Subtext 6

Summer 2008

Breaking old ground
Civilisation in the dust: two archaeologists dig in

Tales from the icefield
Working at the bottom of the world

Telling it like it was
Priest holes? Chalk men? How about a nice Elizabethan magician?

The cult of Stan
If you prick him, does he not bleed? Actually, no.

University of BRISTOL

Subtext

Welcome

It's hard to believe that *Subtext*, now into its sixth term, has already covered two years in the life of the University and the people who make it tick. We've always maintained that the University is more than the sum of its parts – more than mere inputs and outputs. We hope this is borne out by the stories we bring you and that *Subtext* continues to surprise and delight its readers as much as it does its writers.

In this issue, two archaeologists unearth some of the reasons behind the planned excavation of a little-studied region of pre-classical Turkey (p10); an internet development manager discovers a few home truths during a year working for non-governmental organisations in South Africa (p9); a biologist gets to grips with some extreme fieldwork in the Antarctic (not to mention some issues of personal hygiene) (p6); and a historian finds that his training as an actor comes in handy for the odd TV interview (p14).

As ever, send us your comments and ideas – or just sit back and enjoy the read.

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Subtext No 6, June 2008

TANNIEMOLA LIVERPOOL

England, Sierra Leone, Nigeria, Germany, France … moving around has been a way of life for Dr Tanniemola Liverpool, Reader in Applied Mathematics. It's also become a key topic of his research, which has seen him use his maths and physics background to examine how living matter behaves. He talks to Nick Riddle.

I was born in London. My father is a mathematician – he was born in Freetown, Sierra Leone and moved to England in the '60s to work at Imperial College. When I was three we moved back to Sierra Leone.

My first name means 'Nobody knows tomorrow' in Yoruba. The descendants of freed slaves usually had European surnames so they liked to take an African name as a first name. Yoruba names are the most popular. I'm named after my aunt who was called Tanniemowo. 'Liverpool' is not a common name in Sierra Leone so anyone there called 'Liverpool' is probably related.

Things were quite optimistic in Sierra Leone in the '70s. But then the economy started to decline in the late '70s and the '80s – we just got poorer every year. When I was nine years old we moved to Nigeria, where my father worked at Jos University and my mother taught English literature at a missionary school.

I didn't get hothoused or anything. I did the maths that we did at school but I had an expert at home – if I asked my father questions about basic mathematics, he answered them. He had a lot of puzzle books at home and I used to mess about with them a bit.

I thought maths was easy. But the thing that inspired me most was physics, especially relativity and quantum mechanics. I read popular science books as a teenager, and using maths to explain the physical universe was something that I found exciting.

When I was 15 I went to school in England while my parents stayed in Nigeria. Things were not looking so good economically in Nigeria, so I was sent to live with my uncle in Liverpool (coincidentally); it was thought that it would be better for my education.

Cambridge University was the first place where I was told something that I didn't understand the first time. Up until then, I never had to read anything twice before I understood it. It took me a while to figure out that some of this stuff is actually quite hard. It's a transition from doing exercises at school to working on things that are close to the cutting edge and relatively recent.

I found quantum mechanics exciting because it doesn't seem to agree with your everyday experience. I would tell friends of mine who were studying English about quantum mechanics, and we would have endless discussions about the philosophy of it. They were amazed to find that there were these fundamental questions because they thought of science as something very definite and concrete.

I spent three years in Germany doing postdoctoral work. I made a lot of effort to learn German. I don't think I have a great facility for learning languages but I'm quite determined. When I talked with people I forced them to speak German to me. My boss used to tell me not to waste my time learning German, because it's only spoken by Germans and Austrians. He probably wanted me to stick to my work.

Stephen Hawking moved into my office once. I was at the Institute for Theoretical Physics in Santa Barbara for six months. Professor Hawking was visiting, and he needed an office on the ground floor near an exit, which mine was. So he took it over for a week. When I moved back in, I could say that I had taken over Stephen Hawking's chair!

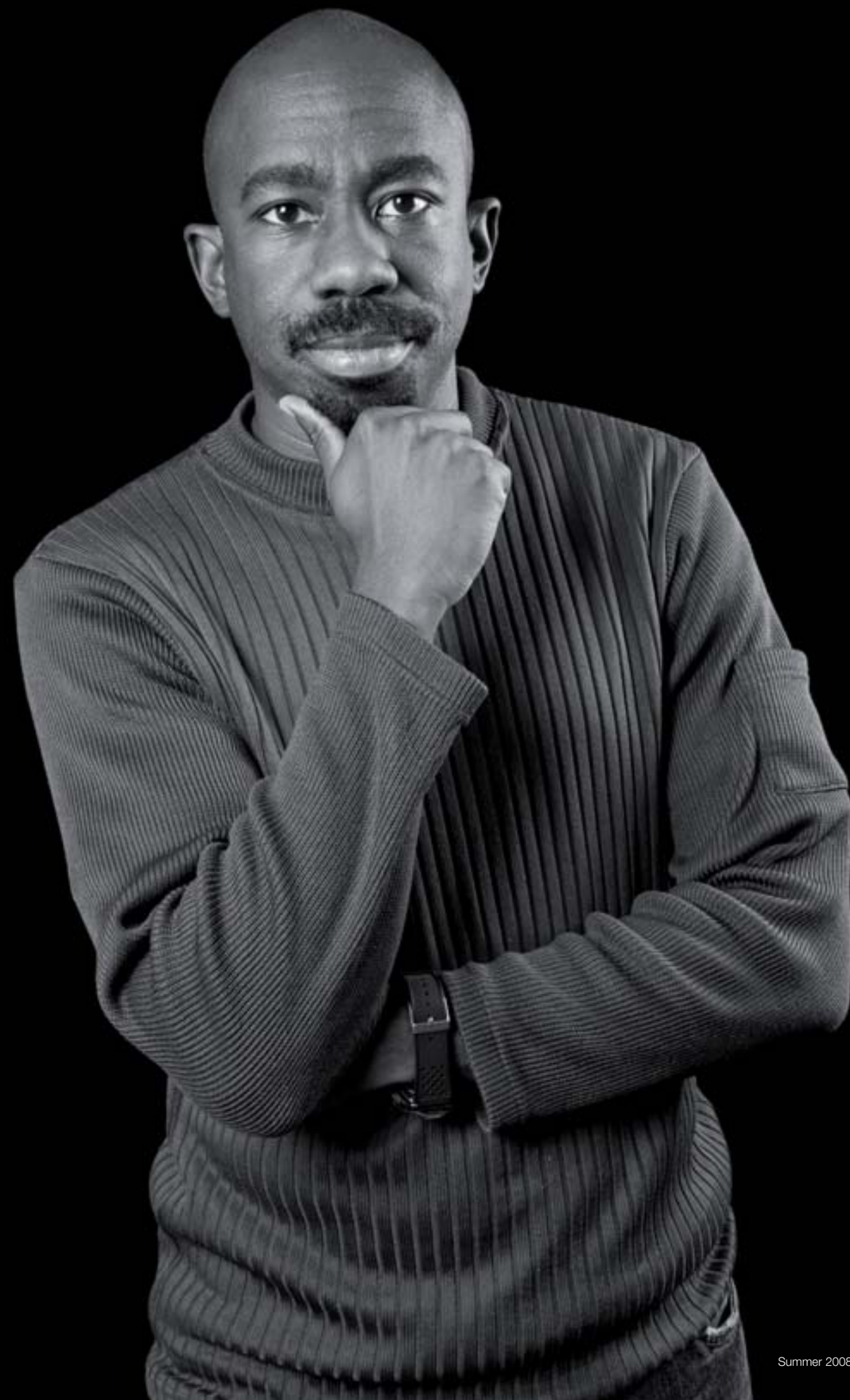
Over the years I've been moving across from physics to biology. After Germany I spent two years at the Ecole Supérieure de Physique et Chemie Industrielles in Paris, where I started applying statistical mechanics to biological systems. I also learned French, which was much easier than German – I'd done French at school and I have a little more affinity with it.

New experimental techniques are driving my current interest in biology. For example, certain kinds of jellyfish fluoresce when light is shone on them. The protein and gene responsible for this have been identified. You can insert the DNA sequence for the fluorescent protein into the genome of another organism (such as bacteria or mice) next to the DNA sequence for another protein that you want to study. Then in the normal course of its life cycle the organism will produce the protein with a fluorescent tag attached. By studying the cells of the organism under a microscope, you can track the motion of the protein and get some insights into its function. So instead of looking at something static under the microscope, you can actually see things move. That's why you need mathematics and physics, because suddenly you're looking at dynamical systems and this new type of biology needs theoretical approaches and mathematical models to describe it.

I've been looking at the physics of how a cell moves things around and acts in response to external stimuli. A whole new generation of mathematicians and physicists are going into biology to study these systems. That's very exciting. Bristol seems to be very committed to moving in this direction, and that's why I came here a year ago after five years at Leeds University.

It seems like I've always been moving. I sometimes wonder what it would have been like to grow up in one place. I went to many different schools, and I had to learn how to make friends easily and become a bit more adaptable. That prepared me quite well for the life of an academic – I'm quite used to moving. There are pros and cons: you end up having friends in lots of different places but you don't see them as often as you'd like to. It's easier with the internet but it still isn't the same.

Bristol is a very attractive city. I find people here quite laid back; there seems to be a relaxed attitude to life. It's not hectic, and I appreciate that. It makes for a good environment.



PAUL GROOM

LIFE BELOW ZERO

It's the coldest, driest, windiest continent on the planet. Soon it could be the flashpoint for international conflict. Good place for a spot of fieldwork? Absolutely, says Dr Andrew Kennedy, Lecturer in Biological Sciences and Course Director of the MSc in Ecology. He talks to Nick Riddle about working in the Antarctic.

Dingle Days are a mixed blessing in Antarctica. When the sun comes out and the temperature nudges above freezing, that's a Dingle Day. 'People tend to stop working and go out for a walk,' says Dr Andrew Kennedy. It's a chance to get clean, too – 'stripping off and trying to wash from head to toe and get your clothes back on before you freeze'.

That's the good bit about Dingle Days. The bad bit … we'll come back to that.

Kennedy first went to the Antarctic after he heard of a vacancy at the British Antarctic Survey (BAS) for a terrestrial ecologist. 'They'd collected ten years of data about the ecology of Antarctica,' he says. 'They wanted someone to analyse it for unifying themes.' As part of this he spent six months in Antarctica doing fieldwork of his own.

The BAS started in 1943 as Operation Tabarin, a secret naval operation to stop Nazi Germany taking over Antarctica. 'They had already dropped swastikas over the continent to claim it as theirs,' explains Kennedy, 'so the British decided to go down there and assert themselves. After World War II, rather than letting all that investment wither on the vine they continued it as a civilian operation.'

Antarctic territory has been claimed by many different countries, but in 1959 the signing of the Antarctic Treaty put all claims on hold. But the climate of co-operation is looking volatile: the oils and minerals beneath the Antarctic ice cap will only increase in value as other stocks dry up, and some day, says Kennedy, 'these claims will resurface. That's one reason why we maintain research stations in Antarctica – to protect our territorial claims.'

The extreme environment seems to bring out national character with unusual force: the Americans have bases scattered across Antarctica, including the first 'Antarctic City' at McMurdo Sound and the Amundsen-Scott base at the South Pole itself. 'The taxiway for their aircraft landing strip goes all the way round the Pole,' says Kennedy, 'so every time a US plane flies in it symbolically encroaches on every other territorial claim.' The Russians, meanwhile, built their Vostok base at a spot known as the 'Pole of Inaccessibility' – the highest, harshest point on the continent – 'just to show that they can survive the worst conditions in Antarctica'.

Kennedy's research centres on global climate change; in this case, he used the ten-year BAS data set to investigate the impact that a warmer, wetter climate might have on the biological communities of Antarctica. The data came from three different types of research: carefully controlled laboratory incubation experiments, field observations and a combination of these which is known as field manipulation – 'setting up a climate change lab in the field, in effect,' says Kennedy.

Doing this in Antarctica can yield unexpected results: what seems at first glance barren and lifeless can, with a bit of field manipulation, show itself to be anything but.

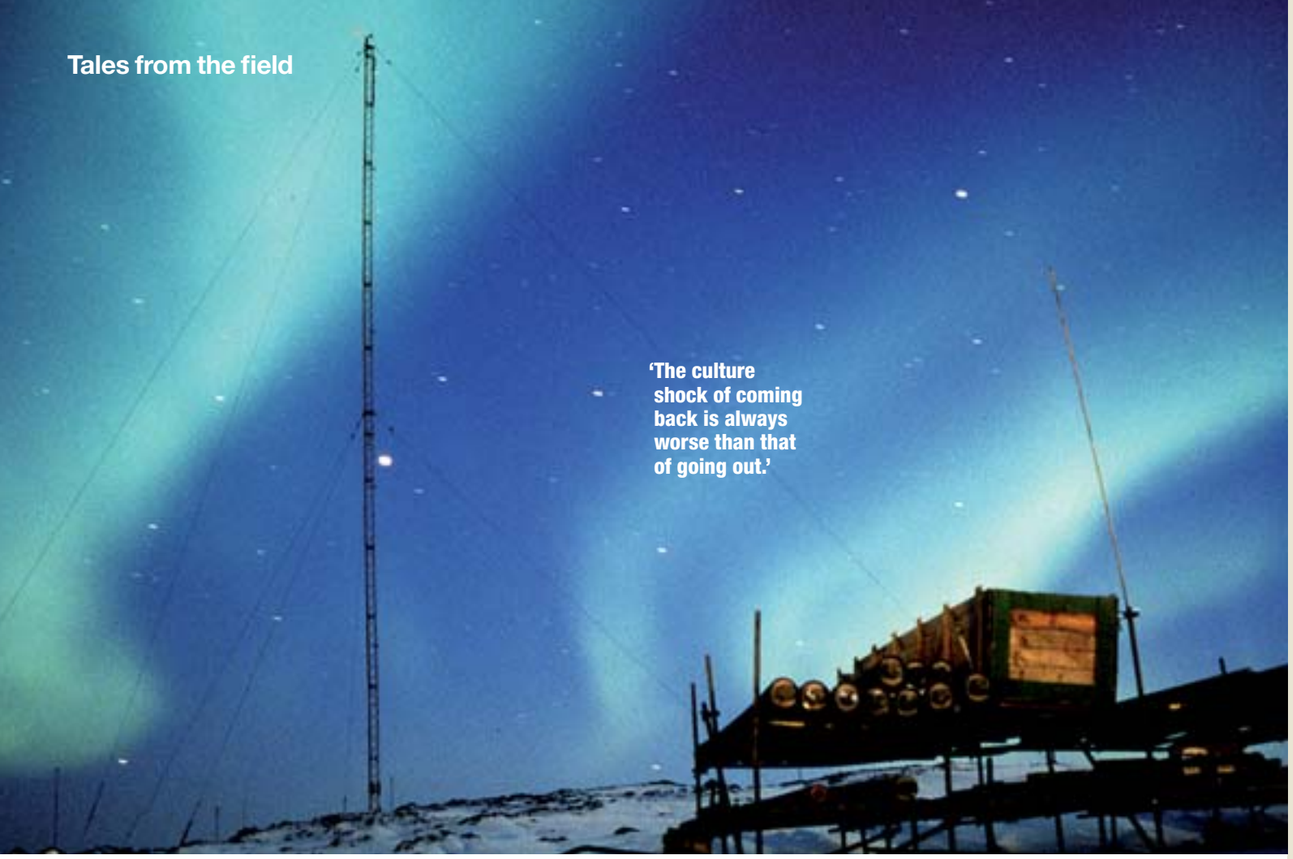
'Over 99% of Antarctica is covered by ice,' says Kennedy. 'The areas that aren't often look like bare, glacial screes with very few plants, and almost no invertebrates. But if you put a small greenhouse on top, little communities start springing up in the warmer environment you've created. The same thing happens if you transplant soil to the lab and incubate it at 15-25°C: a variety of plant species develop that were not recorded in the field.' The results suggest that warmer, wetter conditions in Antarctica could yield much more complex biological communities than occur today.

The species *homo sapiens* only began exploring the Antarctic in earnest in the early 20th century, and it's less than 100 years since the harsh conditions famously finished off Captain Scott and his party in 1912. Expeditions nowadays may benefit from innovations such as the helicopter and radio transmission, but going to the Antarctic is still no walk in the park.

The weather is one of the more obvious hazards. A major feature of Antarctica's weather systems is katabatic wind (from the Greek

ALL PHOTOGRAPHS: ANDREW KENNEDY

Left: Kennedy stops to enjoy the warmth of the sun during an evening traverse of an Antarctic glacier **Right, from top:** Summer at the BAS's Signy Station, where Kennedy was posted for six months; a colony of chinstrap penguins on Signy Island; Kennedy after five weeks in the field, far from shaving foam or shampoo; a helicopter arrives with supplies at a field base in the Stillwell Hills



katabatikos meaning 'going downhill'). 'The air above Antarctica gets very cold indeed because the ice reflects the sunlight back into space,' says Kennedy. 'The colder the air gets, the faster it sinks.' When it hits the centre of Antarctica, some four kilometres above sea level, the air spills over the sides and plummets downhill, picking up speed until it reaches the coast. That's bad news if, as is often the case, you're based on the shoreline. Polar tents can withstand katabatic winds and blizzards, but they have to be put up securely with ropes connecting each one, because visibility can be so bad that getting to the next tent is a matter of feeling your way along. If the wind is up, the only means of locomotion is crawling. Unless it's blowing too strongly, in which case you're stuck inside the tent. And that's when the hygiene aspects come into focus.

Polar tents have a thick groundsheet with a removable corner; 'That's the lavatory if you can't go out,' says Kennedy. 'Field teams used to be all-male; these days, with mixed-sex groups down there, all sorts of things are a big issue. Some people are too self-conscious to use the toilet at all.'

In the interests of the environment, anything that humans bring in to Antarctica has to be taken away, including whatever they excrete. Assuming you've overcome your self-consciousness, the results have to be bagged up and put outside the tent, where they freeze until you take them out with you. And now we come to the downside of Dingle Days: 'If that stuff thaws,' says Kennedy, 'you can imagine the smell.'

There are other drawbacks when the mercury rises above zero: polar tents are snowproof, of course, but not waterproof. Likewise, the windproof garments that are regulation in Antarctica – very thick, waxed affairs made of Egyptian cotton – don't repel water, 'because they don't need to,' says Kennedy. 'But if the climate gets warmer, that'll become a problem.'

This touches on a common misconception about Antarctica: that its extreme cold is the major limiting factor for life there. Not so, says Kennedy: 'Many organisms can survive temperatures of -10° to -20°C. They have anti-freeze agents in their bloodstreams. But no living organisms can survive without access to liquid water.' For life forms unable to manipulate a gas stove, frozen water is as much of a problem as no water at all.

Above: The aurora australis at night. 'I took this photo from Australia's Mawson Research Station at the start of the Antarctic winter, using a long exposure. The temperature was -27°C and I only had a few minutes outdoors before my camera packed up.'

Back in the human realm, Kennedy recalls the polar nights – or rather, the lack of them during the Austral summer: 'You see the sun going round endlessly, just above the horizon.' Did non-stop daylight ruin his sleep cycle? 'Not really. What does muck up your sleep is those winds. They can reach 90 miles per hour, and when they buffet the canvas it's like having a whip cracking by your head all night.'

Bearing in mind the long periods involved – from a few months to several years – Antarctic fieldwork belongs in a special category of experience, one that also includes space exploration and working on nuclear submarines. There are good reasons why NASA and the Pentagon have studied behaviour on Antarctic bases. But what happens when it's time to return to civilisation?

'The culture shock of coming back is always worse than that of going out,' says Kennedy, whose longest Antarctic stint was a relatively sane six months. 'All sorts of things start flooding back, especially colour and smell. You don't get the sort of smells down there that we get in temperate environments. The only real odour comes from the guano of the penguin colonies.'

Then there's the hustle and bustle of human activity and the lack of trust after living in a place with no crime or locked doors. Not to mention getting back to partners. 'The Australians have a leaflet on how to approach that, including some quite intimate advice,' says Kennedy. That's if the relationship has survived the long tour of duty in the first place; the polar postal system is no stranger to 'Dear John' letters.

For that very reason, Kennedy doesn't go down there any more. 'I loved being there, but I'm married now, with three small children,' he says. 'I can't imagine kissing my wife and kids goodbye, knowing that I'm not going to see them for six months. That would be too awful.'

But for those scientists who scoff at the notion of work–life balance, the Antarctic still beckons.

CHANGING PLACES

With several strings to her bow already, Sarah Agarwal transferred her project management skills from ILRT to non-governmental organisations fighting HIV/AIDS and gun violence in South Africa. She shares her experiences with Hilary Brown.

Having what is possibly the longest job title in the University isn't all bad, as Sarah Agarwal, project manager, business analyst and deputy internet development manager in the Institute for Learning and Research Technology (ILRT) found when she decided to take a career break. What she calls her 'weird mixture of skills' in all things web-related (and some that aren't – she's currently working on a business plan for a new academic course at the University) fitted the requirements of the Themba HIV/AIDS Organisation, a non-governmental organisation (NGO) in Johannesburg using theatre as a tool in HIV prevention.

Agarwal had been working in ILRT for four years when she decided it was time 'to do some meaningful work outside the limits of English society – and to have a huge adventure'. As a Quaker, she was also motivated by the principle of 'active witness' – in other words, 'getting off your arse and doing something'.

'Small changes in our behaviour here do make a huge difference to people's lives elsewhere.'

DAVE PRATT

Her application for the job with Themba was successful and suddenly she was in Johannesburg. 'It felt like the west coast of America, but in a bad decade,' she says. 'It was all highways, '60s and '70s low-rise architecture, sprawling suburbs, modern yet down at heel.' Not a particularly auspicious start, but more meaningful were her first impressions of the people. 'On my first day at work, my colleagues sang me a song. They gave me a wonderful card and said "welcome home" – what a bizarre, un-English concept. I thought this warmth would wear off, but it didn't. There's a connection between people there.'

Agarwal's remit was to set up an IT network, redesign the organisation's administrative processes and help recruit new actors for its community theatre work. All good stuff, but the small things she did were the most useful. 'Training people in the basics of how to use a computer, access the internet and set up an email address was hugely valuable to those individuals on a personal level,' says Agarwal. 'It opened up a whole new world and gave them the tools to follow interests, look for jobs and communicate with other people.'

Her next stop was Gun Free South Africa, where she worked with local communities in Namibia, Lesotho, Malawi and South Africa to set up 360 gun-free zones – places where people aren't welcome to bring guns. Sounds dangerous. But Agarwal was sceptical about warnings that South Africa was unsafe. 'Before I went I attended a course about the dangers, which consisted mainly of someone who hadn't been to South Africa since 2000 trying to scare me for two hours. My reaction was to take it with a pinch of salt,' she says. 'There's a lot of hypocrisy in the western view of South Africa and other developing countries. It's not until you experience a place that you realise you shouldn't believe everything you're told.'

There is a high level of gun ownership in South Africa, fuelled in part by fear and suspicion. 'Apartheid was very successful in making people distrust one another,' says Agarwal. 'People would tell me that while their own community was safe, something bad would happen to me if I went to another area. I'd go to that other place and be perfectly safe, but people there would utter similar warnings about the area I'd just come from.'

Despite challenging circumstances, Agarwal encountered a huge sense of optimism and a feeling that change is possible. Democracy is evident in unexpected freedoms, such as open access to Johannesburg's newly built Constitutional Court. 'You can just walk through the doors and swing around in the judge's chair,' says Agarwal. 'It truly feels like a court for the people. I can't imagine being allowed to frolic around our own High Court.'

She was also struck by how South Africans have a real sense of place, which helps give credibility to community-driven initiatives such as Gun Free South Africa and Themba's theatre project. 'In the townships and poorer communities, there is a strong sense that supporting and helping each other is part of life, not an optional activity,' she says. 'There's an African word for this – "ubuntu" – for which we have no equivalent.'

Inspired by this, she now volunteers with Bristol Fairtrade Network and the Evaluation Trust, which helps charities to evaluate how effective they are. 'Many of the NGOs I came across lacked direction, and there is little assessment of the impact they have,' she explains. 'I tried to do my bit to plug some of the gaps – producing a five-year gun-reduction strategy for Gun Free South Africa, for example – but there's always more to be done.'

Agarwal tries to make this ethos of contribution part of her life: she is pushing for her department to stop using bottled water ('an unnecessary industry that is hugely polluting') and recently organised a visit to the University by a coffee producer from a fairtrade co-operative in Nicaragua to help raise awareness of how fairtrade works and the impact it has on communities and individuals. 'It's been impossible to come back and ignore the complacency and materialism of the West,' she says. 'We can't pretend we're not part of world's problems. We can all do something, even if it's just asking for fairtrade fruit and biscuits in The Hawthorns. Small changes in our behaviour here do make a huge difference to people's lives elsewhere.'

You can read more about Sarah Agarwal's experiences in South Africa on her blog: http://aggy.wordpress.com/

JASON INGRAM

DIGGING DEEP

Drs Nicoletta Momigliano and Tamar Hodos, Senior Lecturers in the Department of Archaeology and Anthropology, go back a long way – about five millennia, in fact. Hilary Brown meets two archaeologists with a penchant for the past.

Laying the foundations

NM: My first degree was in Classics at the University of Pisa, but reading Classics in Italy is very different from the UK. It was more the study of the classical world in its totality – you had to have some knowledge of the languages, literature, history, philosophy and, last but not least, archaeology. During my second year, I attended an optional course on the methodology and field techniques of excavations; people who did well in the exam were allowed to excavate with the tutor. So, every summer in my second, third and final year of university, I dug an Etruscan settlement on the island of Elba and a Neolithic settlement in Apulia. I never looked back.

TH: I'd been introduced to the classical world through Greek mythology when I was a child. I lived in England for a year when I was 14 and did a Greek translation course at school. At university in the US, you don't specialise until the third year of a four-year course. One of the units I took before declaring my major was 'Introduction to Archaeology'. I came out of the first lecture thinking, 'This is it'.

NM: Wanting to know more about the distant past of Greece also led me to archaeology, after reading a fascinating book about the decipherment of Linear B, a Greek Bronze Age script. If you really want to know about the background to classical Greece, you have to be an archaeologist. Yes, you can get some fascinating information from Bronze Age texts, but to me the most interesting aspects of the Aegean in the Bronze Age are the archaeological discoveries, such as those made by Schliemann at Troy and Mycenae, or by Evans at Knossos.

TH: For me, archaeology brought together the history, philosophy and literature of the Greek world. It was so tangible – it made me realise that the ancient Greeks were real people who made and used things, and it got me wondering why and how. But I didn't see how I could really understand the material culture without knowing about the other aspects of Greek life. So I did my undergraduate degree in Classical Studies, which included Greek, Latin, ancient history, philosophy, art and archaeology. It wasn't until I did my MA and DPhil that I concentrated on the archaeology.

A small world

NM: After I graduated, I wanted to spend a year abroad and learn more about excavations. I became a student at the Institute of Archaeology in London (now part of UCL). I really liked the intellectual atmosphere there, especially the friendly, unstuffy relationship between students and teachers. So I decided to stay on to do a PhD. After almost 25 years, I'm still here ….

TH: I came to the UK on a six-month work permit after my undergraduate degree and got a job at the Institute of Classical Studies (ICS), a research centre at the University of London. It was pretty lowly work. I did everything from making the tea to turning slides in lectures, in the days when there were still slides to turn. But actually, it was great, because I got to attend all the lectures *and* be paid for it.

NM: That's where we first met, do you remember? I was attending, or possibly even giving, my first 'Mycenaean Seminar'.

TH: That's right. It was inevitable, I guess. Everyone who's anyone in classics and archaeology passes through the ICS because it's so centrally located and has a great library.

NM: And at that time they served some of the best coffee in London; they used double the quantity of coffee suggested by the coffee-machine manufacturer! After London, we met again in Oxford, when I was a Research Fellow at Balliol and Tamar was doing her DPhil at Keble. Our paths crossed again here in Bristol in 2000.

Doing the groundwork

NM: Now we're setting up a joint project in Lycia, south-west Turkey. My speciality is the Bronze Age, Tamar's is the Iron Age; our research interests harmonise very neatly.

TH: Humanities research can be very competitive because it's so independent. There's very little collaboration compared with the sciences. Fieldwork is the teamworking element within humanities-based archaeology, and I really enjoy collaborating with others where everyone works towards a common goal.

NICOLETTA MOMIGLIANO

Left: Nicoletta Momigliano (left) and Tamar Hodos
Above: Bronze and Iron Age pottery from the excavation site in Lycia

NM: Because of our research interests, we chose to investigate a site with no classical remains. Turkey is full of famous classical sites, like Ephesos and Pergamon, but it's very difficult to get underneath the Graeco-Roman remains to explore the periods that interest us most, that is, the third, second and early first millennia BC.

TH: I've done fieldwork in eastern Turkey, and Nico's worked on the Turkish Aegean coast. We decided to combine our interests in a region in between – Lycia – where very little work has been done on these periods. Yet we know the region was occupied before the classical period. You can see it in the place names that survive into the Graeco-Roman period, such as Oinoanda, Cadyanda and Tlos. Although these are famous Graeco-Roman cities, parts of the names are actually earlier Hittite.

NM: And there are Egyptian and Hittite texts of the second millennium BC that refer to the people living in this region, as well as much later references to Lycian pirates. Besides, for clues to early settlement in the area you only need to walk around the countryside and you'll see plenty of pre-classical pottery in the fields.

TH: We know people were there but we don't know anything about their material culture.

NM: What was the layout of the settlements? What can we tell about social organisation from the archaeological remains? Did they use some form of writing? Whom did they trade with?

TH: Did they make their own pottery or import it? What can we learn from it about storage, eating and drinking, ritual, status, or social and commercial interactions locally and beyond? We have no idea. It's pretty much a blank slate, which is rare in archaeology. That's what makes this project so exciting.

NM: Of course. Everybody has to live in some kind of house, everybody uses crockery, but how do these things differ, and why? Everybody has to eat, but the kind of food eaten, its preparation and so on can tell us something about social structures, culture and history. Coming from Italy to Britain in the 20th century, I had to relearn all sorts of rules about food and drink, not to mention other things involving material culture ….

The art of diplomacy

TH: We've had to jump through hoops to get the project off the ground. It's taken two years of negotiation so far. We've drunk so much tea! Excavation in Turkey is very regulated. You can't just go and dig in a field without permission. Turkey has a very responsible attitude towards its heritage; the authorities ensure that sites are excavated properly while

also requiring sustainability so that excavated material can be stored appropriately in the long run. They encourage site preservation to foster heritage tourism.

NM: It's also very important for us that we integrate with the local community. I've worked on one or two projects where the relationship between the local people and the fieldworkers left a lot to be desired ....

TH: We're also collaborating with Turkish archaeologists and involving Turkish university students in the project. It really helps foster multicultural understanding and the cross-fertilisation of ideas.

NM: You have to be mindful of local traditions, too. We'll be there this summer during Ramadan. I know most of our team won't be able to cope with fasting; we'll have to be careful to eat and drink in private during daylight so as not to cause offence.

Fieldwork and family

TH: What will make it particularly interesting for me is that I'll be taking my children, who'll be four and one. Everyone here thinks I'm mad to take them, but Turks are so family-orientated that they'd think I was insane to leave them behind. I've seen wives and partners accompany male colleagues on fieldwork projects to look after their children, but my husband has his own career and can't come to look after ours. It's hard when the kids are *so* young and the potential time away can be two months, which is how long an excavation season usually lasts.

NM: It's getting better, but there are still fewer women than men directing fieldwork projects: it's important to both of us to prove that being a mother with a young family should not be a bar to conducting fieldwork. And, in any case, Turkish people tend to be very family-friendly; finding help with babysitting may well be easier there, especially in a small village.

TH: Right, as long as my son wears the right football shirt for the favourite team of the area. (Laughs.)

Getting your hands dirty

TH: Excavation is physically and mentally tiring, and the physical environment can be inhospitable, which adds extra pressure.

NM: The daytime summer temperatures in Turkey regularly reach the low forties. You have to start at 5.30 am, because you can't work in mid-afternoon.

TH: It can also be very humid, and you can dehydrate in a matter of hours.

NM: When you direct an excavation you only really stop working when you sleep. And a lot of the work can be incredibly monotonous.

TH: It's definitely not all Indiana Jones-style glamour. It can be stressful, especially when you have a set of goals you need to accomplish within a fixed time frame. Often, you need to dig down to a certain level of stratigraphy to achieve your aims for the season. You have to make sure you've recorded everything properly and yet you don't have the time to lovingly uncover every object with a toothbrush.

NM: You certainly have times when it seems that nothing is happening. Then all of a sudden it's the end of the day, or season, and you find exciting things that have to be dug out, recorded, photographed, drawn and stored very quickly because if you don't they're going to get ruined … or stolen!

An archaeologist's eye view

TH: Being an archaeologist, you can't help stopping at every set of roadworks you come across and looking at the strata. It also makes me look at the physical environment around me in a certain way. I'm so used to excavating foundations and trying to reconstruct the building phases that when I'm confronted with a standing building, I find myself imagining it as an excavation site – what would the foundations look like, what would survive in the ruin, and how would I interpret that? Would I come up with the same building that's in front of me?

NM: You do look at things differently. For example, I went to an exhibition at Arnolfini recently, called Persepolis 2530, about the site of a week-long party held in 1971 by the Shah of Iran among the ruins of the ancient Persian city. The artist had reconstructed part of the temporary architecture built for the celebration, itself now a ruin. I was there with my husband, who's not an archaeologist, and he was disappointed because all he could see was the frame of a huge tent. But I could see that the artist was doing something very archaeological: the remains of the tent symbolised the political significance of this moment in Iranian history, which led to the Cultural Revolution.

The past in the present

TH: Archaeology is important because it teaches us about human experience in the past, which in turn helps us understand ourselves, and society, today. We're all part of the same species, even if we have different ways of living, socialising and expressing ourselves in words or through our choice and use of objects. Study of past civilisations shows that there are different ways of doing things and this encourages multicultural consideration.

NM: Other subjects, such as philosophy, history and literature, can all help us understand the past, but archaeology provides the physical evidence. And it allows us to look at incredibly long and distant periods of time, and aspects of human life, for which there are no written records.

TH: Our life is structured and influenced by the things around us. You can't divorce people from the objects that they use and the environments they use them in. Archaeology is a very holistic discipline; it integrates aspects of anthropology, history, science and the arts.

NM: I'm also very interested in how archeology affects our daily lives, in how the past is used in the present.

TH: I love listening to *Yesterday in Parliament* – it's basically a slanging match between politicians, but that emphasis on rhetoric comes directly from the Greeks. Even the shape of the debating chamber has its origins in the Ancient Greek world.

NM: There are examples of uses of the past in the present everywhere – just think of Birtwistle's new opera, *The Minotaur*, which includes references to Minoan Knossos or the fact that Minoan Crete, one of my main research interests, is marketed as the cradle of European civilisation everywhere, even in EasyJet brochures ….

TH: Either by tradition or deliberate design, archaeology links the ancient and modern worlds. It's everywhere.

'It's not all Indiana Jones-style glamour … you don't have time to lovingly uncover every object with a toothbrush.'

HUSSEYN KÖKTÜRK

Above: Bay of Fethiye, with the mountains of Lycia in the distance

Bristol in pieces

NICK RIDDLE

TWENTY QUESTIONS

Claire Axel-Berg, Head of the University's International Office, has been outsmarted by cats and appalled by a Heathrow terminal, but feels an affinity with guinea pigs.

What is your favourite meal? Anything that doesn't come on a plastic tray. Although I'm rather fond of the airline peanuts that come with a 'may contain nuts' warning.

If you were offered one superpower, what would you choose? The ability to teleport to another country without having to sit on a long-haul flight.

Cat or dog? Or neither? Dog. I have tried cats, and they outwit me too easily. I could do with a bit of blind devotion, and I reckon I stand a better chance with dogs than cats or teenagers.

What do you sing in the shower? It's hard to tell, even *I'm* not sure what it is. I don't hold a tune particularly well.

Favourite smell? Tomato plants. They smell like the fruits should taste, but seldom do.

Your greatest character flaw? Self-doubt. Or is it?

What keeps you awake at night? Noisy drinkers from the pub opposite … who often include my own children, unfortunately.

Native Americans believe we all have a Spirit Animal. What would yours be? Guinea pig. They're quite the nicest people to be around.

Favourite spot in the world? Clifton Village on a Saturday morning before the shoppers arrive.

Least favourite spot? Heathrow Airport, Terminal 3 Arrivals Hall. Desperate place – I'm surprised people don't just turn back.

One book, one piece of music, one film Bill Bryson's *Notes from a Small Island*, 'Nimrod' from Elgar's *Enigma Variations*, *Raiders of the Lost Ark*.

Who would you like to banish to a desert island? Whoever dreamed up *Big Brother* (not George Orwell!).

You can make one new law. What would it be? Three-day weekends. Definitely.

Your biggest life-changing experience (so far)? Travelling to Asia many years ago. I realised how much there was to see, and I still haven't finished seeing it.

Something you wish you'd known about life when you were 18? That you don't stop being a person at 40. Teenagers can be very dismissive, and I'm pretty sure I was one of them.

'My philosophy is this …' Don't waste time sitting around thinking about it – just do it. Only to be applied to simple household tasks; I'm not advocating serious action without thinking it through!

When and where were you happiest? Cornwall, summer holidays. I take my children to the place I spent my childhood summers, and it is a really important part of all our lives.

Where will you be ten years from now? Digging a garden in Portugal.

How would you sum yourself up in one line? Small, but I still take up a lot of space.

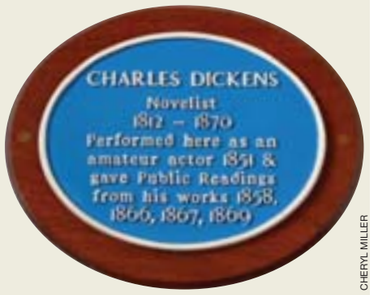
Is there a question you'd like to be asked? 'What is your greatest achievement?' Definitely my children, but ask me now in case they decide to do something awful in the near future.

THE PLUG

***Coleridge's Afterlives* Edited by James Vigus and Jane Wright** (Palgrave Macmillan)

The afterlives of Samuel Taylor Coleridge (1772-1834) appear in a vast spectrum of writers throughout the 19th century and reach into the heart of modern literary theory. These essays, co-edited by Jane Wright, Lecturer in English Literature, examine for the first time the breadth and variety of these afterlives across a number of literary movements, genres and periods. Topics include the recollections of Coleridge by De Quincey and Bristol-based publisher Joseph Cottle; his influence on American writers such as Ralph Waldo Emerson; and Coleridgean 'adrogyny' contrasted with Victorian notions of 'manliness'.

THINGS YOU NEVER NOTICED
6. CHARLES DICKENS PLAQUE



CHERYL MILLER

Clifton doesn't lack the odd blue plaque or two. One of them is mounted on a wall in the reception area of the Victoria Rooms. The building, bought for the University by George Wills in 1920 and now home to the Department of Music, became the focus of Clifton society after it opened in 1842. The Assembly Rooms, as they were then called, hosted appearances by figures such as Ellen Terry, Oscar Wilde, the singer Jenny Lind – and Charles Dickens, who performed there in 1851 with an amateur company that also included Wilkie Collins, author of *The Moonstone* and *The Woman in White*.

Dickens returned four times to give public readings from his works, including *A Christmas Carol* in 1858, to great acclaim from the local press. 'Mr Dickens,' said the *Clifton Chronicle*, 'now moved his hearers to laughter and anon melted them to tears as he graphically delineated the creations of his genius.'

CHALK MEN AND VELVET CUSHIONS

Professor Ronald Hutton's self-professed 'vulgar tastes' as a historian have made him a regular contributor to TV and radio. Over the past 25 years he's shared his expertise on subjects ranging from the Tudors and Stuarts to ancient paganism, witchcraft and magic. He talks to Hannah Johnson.

DAVE PRATT

It was freezing in Harvington Hall, but Ronald Hutton was thankful not to be one of the extras. The programme-makers had asked him to talk about the Elizabethan magician John Dee; they had other plans for the handful of actors they'd brought along.

'They gave me whisky and hot coffee to keep me from shivering,' he says. 'But in the next room they were shooting a "romantic" scene – namely, the actors taking their clothes off – without even putting the heating on.'

The location, a Worcestershire stately home, was chosen for its spooky atmosphere, but the historian in Hutton was more interested in its former role as a shrine to Catholic martyrs and the fact that it boasts 'the best priest holes in England'. Getting access to such remarkable places is, he says, one of the great pluses of working in TV.

'As a historian, I'm used to crawling up to the tradesmen's entrance to stately homes, paying my admission fee and being shown grudgingly to a freezing cold desk surrounded by some peeling wallpaper, where an official brings me the documents,' says Hutton. 'If I go with a TV crew, I get to use the front entrance and they offer food and hot drinks. Everything is brought to me on a velvet cushion – metaphorically.'

Some of Hutton's media work has been memorable in other ways. A call from the Discovery Channel, for example, resulted in a spectacular trip to the Orkney Islands.

'I left Bristol very early on a May morning,' he recalls. 'At Heathrow I was put on to a plane for Aberdeen, where I boarded something with very small wings for the Orkney airport. By coffee time that morning I was surrounded by nesting sea birds with all these ancient monuments around me. It was an utterly dreamlike start to two wonderful days where I could spout some ideas about prehistoric archaeology and meet some of the best archaeologists in their field.'

Getting involved with TV documentaries has allowed him to test some theories of his own, including the hypothesis that Silbury

'We made a quantum leap in the history of an ancient monument simply because a TV company had decided to make a programme.'

Hill near Avebury in Wiltshire, the biggest prehistoric mound in Europe, might have been a signalling platform.

'An American TV company had the cash to run an experiment in which they put a big scarlet banner up on the hill and then sent runners out,' says Hutton. 'And I was right: you *can* see the thing simultaneously from all parts of Avebury. Archaeologists – quite rightly – would never have given me the time of day, but TV made it possible.'

Far from 'dumbing down', then, it sounds like TV can enhance a historian's work?

'Occasionally you do get TV that breaks new ground,' Hutton agrees. 'The best thing I've contributed to was a series for Channel 4 about ancient monuments. We actually dated the Long Man of Wilmington, a chalk figure in Sussex which was thought to be prehistoric or maybe Anglo-Saxon.' The production company paid for a proper analysis of the chalk using a new technique. The result: 'It turned out to be Tudor. So we made a quantum leap in the history of an ancient monument simply because a TV company had decided to make a programme. I'm so proud and happy to have been involved in that.'

Partly as a result of his media profile, Hutton is in great demand as a public speaker, giving talks to village societies, local museums and schools. He's also been asked to design stamps for the Royal Mail and was once approached by Disney to act as a consultant on a film project.

'They wanted to make a sequel to their film of TH White's *The Sword and the Stone*,' says Hutton. 'I provided lots of ideas for them. I was handsomely paid and had lots of fun. In the end they decided not to make the film, but that didn't matter because of all the profit, emotional and literal, I had on the way.'

Hutton is indebted to TV in other ways too. He has fond memories of the history and archaeology programmes of the 1960s and even claims to have passed the Cambridge entrance exam on the strength of his viewing habits.

'Knowing how broad the Cambridge papers were, I took notes as I watched, so in the exam I could answer with a fair degree of superficial fluency on stuff as disparate as paleolithic cave paintings and Gladstone,' he says. 'That went down well with my rather jaded examiners.' By contributing to TV now, Hutton hopes that he, in turn, will inspire the next generation of historians.

'I'm lucky that my disposition and circumstances have enabled me to do this type of work,' he concludes. 'I was trained for the stage, that's the critical thing. Most academics can name a career they might have had instead; mine was acting, so I'm used to being directed. That makes me putty in the hands of TV directors.'

A MAN OF MANY PARTS

Pete Dickens, AIMS Senior Human Patient Simulator Technician in the Department of Physiology and Pharmacology, is not alone in his work. He shares a room with a life-sized manikin. Hilary Brown meets the man behind Stan.

It's half an hour before a fourth-year medical student physiology practical, and Pete Dickens is getting into character. Will it be the retired docker with a dodgy ticker, the thrusting young executive with a peanut allergy, or the motorcyclist involved in a nasty collision?

Depending on the teaching scenario, Dickens, with the help of a computer, will give a life-sized model called Stan the characteristics and symptoms of these various personas so that medical students can study his illnesses and devise and carry out appropriate treatments.

Stan D Ardman, named after 'standard man', is a hi-tech manikin known as a human patient simulator. He and his minder, Dickens, are based in the Applied and Integrated Medical Sciences (AIMS) CETL, one of the University's two Centres for Excellence in Teaching and Learning.

Dickens' arrival at the University preceded that of Stan by five years. He came by way of the Bristol Royal Infirmary, where he worked as a medical laboratory assistant, and the University of the West of England, where he was a nursing skills technician, finally landing a job in Bristol's physiology lab in 2000. 'I was drawn to working in education, perhaps because I dropped out of a metallurgy degree – I've always felt as if I've had a debt to pay back,' he explains.

When the University won some funding to invest in a human patient simulator in 2005, he successfully applied for the corresponding technician's post. By this time, his father had died of a heart attack, which fuelled his interest in physiology. 'I wanted to understand what had happened to him,' says Dickens. He was also fascinated by the idea of the manikin, and the way in which technology and education drive each other to advance knowledge.

There's no question that Stan has revolutionised teaching at Bristol. Until he came along, students had been limited in the sort of tests they could carry out. They still take each other's pulses and monitor heart rates, but – young, healthy souls that they are – the results never vary much. Stan, on the other hand, can be programmed to be any age and have a whole range of symptoms. One day he's fit and healthy, the next he's at death's door.

'Stan has a respiratory and a cardiovascular system, so he breathes and has a pulse rate, which vary according to how ill or well he is,' says Dickens. Even the pupils of his eyes react to light. He is also attached to a catheter so students can pump him full of drugs and watch the effect this has on his body.

'What's important is that the interventions Stan undergoes generate real data in real time,' says Dickens. 'If we take a litre of blood from him, his heart rate goes up and his blood pressure comes down, and you see these effects as waveforms on a monitor, as you would with a real patient in a hospital.'

Stan sometimes has to lose more than a pint of blood for his art. He may be hit by a virtual car, breaking his femur and losing another two litres of blood. Then, as he's being lifted into the ambulance, he gets dropped and his fractured ribs puncture his spleen, causing him to lose yet more blood. The students will see the physiological response to this haemorrhaging in a gradual lowering of his blood pressure until he finally falls unconscious.

By the time students are in their fourth year, psychology becomes as crucial as physiology and things start to resemble an episode of *Casualty*. Previously, Stan has been a model to which various conditions have been applied, but now he's a person. He's unwell and in shock and has been brought into hospital, and the students have to treat him as if he were a real patient.

This is where Dickens disappears behind a screen of one-way glass to don a pair of headphones, switch on a mic and metamorphose into one of his multiple personalities. Each character he plays has a name, an age, a job and a physiology. The students take a medical history and try to work out what's wrong from the symptoms he describes. He may not be very coherent on occasion, but neither would you be if you were suffering from, say, acute appendicitis.

'You do have to suspend your disbelief to some extent,' says Dickens 'Stan is made of plastic and metal, after all. And his voice always has a Bristolian twang to it, however hard I try.' But it works well enough for the students to make their diagnosis, apply the treatment and watch how the patient responds. Or not. If they make a mistake, they're not spared the consequences, and Stan shuffles off this mortal coil on a regular basis.

Running the experiments and maintaining Stan (his face gets grubby and his joints wear out like the best of us) is a full-time job for Dickens. Data from the experiments also have to be tested – Stan has a reputation for fidelity to maintain, after all. He even has a devoted following on Facebook (interests include snorkelling – not for nothing does Stan endure frequent intubation with adjustable lengths of snorkel tubing).

Dickens' work in helping to breathe new life into both Stan and the student learning experience won him the Medical and Veterinary Sciences Faculty Award for Support for Teaching and Learning this year, of which he is justly proud. 'I'm very happy being Stan's agent,' he says. 'Even if he does receive more valentines than I do.'

DAVE PRATT

Left: Get thee behind me, Stan; Pete Dickens and Stan D Ardman, but which is which?

THE LOVER'S COMPLAINT

Once upon a time, the pangs of unfulfilled love were seen as the symptoms of a real, physical ailment. Dr Lesel Dawson, author of a new book on the subject, believes that some of the wilder Renaissance theories about lovesickness suggest an attitude towards mind and body that isn't so alien after all. She talks to Nick Riddle.

'My interest in literature has always been partly about getting into people's minds,' says Dr Lesel Dawson, Senior Lecturer in the Department of English. 'I've always wanted to explore how our intellectual and emotional lives are represented in literature.'

Case in point: love. There's moderate, fulfilled love, and then there's the other kind: obsessive, intense, unfulfilled. Writers and artists, not surprisingly, have found that the second variety makes for better material than the first.

As a graduate student at Oxford, Dawson was looking at madness in Renaissance literature and came across a disease known as lovesickness. She had found the subject of her PhD and much of her subsequent work.

Dawson explains: 'Today there are a variety of ways of explaining and categorising obsessive love: as a form of depression, as a chemical imbalance, as a type of obsessive-compulsive disorder, or as a product of our childhood experiences or underlying instincts. In the Renaissance, the ways of understanding lovesickness were just as diverse.' These explanations, given wide credence in their day, are nothing if not colourful. Take the theory, based on the 'four humours' model of human physiology proposed by ancients like Galen and Hippocrates, which suggests that intense sexual desire scorches the humours, causing melancholy. Or how about this rather vampiric theory, conceived by the 15th-century philosopher Marsilio Ficino? 'He calls it "fascination",' says Dawson; 'the lover's hungry gaze draws a fine vapour of blood out of the beloved's eyes towards the image in the lover's mind.' But this striking idea also has a darker aspect: 'The vapours travel through the lover's body to the liver, infecting the body with alien blood.' Hence the sickness.

JASON INGRAM

'Lovesickness runs from lofty, contemplative forms to more extreme ones that eventually result in madness.'

Dawson has studied how these and other conceptions of lovesickness were re-imagined by 17th-century dramatists such as William Shakespeare and John Webster, and by poets like John Donne (who cultivated the popular 'lovesick look' in a famous portrait which shows him in a pose signifying forlorn yearning: shirt unbuttoned, big floppy hat, thousand-yard stare). She has also gone back to primary sources, examining personal letters and the case notes of physicians. This has yielded a more complex picture of contemporary attitudes to lovesickness than previous accounts have suggested, especially where gender is concerned.

'The standard view is that where male lovesickness is elevated, noble and philosophical, female lovesickness is a destructive bodily ailment, along the lines of hysteria,' Dawson explains. 'But in the medical and literary texts of the period, this isn't the case. There's a spectrum of lovesickness that runs from lofty, contemplative forms to more extreme ones that eventually result in madness, and this spectrum applies to women as well as men.'

Another layer of complexity involves the interplay between mind and body. 'Lovesickness is a species of melancholy, which is a physiological disease, but it can also have spiritual, intellectual aspects,' says Dawson. 'The early modern period sees a close connection between emotional and physical states. And it's a two-way process: the physical state can lead to something emotional, and vice versa.'

This is beginning to sound familiar. Are we moderns coming full circle, after a century or two of separating mind and body? 'Look at Prozac, or recreational drugs like Ecstasy,' says Dawson. 'They work because emotions have physiological and chemical components. So although some of the details of Renaissance medicine seem bizarre to us now, their way of conceptualising emotions and well-being is not a million miles away from our own.'

The relationship between mind and body in 21st-century medicine is explored in a new course that Dawson helps to teach: the BA in Medical Humanities, designed for medical students at Bristol. 'They do a year of English and Philosophy courses, some of which are designed specifically for them but are also open to Arts students.'

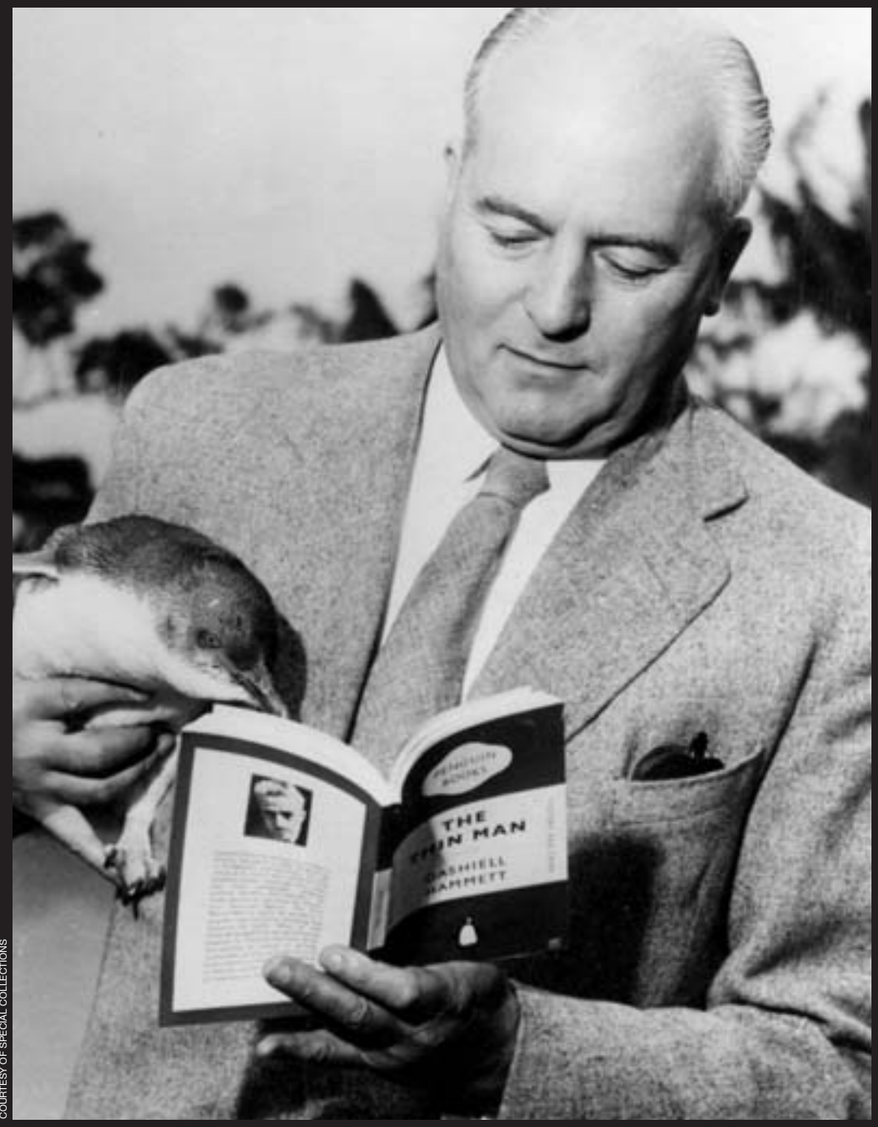
The medics get to look at literary representations of illness – Keats and consumption, Freud and Shakespeare, AIDS in novels like Alan Hollinghurst's *The Line of Beauty* – and also examine the philosophical basis of some of the assumptions behind medicine.

The BA is proving very popular with medical students, and the next couple of years should see the launch of a new MA in Medical Humanities. 'Students seem to enjoy the new perspectives they get on medicine from literature and philosophy,' says Dawson. 'They get a sense of how ideas about illness have changed and can pursue their own interests for the dissertation, which can also involve their clinical experience.' This new element in modern medical training is gaining currency, thinks Dawson, 'because of the emphasis on doctors having good communication skills and responding sensitively to their patients' emotional needs'.

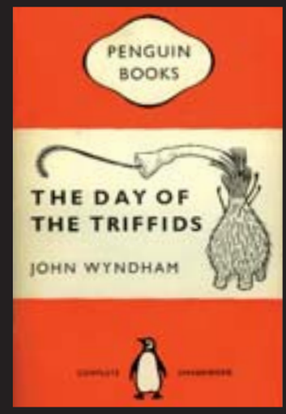
This notion echoes again that earlier era, when doctors complemented their bloodletting and purging treatments with a dose of psychology. The 17th-century physician Richard Napier described treating various people for lovesickness; in one case, says Dawson, 'a young man is brought by his parents because he's desperately in love with his mother's servant. Napier gets to know him, and in the end he tells the parents: "You must let him marry where his heart is set or he will remain mad and foolish".'

So why is lovesickness no longer part of our cultural landscape? The case above suggests one reason. 'It's often a form of protest,' says Dawson. 'Lovesickness often arises if a lover is prevented by class or convention from being with their beloved. It's a way of saying "I'm going to die if you don't let me marry the person I'm in love with".' So perhaps, in parts of the world where such choices are still restricted, lovesickness persists.

After devoting a decade of work to this often spectral malady, Dawson is ready for something more bracing: revenge, as it appears in literature and film from Ancient Greek tragedy to Clint Eastwood's *Unforgiven*. After all, when it comes to understanding human beings, love is only part of the equation.



COURTESY OF SPECIAL COLLECTIONS



PRESERVE OF THE PENGUINS

Above: Cover design by Hans Schmoller, taken from *Penguins Progress 1935-1960*, published 1960, Q25; *Day of the Triffids*, by John Wyndham, published by Penguin in January 1954, 993, with a triffid designed by Wyndham; Penguin logos at play, taken from *Penguins Progress 1935-1960*, artist unknown; Allen Lane and penguin, DM1294/2/Photograph Box 2/Allen Lane

The University's Special Collections holds an extensive archive relating to the history of Penguin Books from their establishment in 1935 by Allen Lane (of Bristol) to the present day. The archive contains editorial files relating to the publication of each book (including author and editor correspondence) as well as material relating to the history of the company, book design and individuals – including designers – involved in the publishing process. Copies of most Penguin Books published can also be found in the archive, which formed the basis of a recent exhibition on 70 years of Penguin book design. It is to be studied and catalogued online, thanks to a £650,000 grant from the Arts and Humanities Research Council. The four-year project will be led by Dr John Lyon of the Department of English, with co-investigators George Donaldson (English), Dr Hugh Pemberton (Historical Studies) and Dr Ika Willis (Classics).

Endnotes

1 'Conker' by Annie Morris, one of the artworks on show at the University's Botanic Garden over Easter. More than 25 local artists took part in the exhibition and sale of original botanical paintings and drawings. Morris, a graduate and a member of the Society of Botanical Artists, paints in watercolour and many of her paintings have been reproduced as prints and cards.

2 An artist's impression of the head of *Kryptops palaios*, one of two previously unknown 110-million-year-old carnivorous dinosaurs named by Steve Brusatte, an MSc student in the Department of Earth Sciences. Fossils of the short-snouted *Kryptops* and its contemporary, *Eocarcharia dinops*, were discovered in the Sahara Desert by Brusatte's former research adviser, renowned palaeontologist and dinosaur hunter, Dr Paul Sereno. The findings have been reported in the journal *Acta Palaeontologica Polonica*.

3 Harry Patch, a 109-year-old veteran of the Great War and a member of the workforce that constructed the University's Wills Memorial Building in the 1920s, switched on the new Wills Tower floodlights at a special ceremony last term to celebrate the completion of the tower restoration project. The project, which has taken two years and cost £750,000 to complete, has restored the 68-metre-high tower of the Grade II* listed building to its original sandy colour using environmentally friendly techniques.

4 Kathy Sykes, Professor of Sciences and Society, talks to schoolchildren at Science Alive!, the University's contribution to National Science and Engineering Week in March. Seventeen interactive displays gave the public a chance to explore aspects of science, medicine, engineering and technology and chat to scientists about their work. The event was organised by the Centre for Public Engagement in conjunction with the Mall Galleries, the University of the West of England and the Wildfowl and Wetlands Trust.

5 Students from the award-winning Language Through Theatre course, who devised, wrote and performed BORDES (a play in Spanish about personal journeys in search of answers to existential questions) at this year's Semana Cultural Week. This annual event organised by the Department of Hispanic, Portuguese and Latin American Studies celebrates and examines all aspects Luso-Hispanic culture.

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ANNIE MORRIS

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TODD MARSHALL, COURTESY OF PROJECT EXPLORATION

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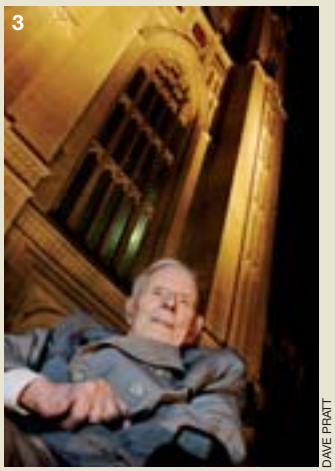

DAVE PRATT

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DAVE PRATT

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ROGELIO VALLEJO

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