the rapid development of AIDS following HIV infection. However, none of these factors weaken the scientific evidence that HIV is the sole cause of AIDS ... Mother-to-child transmission can be reduced by half or more by short courses of antiviral drugs ... What works best in one country may not be appropriate in another. But to tackle the disease, everyone must

The Doctor Will Sue You Now

first understand that HIV is the enemy. Research, not myths, will lead to the development of more effective and cheaper treatments.

It did them no good. Until 2003 the South African government refused, as a matter of principle, to roll out proper anti-retroviral medication programmes, and even then the process was half-hearted. This madness was only overturned after a massive campaign by grassroots organisations such as the Treatment Action Campaign, but even after the ANC cabinet voted to allow medication to be given, there was still resistance. In mid-2005, at least 85 per cent of HIV-positive people who needed anti-retroviral drugs were still refused them. That's around a million people.

This resistance, of course, went deeper than just one man; much of it came from Mbeki's Health Minister, Manto Tshabalala-Msimang. An ardent critic of medical drugs for HIV, she would cheerfully go on television to talk up their dangers, talk down their benefits, and became irritable and evasive when asked how many patients were receiving effective treatment. She declared in 2005 that she would not be 'pressured' into meeting the target of three million patients on anti-retroviral medication, that people had ignored the importance of nutrition, and that she would continue to warn patients of the side-effects of anti-retrovirals, saying: 'We have been vindicated in this regard. We are what we eat.'

It's an eerily familiar catchphrase. Tshabalala-Msimang has also gone on record to praise the work of Matthias Rath, and refused to investigate his activities. Most joyfully of all, she is a staunch advocate of the kind of weekend glossy-magazine-style nutritionism that will by now be very familiar to you.

The remedies she advocates for AIDS are beetroot, garlic, lemons and African potatoes. A fairly typical quote, from the Health Minister in a country where eight hundred people die

Bad Science

every day from AIDS, is this: 'Raw garlic and a skin of the lemon – not only do they give you a beautiful face and skin but they also protect you from disease.' South Africa's stand at the 2006 World AIDS Conference in Toronto was described by delegates as the 'salad stall'. It consisted of some garlic, some beetroot, the African potato, and assorted other vegetables. Some boxes of anti-retroviral drugs were added later, but they were reportedly borrowed at the last minute from other conference delegates.

Alternative therapists like to suggest that their treatments and ideas have not been sufficiently researched. As you now know, this is often untrue, and in the case of the Health Minister's favoured vegetables, research had indeed been done, with results that were far from promising. Interviewed on SABC about this, Tshabalala-Msimang gave the kind of responses you'd expect to hear at any North London dinner-party discussion of alternative therapies.

First she was asked about work from the University of Stellenbosch which suggested that her chosen plant, the African potato, might be actively dangerous for people on AIDS drugs. One study on African potato in HIV had to be terminated prematurely, because the patients who received the plant extract developed severe bone-marrow suppression and a drop in their CD4 cell count – which is a bad thing – after eight weeks. On top of this, when extract from the same vegetable was given to cats with Feline Immunodeficiency Virus, they succumbed to full-blown Feline AIDS faster than their non-treated controls. African potato does not look like a good bet.

Tshabalala-Msimang disagreed: the researchers should go back to the drawing board, and 'investigate properly'. Why? Because HIV-positive people who used African potato had shown improvement, and they had said so themselves. If a person says he or she is feeling better, should this be disputed, she demanded to know, merely because it had not been proved

The Doctor Will Sue You Now

scientifically? ‘When a person says she or he is feeling better, I must say “No, I don’t think you are feeling better”? “I must rather go and do science on you”?’ Asked whether there should be a scientific basis to her views, she replied: ‘Whose science?’

And there, perhaps, is a clue, if not exoneration. This is a continent that has been brutally exploited by the developed world, first by empire, and then by globalised capital. Conspiracy theories about AIDS and Western medicine are not entirely absurd in this context. The pharmaceutical industry has indeed been caught performing drug trials in Africa which would be impossible anywhere in the developed world. Many find it suspicious that black Africans seem to be the biggest victims of AIDS, and point to the biological warfare programmes set up by the apartheid governments; there have also been suspicions that the scientific discourse of HIV/AIDS might be a device, a Trojan horse for spreading even more exploitative Western political and economic agendas around a problem that is simply one of poverty.

And these are new countries, for which independence and self-rule are recent developments, which are struggling to find their commercial feet and true cultural identity after centuries of colonisation. Traditional medicine represents an important link with an autonomous past; besides which, anti-retroviral medications have been unnecessarily – offensively, absurdly – expensive, and until moves to challenge this became partially successful, many Africans were effectively denied access to medical treatment as a result.

It’s very easy for us to feel smug, and to forget that we all have our own strange cultural idiosyncrasies which prevent us from taking up sensible public-health programmes. For examples, we don’t even have to look as far as MMR. There is a good evidence base, for example, to show that needle-exchange programmes reduce the spread of HIV, but this strategy has been rejected time and again in favour of ‘Just say no.’ Development charities funded by US Christian groups refuse to engage with birth

Bad Science

control, and any suggestion of abortion, even in countries where being in control of your own fertility could mean the difference between success and failure in life, is met with a cold, pious stare. These impractical moral principles are so deeply entrenched that PEPFAR, the US Presidential Emergency Plan for AIDS Relief, has insisted that every recipient of international aid money must sign a declaration expressly promising not to have any involvement with sex workers.

We mustn't appear insensitive to the Christian value system, but it seems to me that engaging sex workers is almost the cornerstone of any effective AIDS policy: commercial sex is frequently the 'vector of transmission', and sex workers a very high-risk population; but there are also more subtle issues at stake. If you secure the legal rights of prostitutes to be free from violence and discrimination, you empower them to demand universal condom use, and that way you can prevent HIV from being spread into the whole community. This is where science meets culture. But perhaps even to your own friends and neighbours, in whatever suburban idyll has become your home, the moral principle of abstinence from sex and drugs is more important than people dying of AIDS; and perhaps, then, they are no less irrational than Thabo Mbeki.

So this was the situation into which the vitamin-pill entrepreneur Matthias Rath inserted himself, prominently and expensively, with the wealth he had amassed from Europe and America, exploiting anti-colonial anxieties with no sense of irony, although he was a white man offering pills made in a factory abroad. His adverts and clinics were a tremendous success. He began to tout individual patients as evidence of the benefits that could come from vitamin pills – although in reality some of his most famous success stories have died of AIDS. When asked about the deaths of Rath's star patients, Health Minister Tshabalala-Msimang replied: 'It doesn't necessarily mean that if I am taking antibiotics and I die, that I died of antibiotics.'

The Doctor Will Sue You Now

She is not alone: South Africa's politicians have consistently refused to step in, Rath claims the support of the government, and its most senior figures have refused to distance themselves from his operations or to criticise his activities. Tshabalala-Msimang has gone on the record to state that the Rath Foundation 'are not undermining the government's position. If anything, they are supporting it.'

In 2005, exasperated by government inaction, a group of 199 leading medical practitioners in South Africa signed an open letter to the health authorities of the Western Cape, pleading for action on the Rath Foundation. 'Our patients are being inundated with propaganda encouraging them to stop life-saving medicine,' it said. 'Many of us have had experiences with HIV-infected patients who have had their health compromised by stopping their anti-retrovirals due to the activities of this Foundation.'

Rath's adverts continue unabated. He even claimed that his activities were endorsed by huge lists of sponsors and affiliates including the World Health Organization, UNICEF and UNAIDS. All have issued statements flatly denouncing his claims and activities. The man certainly has chutzpah.

His adverts are also rich with detailed scientific claims. It would be wrong of us to neglect the science in this story, so we should follow some through, specifically those which focused on a Harvard study in Tanzania. He described this research in full-page advertisements, some of which have appeared in the *New York Times* and the *Herald Tribune*. He refers to these paid adverts, I should mention, as if he had received flattering news coverage in the same papers. Anyway, this research showed that multivitamin supplements can be beneficial in a developing world population with AIDS: there's no problem with that result, and there are plenty of reasons to think that vitamins might have some benefit for a sick and frequently malnourished population.

Bad Science

The researchers enrolled 1,078 HIV-positive pregnant women and randomly assigned them to have either a vitamin supplement or placebo. Notice once again, if you will, that this is another large, well-conducted, publicly funded trial of vitamins, conducted by mainstream scientists, contrary to the claims of nutritionists that such studies do not exist.

The women were followed up for several years, and at the end of the study, 25 per cent of those on vitamins were severely ill or dead, compared with 31 per cent of those on placebo. There was also a statistically significant benefit in CD4 cell count (a measure of HIV activity) and viral loads. These results were in no sense dramatic – and they cannot be compared to the demonstrable life-saving benefits of anti-retrovirals – but they did show that improved diet, or cheap generic vitamin pills, could represent a simple and relatively inexpensive way to marginally delay the need to start HIV medication in some patients.

In the hands of Rath, this study became evidence that vitamin pills are superior to medication in the treatment of HIV/AIDS, that anti-retroviral therapies ‘severely damage all cells in the body – including white blood cells’, and worse, that they were ‘thereby not improving but rather worsening immune deficiencies and expanding the AIDS epidemic’. The researchers from the Harvard School of Public Health were so horrified that they put together a press release setting out their support for medication, and stating starkly, with unambiguous clarity, that Matthias Rath had misrepresented their findings. Media regulators failed to act.

To outsiders the story is baffling and terrifying. The United Nations has condemned Rath’s adverts as ‘wrong and misleading’. ‘This guy is killing people by luring them with unrecognised treatment without any scientific evidence,’ said Eric Goemaere, head of Médecins sans Frontières SA, a man who pioneered anti-retroviral therapy in South Africa. Rath sued him.

The Doctor Will Sue You Now

It's not just MSF who Rath has gone after. He has also brought time-consuming, expensive, stalled or failed cases against a professor of AIDS research, critics in the media and others.

His most heinous campaign has been against the Treatment Action Campaign. For many years this has been the key organisation campaigning for access to anti-retroviral medication in South Africa, and it has been fighting a war on four fronts. Firstly, it campaigns against its own government, trying to compel it to roll out treatment programmes for the population. Secondly, it fights against the pharmaceutical industry, which claims that it needs to charge full price for its products in developing countries in order to pay for research and development of new drugs – although, as we shall see, out of its \$550 billion global annual revenue, the pharmaceutical industry spends twice as much on promotion and admin as it does on research and development. Thirdly, it is a grassroots organisation, made up largely of black women from townships who do important prevention and treatment-literacy work on the ground, ensuring that people know what is available, and how to protect themselves. Lastly, it fights against people who promote the type of information peddled by Matthias Rath and his like.

Rath has taken it upon himself to launch a massive campaign against this group. He distributes advertising material against them, saying 'Treatment Action Campaign medicines are killing you' and 'Stop AIDS genocide by the drug cartel', claiming – as you will guess by now – that there is an international conspiracy by pharmaceutical companies intent on prolonging the AIDS crisis in the interests of their own profits by giving medication that makes people worse. TAC must be a part of this, goes the reasoning, because it criticises Matthias Rath. Just like me writing on Patrick Holford or Gillian McKeith, TAC is perfectly in favour of good diet and nutrition. But in Rath's promotional literature it is a front for

Bad Science

the pharmaceutical industry, a ‘Trojan horse’ and a ‘running dog’. TAC has made a full disclosure of its funding and activities, showing no such connection: Rath presented no evidence to the contrary, and has even lost a court case over the issue, but will not let it lie. In fact he presents the loss of this court case as if it was a victory.

The founder of TAC is a man called Zackie Achmat, and he is the closest thing I have to a hero. He is South African, and coloured, by the nomenclature of the apartheid system in which he grew up. At the age of fourteen he tried to burn down his school, and you might have done the same in similar circumstances. He has been arrested and imprisoned under South Africa’s violent, brutal white regime, with all that entailed. He is also gay, and HIV-positive, and he refused to take anti-retroviral medication until it was widely available to all on the public health system, even when he was dying of AIDS, even when he was personally implored to save himself by Nelson Mandela, a public supporter of anti-retroviral medication and Achmat’s work.

And now, at last, we come to the lowest point of this whole story, not merely for Matthias Rath’s movement, but for the alternative therapy movement around the world as a whole. In 2007, with a huge public flourish, to great media coverage, Rath’s former employee Anthony Brink filed a formal complaint against Zackie Achmat, the head of the TAC. Bizarrely, he filed this complaint with the International Criminal Court at The Hague, accusing Achmat of genocide for successfully campaigning to get access to HIV drugs for the people of South Africa.

It’s hard to explain just how influential the ‘AIDS dissidents’ are in South Africa. Brink is a barrister, a man with important friends, and his accusations were reported in the national news media – and in some corners of the Western gay press – as a serious news story. I do not believe that any one of those jour-

The Doctor Will Sue You Now

nalists who reported on it can possibly have read Brink's indictment to the end.

I have.

The first fifty-seven pages present familiar anti-medication and 'AIDS-dissident' material. But then, on page fifty-eight, this 'indictment' document suddenly deteriorates into something altogether more vicious and unhinged, as Brink sets out what he believes would be an appropriate punishment for Zackie. Because I do not wish to be accused of selective editing, I will now reproduce for you that entire section, unedited, so you can see and feel it for yourself.

APPROPRIATE CRIMINAL SANCTION

In view of the scale and gravity of Achmat's crime and his direct personal criminal culpability for 'the deaths of thousands of people', to quote his own words, it is respectfully submitted that the International Criminal Court ought to impose on him the highest sentence provided by Article 77.1(b) of the Rome Statute, namely to permanent confinement in a small white steel and concrete cage, bright fluorescent light on all the time to keep an eye on him, his warders putting him out only to work every day in the prison garden to cultivate nutrient-rich vegetables, including when it's raining. In order for him to repay his debt to society, with the ARVs he claims to take administered daily under close medical watch at the full prescribed dose, morning noon and night, without interruption, to prevent him faking that he's being treatment compliant, pushed if necessary down his forced-open gullet with a finger, or, if he bites, kicks and screams too much, dripped into his arm after he's been restrained on a gurney with cable ties around his ankles, wrists and neck, until he gives up the ghost on them, so as to eradicate this foulest, most loathsome, unscrupulous and malevolent blight on the human race, who has plagued and poisoned

Bad Science

the people of South Africa, mostly black, mostly poor, for nearly a decade now, since the day he and his TAC first hit the scene.

Signed at Cape Town, South Africa, on 1 January 2007

A handwritten signature in black ink, consisting of several overlapping loops and lines, appearing to be the name 'Anthony Brink'.

Anthony Brink

The document was described by the Rath Foundation as 'entirely valid and long overdue'.

This story isn't about Matthias Rath, or Anthony Brink, or Zackie Achmat, or even South Africa. It is about the culture of how ideas work, and how that can break down. Doctors criticise other doctors, academics criticise academics, politicians criticise politicians: that's normal and healthy, it's how ideas improve. Matthias Rath is an alternative therapist, made in Europe. He is every bit the same as the British operators that we have seen in this book. He is from their world.

Despite the extremes of this case, not one single alternative therapist or nutritionist, anywhere in the world, has stood up to criticise any single aspect of the activities of Matthias Rath and his colleagues. In fact, far from it: he continues to be fêted to this day. I have sat in true astonishment and watched leading figures of the UK's alternative therapy movement applaud Matthias Rath at a public lecture (I have it on video, just in case there's any doubt). Natural health organisations continue to defend Rath. Homeopaths' mailouts continue to promote his work. The British Association of Nutritional Therapists has been invited to comment by bloggers, but declined. Most, when challenged, will dissemble. 'Oh,' they say, 'I don't really

The Doctor Will Sue You Now

know much about it.' Not one person will step forward and dissent.

The alternative therapy movement as a whole has demonstrated itself to be so dangerously, systemically incapable of critical self-appraisal that it cannot step up even in a case like that of Rath: in that count I include tens of thousands of practitioners, writers, administrators and more. This is how ideas go badly wrong. In the conclusion to this book, written before I was able to include this chapter, I will argue that the biggest dangers posed by the material we have covered are cultural and intellectual.

I may be mistaken.