

Subtext¹³

Autumn 2010

✿ **Life by the book**
Words and wisdom
in adult education

✿ **Under contract**
Research staff are
people too ...

✿ **In safe hands**
The poetry of sign
language

✿ **Lake of plenty**
Fishing for answers
in East Africa

✿ **Talking it over**
The power of
compassion



University of
BRISTOL

Welcome

This issue marks the end of the first run of *Subtext* – a baker’s dozen of issues in which we’ve talked about the University by profiling the people who work here. *Subtext*’s person-centred approach complements that of its sister publication, *re:search*, which will shortly see its 24th – and final – issue.

Both magazines have been highly successful and award-winning. But we think that they can do more. Or rather, they can reach much further in terms of readership and impact. *Subtext* was conceived as a magazine for staff, but it also has readers in the local community, Europe and the US, not to mention several hundred alumni. We decided that it was time to revisit the presentation of *Subtext* with that wider readership in mind.

The new publication launches early in 2011 with a new design and a new approach, but with the same concern for high production values and good writing. It will also take on the mission, previously pursued in *re:search*, of exploring some of the world-class work that happens at Bristol.

I hope you enjoy this final instalment of the original *Subtext*. As always, we welcome your comments.

David Alder

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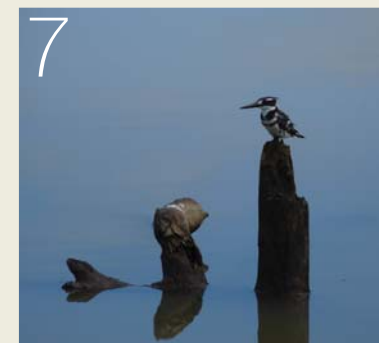
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The newly launched *Subtext* is due out spring 2011



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WENDEL SEBASTIAN

How I got here

If Dr Wendel Sebastian, Senior Lecturer in Civil Engineering, had been better at reaping mangos, he might now be bowling for the West Indies, but an aptitude for maths took him in a different direction. He talks to Hilary Brown.

I was born in Dominica, a small island in the West Indies. It was discovered by Christopher Columbus in 1493. The original inhabitants were Carib Indians and Dominica is the only eastern Caribbean island that still has a native population. It changed hands between Britain and France several times, eventually becoming a British colony.

My ancestors may have been Maroons, African slaves who escaped from neighbouring islands where they worked on European settlers' plantations. Dominica wasn't as popular with plantation owners as some of the other islands, because it's so mountainous and difficult to farm. The slaves could hide out in the interior without fear of being pursued.

As children, my friends and I spent lots of time swimming, fishing and eating mangos. We also loved cricket, which we played with tennis balls and bats made out of the branches of coconut trees. It was easy to score runs and we all thought we were going to be great cricketers, but it was a different story once the older boys started letting us join in their more professional games with proper bats and balls. Safety became a dominant concern; the bowlers had honed their technique by throwing stones into the trees to pick off the mangos they couldn't reach.

My dad was a headteacher. He brought home for appraisal the latest books on the full range of taught subjects. I was always leafing through them and quickly became fond of the sciences and maths. I was struck by how you could use these subjects as a way of describing the world. For example, many people in Dominica live on the coast in valleys between mountains and have plots of land for growing food that are miles inland. The roads were barely passable by car then, so most things were carried up and down the mountains. Concepts like gravity and the mechanics of movement made sense in the context of such everyday activities.

Hurricane David hit the island in 1979. The wind was phenomenal. We saw a neighbour's one-roomed timber house go somersaulting down the road. As children, we were excited at having coconuts washed down in the mountain rivers, but there was a lot of debris to clean up. Electricity was cut off for two years and at night we had to read by candlelight. We had to navigate sections of our journey to school by boat, where the roads had been eaten up by the sea. It made me wonder about designing structures that could withstand hurricanes. When I got into engineering, I realised there were already established methods for this, but the idea of how structures respond to extreme loads has remained with me.

Dominica became independent in 1978. There were celebratory parades, but otherwise life went on as usual. The island's economy is based on bananas and many people's main concern is the weather because banana trees are so fragile. The farmers had barely recovered from Hurricane David before Hurricane Allen came along, so independence had little effect in the short term, although later trade and tourism opportunities emerged. One exciting event that followed on from independence was that the Queen visited the island. Little did I know that I would see her again when she came to open the BLADE dynamics labs.

Both my granddads came to Britain on the banana boats after the Second World War. They returned to the West Indies to visit from time to time and I remember my mum's dad showing me a photo of him

in a winter coat in the pitch-dark and saying that it was taken at 4 pm. On the other hand, he said, you could read in natural light up until 10 pm in the summer. I was intrigued, because you don't get those extremes in the Caribbean.

I couldn't wait to come to the UK after winning a scholarship to study at Cambridge. A key accomplishment for me was scoring an A in further maths A-level, which I had to teach myself. My other A-levels were easier going because there were teachers for them.

Cambridge was thrilling. I was struck by how the professors captured your attention. In one of my first lectures we were asked, 'It takes three minutes to boil an egg; what is the age of the Earth?' It was an illustration of how you could use a problem-solving technique called dimensional analysis, where you assemble all the variables that influence a physical situation, combine them into groups without units and use them to consider the correlation between different aspects of the situation. In this case, you would consider the thermal analogies between the egg and the Earth. This taught me that understanding is as important as knowledge. It's not enough just to be aware of a theory; you need to appreciate when you can use that theory to solve a problem and, equally, to know what its limitations are. I try to pass this on to my students.

I had lots of new experiences at Cambridge. I took reasonably well to the novel idea of a pint and thought I'd be good at punting, because I'd done a lot of rowing on the sea at home. However, on my first attempt, my pole got stuck in the mud and I was left dangling. The punt carried on without me and I fell into the river.

After graduating, I worked in Dominica for an engineering consultancy. It was good experience and I was glad to give something back. But I wanted to study structural engineering at a higher level, so I returned to Cambridge for a PhD. This entailed mathematical modelling and testing of a certain bridge form. Building and breaking a big specimen of the bridge in the lab was great fun.

My research develops the science underpinning novel uses of advanced composites in structures like bridges and buildings. Composites are stiff, strong, light, corrosion-resistant materials that have been successfully used in the aerospace and automotive industries for decades. They behave differently from traditional construction materials such as steel, concrete and timber, so fresh strategies are needed to find ways of using composites in cost-effective civil engineering applications. I'm trying to understand how structures made wholly or partly of composites can best withstand external events such as weathering or the loads of lorries passing over bridges. This takes me down some interesting avenues. For example, while stiffness and strength are typically studied separately, the way they interact in bridges and buildings made of composites is the key to understanding these structures.

I'm pleased to be part of the education system I benefited from. At Bristol, we have bright, motivated students, which makes teaching all the more rewarding. Bristol is also a great environment for my research, because of the facilities in BLADE and the amount of investment that goes into composites research.

I've always felt at home in the UK. I have lots of family here, because some of my uncles and aunts emigrated with my grandparents. Once I even bumped into the old head boy from my school in a West Indian grocer's in Bristol. As for my friends in Dominica, I hope they'll allow me to play twelfth man on their cricket team whenever I go back on holiday. 🍷

RICHARD EDWARDS



TWENTY QUESTIONS

For this final issue of the first run of *Subtext*, Hilary Brown and Nick Riddle, editors of *Subtext*, permit themselves a bit of end-of-term indulgence.

What's your favourite meal?

HB Anything Italian with garlic in it. Auntie Maria Moretti's slow-roast pork with melty courgettes, if only she would give up the recipe.

NR Chicken gumbo, made with a nice dark roux.

Cat or dog? Or neither?

HB Cats, plural, but none of your fancy pedigree varieties.

NR For most of my life I'd have said cat, but having finally realised that they're slightly evil, I'm thinking about getting a dog.

What do you sing in the shower?

HB 'The Court of King Caractus' (but only in my head).

NR It's more of a hum. This morning it was '+81' by Deerhoof.

Favourite smell?

HB Wild garlic.

NR Lemon balm when stroked.

Your greatest character flaw?

HB Indecisiveness. Or is it?

NR Tendency to loiter around clumps of lemon balm.

What other historical period would you like to have lived in?

HB Any one before the predominance of the car.

NR London in the sixties. To be precise: 1966, Studio Two, Abbey Road.

Native Americans believe we all have a Spirit Animal. What would yours be?

HB Pig. Nothing to do with gluttony, of course.

NR Turtle. They're surprisingly graceful when they're in their element.

Favourite spot in the world?

HB On a bike in the Pyrenées.

NR Hunt's Mesa in Monument Valley.

Least favourite spot?

HB In the driving seat.

NR A box room in a house on Newmarket Road, Cambridge where I 'lived' for a year.

What winds you up?

HB Dog owners who don't clear up after their pets.

NR Celebrity culture.

One book, one piece of music, one film.

HB *Tess of the d'Urbervilles* by Thomas Hardy; 'A Hard Rain's A-Gonna Fall' by Bob Dylan; *The Piano*.

NR *Collected Stories* by Flannery O'Connor; 'Life on Mars?' by David Bowie; *Eternal Sunshine of the Spotless Mind*.

What one possession would you save from a fire?

HB The dopey cat (the sensible one would already have scarpered).

NR My house.

You can invite three people from any era to dinner. Who would you choose?

HB Tony Benn, Jessica Mitford, my maternal great great grandmother.

NR John Keats, Virginia Woolf, Pete Townshend.

Name a favourite word.

HB Palaver.

NR Nub.

You can make one new law. What would it be?

HB To pedestrianise all city centres.

NR All local councils must provide regular, *affordable* public transport, centrally funded by a fuel surcharge on private cars.

If someone met you for the first time, what could they ask you to break the ice?

HB 'Did you bake that cake yourself?'

NR 'Wasn't *Inception* the biggest load of overrated tripe you ever saw?'

Your biggest life-changing experience (so far)?

HB Selling all my possessions except for a bike and a tent and cycling round North Africa, Australia, New Zealand, East Asia and Europe at the age of 40.

NR Living in Bloomington, Indiana for five years.

Something you wish you'd known about life when you were 18?

HB What to do with it.

NR That what you think is fate often turns out to have been choice.

When and where were you happiest?

HB Seeing the hotel at the top of the Haast Pass, New Zealand, after cycling 80 km uphill in freezing, torrential rain.

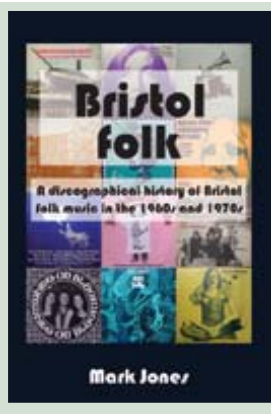
NR Revisiting Bloomington with my eldest daughter, spring 2010, ten years after she was born there.

Where will you be ten years from now?

HB Cycling off into the sunset.

NR Living on Dartmoor with a cat and a dog and prodigious quantities of lemon balm.

THE PLUG



Bristol Folk by Mark Jones

(Bristol Folk Publications)
First published in 2009 and about to go into its second printing, *Bristol Folk* (by Mark Jones, Technical Writer/Trainer in Information Services) charts the city's busy and influential folk scene in the 1960s and 1970s. The book chronicles the careers of artists such as Sally Oldfield, Stackridge, the Wurzels, the Pigsty Hill Light Orchestra, Shelagh McDonald and Keith Christmas, along with the era's folk clubs – from the Troubadour and the Stonehouse, to the

less well-remembered venues such as Bristol Ballads & Blues and White on Black. In the year since its first publication, the book has sparked a renewed interest in its subject: Bristol Museum used it as a research resource for its forthcoming 'Creative Bristol' exhibition at the soon-to-open M Shed, part of which is devoted to the city's 'golden age' of folk music; and the Bristol Folk Festival, last held 32 years ago, is to be relaunched at the Colston Hall in spring 2011.

ALAN SMITH

Tales from the field

WHAT LIES BENEATH

There's a family of fish in Lake Malawi whose origins are a mystery. Dr Martin Genner and PhD student Jen Swanstrom from the School of Biological Sciences are trying to get to the source, watched, now and then, by the locals. They talk to Hilary Brown.



Biologists have long grappled with theories to explain the process of change in all forms of life over generations, and Martin Genner is no exception. For 15 years he has been studying the origins of cichlid fish in Lake Malawi, where hundreds of species have evolved in the spectacularly short period – in evolutionary terms – of around four million years. ‘It’s arguably the greatest example of rapid evolution on Earth,’ says Genner. The only other place that has anywhere near as diverse a fish community is Lake Victoria, another of the Great Lakes in the East African Rift Valley.

‘Besides the speed of their evolution, the fascinating thing about the fish in Lake Malawi is the number of different ecological niches they occupy,’ Genner explains. ‘There are ferocious predators, a bit like barracuda, that prey on smaller fish, species that eat the larvae and eggs of other fish, and those that feed on worms that live at the bottom of the lake or on the algae that grows on rocks along the shoreline.’ More than 350 species of cichlid have been scientifically described and new species are being discovered all the time.

Then there’s the fact that cichlids vary enormously in colour, making them popular aquarium fish. But why is there so much diversity and how do all these species co-exist without out-competing each other?

Casting the net

Genner is currently supervising PhD student Jen Swanstrom on a project to examine whether the diverse array of cichlids in Lake Malawi stems from a single or multiple colonisations. One of the factors that can influence adaptive radiation – the diversification of a species into many specialised forms – is changing hydrography of catchments. Water levels rise and fall with varying climatic conditions resulting in newly formed or isolated water bodies and the question is whether, and if so when and how often, the fish move between these different catchment areas.

The project entails spending several weeks a year in areas bordering the lake collecting samples to bring back to Bristol for genetic analysis. Fairly new territory for marine biology graduate Swanstrom (‘I haven’t always been a fish geek’), but she’s thrown herself into it with gusto: ‘You have to jump into as many different water bodies as you can in a day,

whether it’s a lake, a river flowing into it or a neighbouring swamp, and bash around in it for about half an hour and catch as many fish as possible in your modified mosquito mesh net,’ she explains. ‘It’s exhausting, because you have to cover a lot of ground to make meaningful comparisons across the different catchment areas. It’s a bit like a road trip, only not as glamorous, because you end up with a lot of dead, smelly fish to cart around.’

It doesn’t take long for a crowd to gather in a densely populated country like Malawi and these escapades often attract an audience of curious locals. ‘People get quite a laugh out of watching our efforts, especially when we fall into the water,’ says Swanstrom. ‘They’re also puzzled about why we take the smaller fish; they go fishing for food so they’re only interested in the bigger, tastier specimens.’

‘People are keen to help out, usually because they think our fishing skills aren’t up to it,’ adds Genner (they may have point, according to Swanstrom). ‘It’s a good way of adding to our samples and the kids love getting pens or sweets in return.’

Then comes the task of sorting and storing the fish in tubes of ethanol to preserve their DNA, which usually takes place at the roadside. Most of the samples for this project are drab-looking river fish with spotted bodies, and Genner admits to an unhelpful habit of distinguishing them by the number of spots they have, which causes some problems for Swanstrom: ‘I have terrible trouble deciphering my notes afterwards,’ she says, ‘as they’re full of repetitive references to fish called “three-spot”, “four-spot”, “five-spot” and so on.’

Flat tyres, fevers and optical illusions

Niggles aside (Swanstrom again: ‘Martin often forgets to factor in food stops’), the fieldtrips are congenial affairs. Despite civil uprisings in the past, Malawi is stable, and although the population is passionate about internal politics, the rallies Genner has experienced have been peaceful, even ‘jolly’, occasions. ‘Everyone is friendly, and the kids are keen to practise their English, especially when it comes to discussing football, which is the other national obsession,’ he says. ‘And people always help out if you’re in a tight spot. I’ve had occasions when I’ve run out of fuel or had a flat tyre in the middle of the bush, and someone has come to the rescue – seemingly out of nowhere – with a drum of petrol or a tow rope.’

There are risks, of course, including tropical illnesses, such as malaria and bilharzia, a parasitic disease carried by snails common to the types of water body where Genner and Swanstrom collect their samples. Other nasties? Nothing too bad, according to Genner, just water scorpions, tsetse flies, the occasional leech, and, once, an encounter with a highly venomous water cobra. Oh, and crocodiles.

‘You wouldn’t go into the water if you knew it was infested with hippos or crocodiles, but you don’t always know,’ says Genner. He recounts one close call, when he swam past what he thought was a fishing net with floats protruding from the mesh just above the surface of the water. ‘When I got ashore, I mentioned it to some locals. No one knew of any nets being set in that part of the lake, but there had been sightings of a large crocodile in the area.’

‘It’s like a road trip, only not as glamorous – you end up with a lot of dead, smelly fish.’

Race for life

It’s too early to draw any firm conclusions about the drivers for speciation in Lake Malawi, but there appear to be several factors at play. Cichlids in shallow rocky waters, for example, rarely migrate to other habitats, which allows time for numerous species to evolve through sexual selection, driven by competition for mates, and natural selection, where organisms best adapted to their environment tend to survive and diverge in aspects such as diet. There is less evidence of such ecological diversity among deep-water cichlids, however, and these females appear to be less choosy about which males they mate with, although the species here are just as abundant as they are in shallower waters. ‘In this case, other factors, such as certain fishes preying on others’ young, may regulate populations below levels where competition becomes so fierce as to result in certain species becoming extinct,’ says Genner.

Apart from the pure scientific challenge of mapping the evolutionary history of an entire lake fauna through DNA sequencing, Genner is hopeful that the research will lead to a better understanding of African freshwater biodiversity in general. ‘The human population is growing rapidly in Malawi, and the demand for food means that water is being diverted from rivers to agricultural schemes,’ says Genner. ‘With changes in land use, pollution is also an issue, but it’s difficult to make conservation decisions without sufficient knowledge of the ecosystem.’

Competition is everywhere and the struggle for survival is apparent even among the hundreds of species that coexist apparently peacefully in Lake Malawi. ‘The lake is stunningly beautiful – it’s known locally as Lake of Stars – but its serenity is deceptive,’ says Genner. ‘If the fish aren’t feeding or mating, they’re fighting with each other. Predators – other fish, otters and birds – are everywhere, night and day, and parasites abound. There’s no doubt about it, it’s life and death stuff.’



PLENTY MORE FISH

It comes as no surprise to learn that Genner himself keeps cichlids (apparently some species are relatively intelligent and able to recognise their owners) and has done so ever since he was 10 and his father brought home a fishtank. One of the most common species of cichlid found in aquaria is the South American angelfish, *Pterophyllum altum* (pictured above). The three species of *Pterophyllum* are unusually shaped for cichlids, with round, laterally compressed bodies, elongated triangular dorsal and tail fins and brightly coloured vertical stripes.

Genner’s study site these days is somewhat larger than your average aquarium. Lake Malawi is sometimes called the ‘Calendar Lake’, as it’s 365 miles long by 52 miles wide. It is the third largest lake in Africa and the eighth largest in the world. With a surface area of around 11,429 square miles, it is the second deepest lake in Africa.

Lake Malawi is the southern-most lake in the Great Rift Valley system of East Africa and has shorelines in western Mozambique, eastern Malawi and southern Tanzania. The largest river flowing into this freshwater lake is the Ruhuhu River. Lake Malawi has an outlet – the Shire River, pictured on p7 – a tributary that flows into the Zambezi River, the largest river flowing into the Indian Ocean from Africa.



Opposite: Martin Genner (left) and Jen Swanstrom in Malawi. Clockwise from top left: Marshland adorned with lilies makes this Malawian sample site look more inviting than it might do otherwise; Lake Chiuta, a shallow lake on the border between Malawi and Mozambique; the presence of a hippo makes this site a no-go area; Astatotilapia calliptera, found near Thyolo, Malawi



STRAIGHT TALK

Dr Emily Foulstone is a Research Fellow based at Southmead Hospital; Dr Charlie Hindmarch is a Research Assistant working in the Dorothy Hodgkin Building. Both are endocrinologists – and co-chairs of the research staff committee, which represents a large contingent of staff at Bristol: researchers hired on short-term contracts. Nick Riddle takes copious notes.

Getting hormonal

EF: Endocrinology looks at how hormones are produced and regulated, and how they make sure the body works properly. Some hormone systems work over months or years: the changes you go through in puberty are all hormone-directed. With something like insulin action, that takes a matter of hours. Endocrinologists also look at how these systems go wrong and cause hormonal diseases like diabetes. In type 1 diabetes, for instance, the body can't produce insulin.

CH: My interest is in neuroendocrinology: how the brain interprets and responds to signals, how it synthesises the hormones and how it releases the appropriate amount. A fairly simple example is the dehydration response: when you become dehydrated, the brain detects changes in the water balance and in blood pressure. The brain then synthesises a chemical called vasopressin, and releases an appropriate amount of it, which conserves water at the level of the kidney and buys you the time to go and find something to drink. It's a very sophisticated and elegant system.

EF: Charlie likes the big picture, whereas I focus more on the details: how hormones act on cells and how they activate them. My interest is in the insulin-like growth factor (IGF) signalling system, which is one of the key players in regulating our response to metabolism and diet – but it also plays a role in causing cancer. At the moment I'm looking at a particular protein that binds to the IGFs and seems to influence how breast cancer cells grow and survive.

And what do you do?

EF: At parties, I'm torn between wanting to mention what I do and wanting to keep quiet. I just have to mention science and some people go glassy-eyed. If I mention cancer, they start asking 'What about this kind of chemotherapy and what about that?'

CH: If I mention that a strain of my work has to do with hypertension,



they say 'Oh, my gran's got hypertension'... I'm never sure what to say about that.

EF: Or they say 'Oh, my auntie had breast cancer – can she drink soya milk?' I don't know! I'm not a clinician! But you can see it from their point of view: you blabber on about cells and signalling pathways and you've lost them, but mention cancer or hypertension and they think 'I know that word!'

CH: I'd be the same if I met a physicist: 'Superstrings! I've heard of those!'

EF: For a while I was very tempted, when I had to go out and meet new people, to say I was a hairdresser or something.

Starting out

CH: My father was doing a PhD in Grassland and Field Ecology while I was growing up, so I'd play in meadows all summer. Maybe that's what I thought being a scientist was all about! But I was pretty dismal at school. I ended up working in a shop selling tropical marine fish, and I got interested in learning all the Latin names and the biology behind it. A customer came in one day with a dead fish, and after I'd given him a long tutorial during the post-mortem, he suggested that I should study this at degree level. It turned out he was a lecturer in marine science. I persuaded Plymouth University to let me on a foundation year, which I blitzed through, then I did Marine Biology. Three years of 'seaside studies', going round Cornwall and Devon looking at the inter-tidal zone – I loved it. My mum, who has worked as a trained nurse for over 40 years, suggested that I worked as a healthcare assistant during my degree, just to earn some money. I suppose she was the one who gave me a human perspective on disease.

EF: My parents are both artists, but they've always had a strong interest in science. I enjoyed science at school, came to specialise, took science A-levels – I wanted to take English as well but I was advised not to if I wanted to do a science degree (which I later found out was rubbish, but *c'est la vie*). When I was looking at degrees it was a toss-up between biochemistry and marine biology, strangely enough. I don't know why I went for biochemistry thinking about it now, when I could have gone out and done wicked field courses instead of being stuck in the lab. Although maybe being stuck in the lab was what I really wanted.

CH: I was desperate to work with cephalopods – specifically octopuses. I loved their colour changes and their intelligence. So I applied to do a dissertation at the Marine Biological Association. What they offered me was a neuroscience project looking at the retinal photoreceptors in the optic lobe of cuttlefish. They're a good institution, so I gave it a crack – and I did really well. I followed it with a biochemical pharmacology masters at Southampton. It was a little frustrating to move from looking

at interactions between hundreds of species, to looking at one drug, one receptor, one action, in isolation. I didn't think biology could operate like that. It's no surprise that I'm now looking at tens of thousands of genes and trying to reconstruct networks that govern physiological change in multiple brain regions – the brain being one of the most complicated things in the universe.

Getting a voice

CH: Research staff are hired on short-term contracts to help carry out research projects. The principal investigators write the grant application: they bring in the research funding that pays everyone's wages and lab costs. Ironically this unstable job is now one of the most stable, in a way: a lot of people who were in 'secure' jobs have been made redundant, but my redundancy is guaranteed – I know the exact date it'll happen, unless more funding is found.

EF: Research staff make up a huge percentage of the University's employees, but for a long time we didn't have a voice or a sense of identity. There was a government initiative a few years ago to improve the lot of research staff, which led to a number of provisions at Bristol, including the research staff committee ...

CH: ... of which Emily and I are co-chairs, in addition to our day job. You can bet your bottom dollar that any senior academic worth their salt has sat on committees and got a good working knowledge how their university is organised. In fact, for promotion at certain pay scales, you *have* to demonstrate an awareness of it.

EF: Also, the longer you stay at the University the more you want to know about how it works. The committee can't change the fundamental issue of fixed-term funding, but it has allowed us to influence things within the University and make our working life better. We can also influence what training is offered, not just in computer and presentation skills but how to write a CV and find jobs outside academia. Because we have to face the fact that not all research staff will stay in academia.

CH: You can get a little institutionalised after a few years: I look at my CV now and I think I'd struggle. Knowing how to decerebrate a rat is not a great skill outside my specific field, and certainly not in a bank.

EF: We can also find out whether people over in, say, the English Department are coming across the same problems, and whether we can address them together. I think it's meant that researchers feel more connected across the university, not just their own faculty, or just in science. I think we still don't talk enough to each other.

CH: You don't know what sort of crazy collaborations will form unless you get us young academics together to talk about the only thing we know we have in common, which is that we work here.



'I want to be a scientist for the rest of my life.'

Tenacious PhD

CH: I think anyone who's got to their first postdoctoral position has a certain tenacity. You're pretty much on a track through your degree and your masters: you apply, you do them, you reach the targets you've been set, you move on. After that, it starts getting more complicated. There have been times when I haven't worked, applying for jobs and going for interview after interview, and some people would have said 'Give it up Charlie, it's been six months'. But if you keep plugging away, eventually you get that first research job. Once you're in, it's up to you what you make of it.

EF: It's like most jobs – you *could* just sit back and do the bare minimum. In jobs like ours, that's fine for the two or three years of your funding, but after that, you're not going to get that next post.

CH: So you have to do more: take on administrative roles, like Emily and I are doing, to help improve your career prospects, but also pursuing collaborations, taking chances, working extra hours, doing the reading, presenting yourself in the correct manner, and grabbing opportunities. That's the sort of tenacity I think is required. But surely that's every career, right?

Life and work

EF: I think anyone can be a scientist – you just have to love doing research.

CH: You have dull patches, and we all have a life outside work. I have a family, and that can leave me not enjoying work so much because I'm being stretched in two different directions. That's the big test – when you're not loving your job. When you're loving it, it's easy.

EF: It's the intellectual stimulus for me. We could earn more money doing something else.

CH: Sometimes that does stick in your craw. I know people with PhDs who work in the business sector and whose bonuses exceed my salary. But I also know that deep down these people lament that they're not working in academia and they get a kick out of listening to what I do. That is some consolation, as they speed away in their Aston Martins.

Surroundings

CH: Universities are a good environment for hosting imaginative thinking. You can make mistakes without drawing attention to yourself, or you can have great successes and sometimes they won't get noticed either. But it's a good way to keep developing as a thinker and a scientist. And the people that you go for a drink with are also your harshest critics in your peer review: they'll tear you apart quite happily, both to hone their skills as critical reviewers and to hone your skills as a defender.



JASON INGRAM

EF: It's a very stimulating environment – it allows you to be an individual ...

CH: I think it *insists* on your being an individual ...

EF: ... and you get to work with a lot of really interesting people.

The next generation

EF: I've done quite a bit of teaching. The University offers fellowships so that academics can be relieved of their teaching load and concentrate on their research for a while; my funding was coming to an end, and one of the lecturers in the department got a fellowship, so they needed someone to take over their teaching. It was a way for me to stay employed at Bristol. I enjoyed it a lot more than I thought I would. And I still do some third-year teaching. It's good to be reminded that there are students here. I'm based at Southmead Hospital, away from the main precinct, so you sometimes forget that the next generation are coming through, learning and getting excited by being here.

What's next?

EF: I'd like to stay at Bristol. I've got another year and a bit on the current grant, so for the next six months I'll be writing papers, making grant applications and trying to stay. If it doesn't happen, I'll have given it my best shot.

CH: Bristol is my second home. I also have practical issues: a five-month-old baby, a three-year-old child, a house. We might take six months out while I take up an invitation to work in a lab in Canada. I've applied for fellowships but there's not a lot of money floating around at the moment. If the worst came to the worst and I had to leave science because there's no funding, I'd just have to find something. I don't know what that would be; I'd have to wheel out my transferable skills toolkit. But I want to be a scientist for the rest of my life. ❀

SIGNS&WONDERS

You might think of it as merely a practical way for deaf people to communicate, but sign language has a thriving culture complete with its own art forms. Dr Rachel Sutton-Spence, Reader in Deaf Studies in the Graduate School of Education, is both scholar and champion of the creative uses of British Sign Language. She talks to Nick Riddle.

The rain was pelting down one lunchtime in 2005 when Dr Rachel Sutton-Spence set out for a bike ride. She cycled out to Nailsea, and was coming back through Long Ashton.

'I was pounding along in the rain, when suddenly out of nowhere I had the thought: "Folklore – that's it!" I was riding through the complex road system in the Cumberland Basin, and it was bucketing down, and all I could think of was, "If someone knocks me off my bike and I come round with amnesia and I forget that I want the rest of my research career to be in sign language folklore, it's going to be the end". So I rode *really* carefully back to the Centre, ran inside and said to everyone: "Right, *this* is what I want to do".'

It was the folklore of British Sign Language (BSL) that she had in mind. As a hearing academic working at the Centre for Deaf Studies, she realised that she could combine her own perspective with that of deaf and hearing colleagues to create a comprehensive picture of modern deaf culture.

'Some people get ideas when they're walking the dog or doing the ironing. I get a lot of mine when I'm on my bike. So when people think, "Oh, Rachel's just gone out for a bike ride" ...'

Early signs

In a way, the ride began at Oxford when Sutton-Spence was an undergraduate studying psychology.

'I first came across sign language when I took a module called – I regret to say – Language and Communication Disorders,' she says. 'We actually had to go the Radcliffe Infirmary for our tutorials, which tells you a lot about attitudes to sign language back then. But I was lucky enough to be taught by John Marshall and Ruth Campbell, two of the few British academics at the time who took sign language seriously.'

Sutton-Spence pinned her colours to the mast with the module's very first essay, entitled 'Are sign languages really languages?' She tackled it with gusto, 'and being a brash undergraduate, my final knockdown argument in the essay was "Besides which, anything in which you can compose haiku must be a language"'. A prescient line of argument, considering the path her work has taken.

She took a course in British Sign Language (BSL) while working in a psycho-linguistics lab in Cambridge, which proved to be essential preparation for her next post, as a research assistant with Bencie Woll ('my academic mum') at the University of Bristol's Centre for Deaf Studies in 1989. 'She was my PhD supervisor and we've collaborated ever since,' says Sutton-Spence. 'She's one of the reasons sign linguistics is where it is.'

Hands-on approach

Bristol's Centre for Deaf Studies was in the vanguard of changes in attitude to sign language culture. 'There was, and still is, a strong bilingual, bi-cultural environment there between deaf and hearing people,' says Sutton-

Spence. 'I tend to take it for granted now, but I'll go to other places where there are deaf and hearing people working together and two hearing people will talk in the presence of a deaf person. At the Centre here, if there's even a possibility that a deaf person would be there, you'd be signing – it's just rude not to.'

She has, she acknowledges, a head for languages. It's an aptitude that developed early: her father moved the family from Liverpool to Brazil when she was 10 years old. 'He set up a paint factory for ICI there in the boom of the mid-'70s, then had to close it down again during the bust of the '80s,' says Sutton-Spence. 'We were there for six years, exposed to a completely different culture and language, and I became pretty fluent in Brazilian Portuguese.' She also has a sense of the creative possibilities of language, and after learning BSL she was soon drawn to a developing art form: sign language poetry.

Sign language is, of course, powerfully visual, which allows for creative uses not available in spoken or written forms. Hence the existence of a small but thriving community of sign language poets. 'One of the key features of poetry, or any creative literature, is defamiliarisation,' she explains. 'You think you understand how the world is, and then something in literature shows you it could be different. Sign language poets do that with sign language.'



'You'll have to tell me to shut up, by the way, because I could talk about BSL poetry for the rest of the day.'

JASON INGRAM



Above: The poet Paul Scott performs ‘Black’, one of the poems in the new online anthology

In sign language poetry, the play with meanings can involve similar hand shapes, similar movements, symmetrical shapes that create a balance between hands, or making two separate signs simultaneously. And that’s just for starters: sign language poets can also ‘embody’ things and convey their point of view.

‘There’s a very good poem by Richard Carter where he becomes the mirror, so you see the mirror’s eye view of what’s going on,’ says Sutton-Spence. ‘Another poet, Paul Scott, has one in which a little girl plays with her doll: you see what the girl is doing to the doll, then you see how the doll feels about it. The pleasure lies in watching these poets bend or break the rules of sign language, and you can only do that if you’re skilled with language *and* a skilled performer. You’ll have to tell me to shut up, by the way, because I could talk about BSL poetry for the rest of the day.’

It’s partly about the bike

There’s no getting away from it: cycling is no mere hobby for Sutton-Spence. She has found ways to combine it with her academic work. It started modestly enough (‘I cycled from Bristol to Cardiff, talked about sign language at a conference and rode home again’), but developed into a more ambitious series of journeys in Brazil and the US. In 2011 she will spend a year on a Cornell Scholarship at

Swarthmore College in Pennsylvania – the culmination of a relationship that began when she dropped in on a colleague there after a marathon bike ride.

And then there was that hurtling epiphany in Long Ashton which brought the area of folklore into alignment for her. Studying sign language folklore – storytelling, anecdotes, jokes, poetry – wasn’t a brand-new idea: the Americans, as ever, had got a head start. It was more a realisation that the conditions at Bristol were perfect for a groundbreaking study of BSL folklore. ‘I realised we were sitting on a community of village elders,’ she says. ‘These are the wise women and men who know their cultural and linguistic heritage, and we weren’t using it. My interest in folklore from the linguistic side complements a lot of the interests of people from the Centre for Deaf Studies.’

Now based at the Centre for Narrative and Transformative Learning (CeNTraL) in the Graduate School of Education (though she still teaches at the Centre – ‘sign language linguistics and sociolinguistics, literature and folklore, that sort of thing’), Sutton-Spence is currently working on a project, funded by the Arts and Humanities Research Council, to create an online anthology of BSL poetry. This follows a collection of BSL haiku compiled by PhD student Michiko Kaneko in 2006 – possibly the first online BSL poetry anthology. ‘We’re still

catching up with ASL poetry, but there’s a new generation coming through now,’ says Sutton-Spence. ‘We’re taking some BSL poets to a conference in Philadelphia next year to show them what the Brits can do.’

Watching their language

Ironically, just as sign language has become more accepted by the mainstream (the UK government recognised it as a language in its own right in 2003), cochlear implantation has muddled the waters. ‘It’s true that children with cochlear implants can sometimes hear more, but they’re not “cured” of their deafness,’ says Sutton-Spence. ‘Sign language is still extremely important for ease of interaction, relaxation and just *being*.’ But now that most deaf children attend mainstream schools with little or no sign language support, this new generation is missing out during their formative years.

‘A lot of deaf people nowadays don’t discover sign language until they leave school and start getting involved in deaf groups,’ she says. ‘So they come to BSL – and sign language folklore – fairly late.’ A student of hers studied this group and came across a rich seam of deaf jokes, ‘most of them unrepeatable because they’re circulating among young adults’. But the sheer number of such jokes is an indication of how vexed an issue this still is. ‘Deaf people will *always* struggle to interact with the hearing world,’ says Sutton-Spence, ‘and their stories and jokes are about those struggles and finding your place in a society that appears wilfully to misunderstand you.’

BSL still has a major role to play; and although the most obvious reasons may be pragmatic ones, Sutton-Spence has made it her personal mission to point out its aesthetic appeal: ‘Once you’ve seen sign language in the hands – ha ha – of someone who really knows what they’re doing, I defy you not to fall in love with it.’

You can find the new anthology online at www.bristol.ac.uk/bslpoetryanthology.

A DOG BY ANY OTHER SIGN

BSL, ASL, French or Japanese sign language ... how similar are they in comparison to spoken or written languages?

‘The sentence structures are fairly similar because you’re working with a visual-spatial grammar and we’re anatomically the same,’ says Sutton-Spence. ‘But the vocabulary is different, because of the range of possible ways to represent something visually.’

She gives an oft-cited example: ‘Do you sign “dog” by showing the ears? The legs? By showing what you do when you *call* your dog? By showing what a dog does when it barks or bites? These are all visual aspects of the dog, but if I signed the ears, I could mean “donkey” unless you know that that’s the sign that the language has chosen for “dog”. For more abstract words, like “have” or “colour”, the signs are completely different.’

OPEN BOOK

Reading and literature is something we bring our lives to, whether we realise it or not. Connecting literature to its role in everyday life is one of the aims of Tom Sperlinger, Director of Lifelong Learning in the Department of English. He talks to Nick Riddle.

‘Only connect the prose and the passion and both will be exalted,’ wrote EM Forster in *Howard’s End*. The phrase ‘only connect’ has become somewhat ubiquitous – just try googling it – but Forster’s motto seems a legitimate and apt one for Tom Sperlinger’s work in lifelong learning (or ‘adult education’ – the two terms are broadly interchangeable).

‘Lifelong learning is where education meets experience,’ he says. ‘That changes the nature of the learning *and* the teaching. And that’s what makes it so unpredictable and rewarding.’

Background reading

Sperlinger’s family history gave him a template for such connections. His father’s parents emigrated to London from Vienna in 1938. ‘They were Jewish so they left Vienna just in time,’ he says. ‘They were able to because my grandfather worked as a journalist for a London-based firm.’ During the war Tibor Sperlinger worked for the BBC, where he came to know the art historian EH Gombrich, another Viennese émigré and a vocal champion of the accessible approach that underpins lifelong learning.

His Viennese grandparents weren’t intellectuals or part of the cultural élite, ‘but they engaged with the great artistic moments in Vienna at the time,’ he says. And when they emigrated to London, they brought a lot of that cultural tradition with them. He still recalls their house, a nondescript suburban home on the outside but with an interior that was pure Vienna: Bauhaus-inspired furniture, blown glass, paintings and sculptures throughout. It’s a neat metaphor for our inner life: first impressions don’t always tell you about someone’s mental furniture.

So what was Sperlinger’s first major piece of interior decor? ‘The book that convinced me to study literature was Virginia Woolf’s *Mrs Dalloway*, which we read for A-level,’ he says. ‘Everyone else hated it, so I kept quiet about liking it.’ At first, he hated it too: ‘I remember finding it completely unreadable to begin with. But once I began to figure out what Woolf was doing, this world opened up and it was like being in on a secret.’ Not a literal secret, perhaps, but a key to the book’s governing idea: ‘That people who initially seem alienated from one another in the external world actually have an intimate relationship



with others that they don't know about, in terms of the way they're thinking,' suggests Sperlinger. 'That seemed very powerful and moving.' It also sounds not a million miles from the idea behind lifelong learning.

Dropping out – and in again

Sperlinger's education proceeded quite smoothly, until he went to Cambridge University – and dropped out in his first year. After various temporary jobs (including postroom worker and hospital porter), he tried again, this time at Liverpool University. 'That was more of a conscious choice, and it made the experience very different,' he says. 'I had a better sense of what I was looking for.' It gave him, he thinks, a good insight into what motivates people to come back into education, 'after a much longer gap than I had.'

His work in adult education began at Liverpool, and after pursuing a Masters in 19th-century literature at Oxford, he took up his present post in the Department of English at Bristol. As Director of Lifelong Learning he oversees (and often teaches) around 30 short or day courses on literature and creative writing, as well as a new, part-time BA programme in English Literature and Community Engagement (see panel).

Life lessons

In his time as a teacher in adult education, Sperlinger has witnessed many meetings between experience and literature: sometimes the most throwaway anecdote can open up a text. He gives the example of a short course he taught at the Single Parent Action Network in the Easton area of Bristol. One student would always come early, and the two of them would chat about nothing in particular.

'One day she told me about a friend of hers who'd felt that she had a telepathic connection with her son, but that when he started going to school, he started rejecting that connection and it vanished. I didn't know how to respond to it at all at the time. In that afternoon's class we were talking about *Beloved* by Toni Morrison, and we read one of the passages in the book that seems to be a ghostly dialogue between Beloved, a baby who comes back from the dead, and her mother.' The passage has no quotation marks to indicate who is speaking,



'There's no shortage of case studies that demonstrate the power of lifelong learning in transforming people's lives.'

A DEGREE OF DIFFERENCE

'The BA in English Literature and Community Engagement is a six-year course designed to give people the same academic experience as that offered on the full-time Bristol degree in English, but students come in one evening a week, so it's accessible for those with full-time jobs or children. The unique element is that they work in the community as part of the programme, most often by running a reading group – for example with Bristol Libraries and other local bodies like the Bristol Drugs Project. It makes students think about how other people read, and raises questions: Does where you were born make a difference to your experience of literature? Does having had an experience of drug addiction affect how you read certain things? The age range of our students is 23 to 69, and they come from an extraordinarily wide range of social backgrounds.'

making it hard to interpret. But Sperlinger asked the student to repeat the story about her friend to the class. 'We all agreed that something similar was going on in this passage – a ghostly kind of communication between a mother and her child,' he says. 'That peculiar bit of experience helped us open up and understand a difficult passage in a complex work of literature.'

Experience can also make for more assertive students, and the hierarchy of teacher and taught can get a good going-over as a result. Sperlinger discovered this at the beginning of the first adult education course he ever taught, up in Liverpool. 'I did an introductory spiel, then started talking about *Othello*, which we were reading. And one of the students disagreed – not aggressively, but quite vocally – with the first thing I said, about which of the play's characters cared most about their reputation. She took issue on the basis of her own experience of how people behave.'

Hierarchy, assumptions, preconceptions – all should be left at the door by students and teachers alike, says Sperlinger: 'One of the pleasures of adult education is that you never know who's going to come or what kind of experience they'll have'. It's not uncommon for someone to show up with a knowledge of the subject that borders on the specialist: a woman, for example, who came to a one-day course on Keats knew the poems and a lot of the letters verbatim and could recite them. 'I have no idea what her background was,' he says; 'you don't always get the chance to find out.'

University and identity

Show people how to connect art with life, prose with passion, ourselves with others, and perhaps we as a society wouldn't be so... well, disconnected. A university is, in theory, an ideal place to see this at work. But Sperlinger notices, from working with communities in Liverpool and Bristol, a problem common to both: 'There's a feeling among local people that the university is not for them. It's complicated: it isn't just to do with what those institutions do or don't do in their communities, it's also about what they stand for.' It's a question, in other words, of identity – something that literature is exceptionally good at examining. And identity can shift depending on your point of view.

'For example, when I talk about "The University" I usually don't mean me – I mean the senior management ' he says. 'But when my students talk about "the University", they usually *do* mean me. That's something I have to take on board.' Sperlinger encourages his students to think about the University 'as a community of individuals of which they are now part,' and to see their work with reading groups as a way of extending that community.

A lifelong commitment

Lifelong learning in the UK is going through a rocky patch, particularly as public sector budget cuts take hold. Consequently, any argument for the social impact of adult education may sound defensive. But the arguments are persuasive. 'No matter how good the school system is – and it's far from perfect – there will always be people for whom, through accidents of circumstance, education goes wrong quite early on,' says Sperlinger.

There's no shortage of case studies that demonstrate the power of lifelong learning in transforming people's lives. Sperlinger picks one out. 'We have a student who left school at 12, was in and out of prison until his mid-twenties due to serious drug addiction, and started reading in prison. He's now in his late thirties and says that the stable and healthy life he now has is down to two things: reading literature and taking a class in dance movement and the therapeutic process. Those were the things that made him come out of himself and see things through other people's eyes. Now he's about to start our BA in English Literature and Community Engagement.'

Sperlinger is ready, too, with a spirited defence of so-called 'non-vocational' courses. 'Engaging with literature, or with something else like dance or history or philosophy, sharpens your creativity, empathy, critical analysis – a whole range of skills that are vital not just in the creative industries but in the professions as well,' he argues. 'I think that point needs to be made again and again.' ❧



Compassion, honesty, fortitude: anyone who spends a lot of their time recording women's experiences of domestic abuse needs these qualities in abundance, plus a few more besides. Dr Hilary Abrahams, Research Fellow in the School for Policy Studies, has the full set. She talks to Aliya Mughal.

For someone whose work involves engaging with some of the most distressing aspects of human nature, Dr Hilary Abrahams has an infectious hopefulness on life. That outlook has propelled her through a personal and professional journey that has been far from straightforward.

As a teenager, she was the primary carer for her mother, who was severely affected by multiple sclerosis. But the lack of compassion and understanding they faced within the community only fuelled her determination to unravel what lay at the heart of such emotional dysfunction.

'I feel very strongly that it is society that disables people,' says Abrahams. 'They don't have the problem: it's society that *makes* the problem. How you change society, I don't know – but I'm trying.'

Facing the facts

As with all of her colleagues in the Centre for Gender and Violence Research in the School for Policy Studies, changing attitudes is the driving force behind Abrahams' work. She has spent the best part of ten years visiting women's refuges to document the consequences of domestic abuse.

It's a subject that many shy away from as too raw and unbearable, but Abrahams considers this an absolutely necessary area of study. Her approach is very much shaped by her own life experiences and a sense of moral conscience that she developed early in life.

As her mother's health deteriorated, Abrahams watched family friends vanish, unable to deal with the situation. Years later, when a recently widowed friend turned to her for support, she was again bemused by the lack of outward concern among their social group.

DAVE PRATT

Endnotes



JO WEST



ROBERT EGGINGTON



THE BRISTOL GALLERY



EDE & RAVENSCROFT

1 A lion dance, designed to bring good luck, accompanied the opening of the Chinese Herb Garden at the University's Botanic Garden in June. The Herb Garden is a collaboration with the Register of Chinese Herbal Medicine, and will contain the most diverse collection of sacred lotus plants in the UK. It will be the focus of research and conservation of plants under threat in the wild in China, and will also be visited by students of Chinese medicine.

2 The demon (played by Steve Rea) conjured up by the witches in *Wryd Sisters*, a play based on a Discworld novel by Sir Terry Pratchett and performed by Bristol staff, students and graduates. The proceeds from the performances, totalling £1,262, went to The Prince's Trust, which helps disadvantaged young people to get into work, education or training.

3 Staff and student volunteers who helped create a garden play area at the Boys and Girls Club in Sea Mills, Bristol, in August. The two-day project was organised by the University's Graduate Chemistry Association.

4 Actor Daniel Day-Lewis, an alumnus of the Bristol Old Vic Theatre School, who received an honorary degree at the University's degree ceremony in July.

5 Joan Miro's 'Ubu Aux Balears XII', 1973; signed lithograph, edition size 120. The print was on display at The Bristol Gallery 'Surrealism' exhibition in August, curated in conjunction with Bristol postgraduate students.

6 Bronze brooch, with a duck's head motif, found during excavations of an Iron Age hill fort near one of the largest burial mounds in Tincry, eastern France, by Dr Volker Heyd of the Department of Archaeology and Anthropology. The project is now entering its next phase, during which researchers will study the organisation of early Celtic occupation in the hill fort in relation to satellite settlement sites.



VOLKER HEYD

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