Subtext 11

Spring 2010

Life in the shadows
Taking history personally

To cap it all
A researcher keeps a cool head

Small talk
A little chat about some big ideas in science

Work in progress
What, *more* change?

University of BRISTOL

Welcome

Producing *Subtext* may present Nick and Hilary, its editors, with challenges from time to time, but finding suitable subjects is never among them. Eleven issues on, the reservoir of colleagues with colourful histories, intriguing jobs and ideas aplenty remains close to full.

This time around, we bring you a conversation between two professors who inhabit the mind-boggling worlds of quantum optics and nanoscience (p10); a neonatologist who has pioneered life-saving treatment for oxygen-starved newborns (p15); a photographer whose personal history gave him the subject matter for a major research project (p7); and many others who make the University a source of amazement and a force to be reckoned with.

For me, this is a special issue partly because it's the last I'll have a hand in. I'm off in May to launch a modest business venture while sliding gently into the sixth age of man – 'the lean and slipper'd pantaloon'. Without wishing to be sentimental, I'll miss all the people who make the University – and, I like to think, *Subtext* – something truly special.

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Subtext No 11, February 2010

By his own admission 'easily distracted', Professor Ricardo Araya toyed with politics, football and psychology before settling on a career in psychiatry. He talks to Hilary Brown about how he came to Bristol's Department of Community-Based Medicine, where his research has done much to improve mental health services in low-income countries.

I was born in Santiago, Chile. I'm the second eldest of six children. My father is an engineer and my mother was a housewife who also worked part-time in a private medical clinic. My parents encouraged us to work hard at school. As a result, we now have three doctors, a teacher, a translator and another engineer in the family.

My maternal grandmother was French. Her father emigrated to Chile to run a fancy department store called Maison de France. Many Europeans came to Chile during the 1800s, often to work in the nitrate mines in the north. I once visited Humberstone, an abandoned mining community, with a British friend. It was like a ghost town. Suddenly, a man, who must have been in his eighties, appeared from nowhere and asked in perfect English if we had a copy of *The Times*. For a moment, we wondered if he was an apparition! In fact, he was a local who had worked there for a British mining company, learnt the language and developed a fondness for English newspapers.

At school I was a good student, but I had what I call an 'unquiet mind'. I questioned everything and soon learned that this could be advantageous, not least in keeping me out of trouble. Once my friends and I were caught by the school inspector having a cigarette in the local park at lunchtime. Instead of running away, I stayed to discuss why this should be forbidden. The others were later suspended, but I was forgiven.

In 1973, the military, led by General Pinochet, took control. Political animosity was intense. You were either for or against the regime; there was nothing in between. One of my brothers supported the right-wing militarists, while I was on the left. We were always arguing, but we had to live in the same house. To make matters worse, he was disabled from having had polio as a boy, so I had to drive him to university, as we were both studying medicine in Santiago. It took years for us to put our differences aside.

There was no democratic student representation. My brother was nominated head of the students' union by the authorities because they knew he would toe the line. But the student opposition – among them Michelle Bachelet, who would become President of Chile – elected me as their unofficial leader. There were frequent rumours that we were being spied on by classmates who worked for the security services.

We protested by shouting slogans and burning tyres. If the police caught you, they'd beat you up and throw you in a cell for a few hours. A friend of mine was killed in one incident: the police claimed they had identified a terrorist cell but that the suspects had resisted arrest and were shot. Years later, we learned that this was a lie.

I was among the top five students at medical school. This had a lot to do with having learned discipline through playing sport. But I'd always wanted to study psychology, so when I gained a sports scholarship at the University of California, I postponed my medical studies and went to San Francisco.

Life in the States wasn't easy. I had to work as a hotel dishwasher to make ends meet. I used to cross some of the city's most dangerous neigbourhoods on my way home at night, running from block to block and watching my back in case of trouble. I'm told that one of these areas, Fillmore, is now very desirable! Despite the difficulties, I enjoyed my time there; San Francisco was the opposite of Chile – liberal and cosmopolitan – and the university football team was like a gathering of the United Nations, as most of us were foreigners.

I broke my leg and had to stop playing football, which put an end to any dreams I had of turning professional. My funding was withdrawn and I returned to Chile to finish my medical degree. I loved psychology, but medicine wasn't dissimilar. I wanted to help people and being a doctor was one way of doing this. At school I'd been encouraged to develop a sense of social awareness. This is something that has guided me throughout my life.

I couldn't get a job in Chile after I graduated because of my past activism. I gained a scholarship to train as a psychiatrist at Maudsley in London, where I completed a PhD in primary care and psychiatry and took up a research post.

When I came to the UK, I was fascinated by how the British use language. As a trainee at Maudsley, it took me some time to realise that when my supervisor said my opinion was 'interesting', what he really meant was 'What are you talking about, you fool?'. I also found the British reserve difficult to get used to, especially after the exuberance of the Americans.

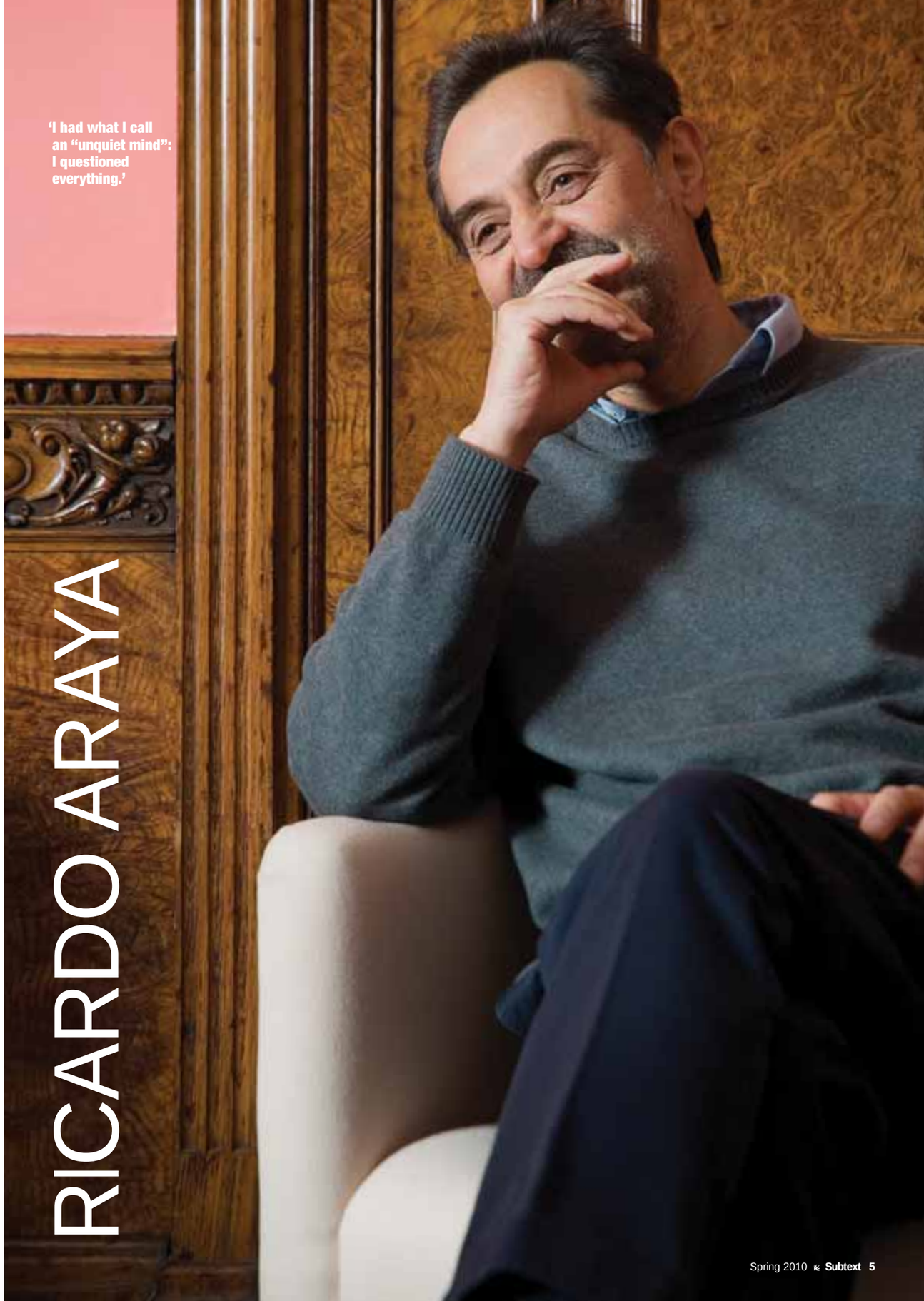
I returned to Chile in 1989 when a democratic government was elected. I thought I'd be welcomed, but so many political refugees were returning that there weren't enough jobs to go round and those who had stayed felt that there was unfair competition from the ones who had gone abroad to gain further qualifications. Although I felt uncomfortable doing it, I turned to my political friends, most of whom had jobs in the new government. I was offered a position as an adviser in the Ministry of Health.

Being a civil servant didn't suit me. Science played such a minor role in policymaking that I felt my skills were wasted. I got back into research when I set up a unit to evaluate services for people with mental health problems. But I had to return to the UK to develop strategies to improve depression-treatment programmes for people on low incomes at an international level.

Psychiatry is the poor relation of medicine, especially in developing countries. In some parts of Africa, there's only one psychiatrist for every million people. It's a huge burden on society. But there is more awareness of mental health problems generally, thanks to advances in our understanding of the brain. And we no longer think of physical and mental health as being two separate things – there is simply health.

Many members of my family have suffered from depression, including me. It's one of those chronic conditions you learn to live with, a bit like diabetes or long-term back pain. You get to detect early signs of relapse and develop strategies to avoid the triggers.

Whenever you move to a different country, there's something new to discover. It's not just language, culture and how to get a National Insurance number; it's also sounds, smells, the light. At the moment, I'm happy where I am, but there's no perfect place. I see myself as a citizen of the world. Every now and again it's good to expand your horizons and take on new challenges.



'I had what I call an "unquiet mind": I questioned everything.'

DAVE PRATT

NICK RIDDLE

TWENTY QUESTIONS

Claire-Lise Braun was born in Paris, has a Masters in Linguistics from Paris VIII Université de St Denis and is a Programme Administrator in the Registrar's Office. She is also a media officer for the Bristol branch of Amnesty International.

What is your favourite meal? Trifle – vegan and gluten-free.

Cat or dog? Or neither? I adore cats; I'm not keen on dogs or the idea of dog ownership, especially in the city.

What do you sing in the shower? Something by Queens of the Stone Age, or whatever my choir is currently practising.

Favourite smell? My cat's fur.

Your greatest character flaw? That I have so many of them. Or if you ask my friends, excessive self-deprecation.

What other historical period would you like to have lived in? The future. The world is only just starting to catch up with me.

What keeps you awake at night? Mostly my overanalytical brain.

Favourite spot in the world? A rock facing the ocean in Clifden, Connemara.

Least favourite spot? Bus-stops.

What winds you up? People who don't listen and tailgaters.

One book, one piece of music, one film. *The Man who Mistook his Wife for a Hat* by Oliver Sacks, 'Gnossienne #1' by Erik Satie, *Fight Club* by David Fincher.

What one possession would you save from a fire? I'd probably have my hands full with the cat, so possessions wouldn't get much of a look-in. Ideally, 'Kate' – a painting I did over ten years ago, but it's six feet tall and nailed to the wall so it'd probably have to fry.

You can make one new law. What would it be? Make all cruelty to animals illegal, including battery farming and vivisection.

If someone met you for the first time, what could they ask you to break the ice? Anything site- or time-specific; nothing that requires reeling off my CV – that kind of conversation bores me so much I want to chew my own leg off to escape it.

Your biggest life-changing experience (so far)? Coming to this country in the early nineties.

You can invite three people from any era to dinner. Who would you choose? William Wilberforce, Germaine Greer and Albert Schweitzer.

'My philosophy is this…' 'On a long enough timeline, everyone's life expectancy drops to zero.' (*Fight Club*)

When and where were you happiest? Manchester in the nineties. Friends, boyfriends, dancing, martial arts, painting, and I was still relatively innocent. The latter was a mixed blessing.

Where will you be ten years from now? I hope to have progressed career-wise (I'm certainly working on that) – other than that, anything could happen...

How would you sum yourself up in one line? A good egg, overall.

THE PLUG

***The Cambridge Companion to the Arthurian Legend* edited by Elizabeth Archibald and Ad Putter** (Cambridge University Press)
From the earliest medieval sources to *Spamalot*, this Companion, edited by two members of the Department of English, examines the evolution of the legend of King Arthur and his Knights of the Round Table. Contributors – including several Bristol academics and former PhD students – trace the legend's development and analyse the major themes that have emerged in English, continental European and American culture, from Geoffrey of Monmouth and Chrétien de Troyes to the Victorian revival.

***United in Discontent: Local Responses to Cosmopolitanism and Globalization* edited by Dimitrios Theodossopoulos and Elisabeth Kirtsoglou** (Berghahn Books)
Cosmopolitanism – which argues that the world's peoples belong to a single community with shared values – has some very vocal critics. For many, it's an ideology that serves the interests of the powerful and is bound up with the worst effects of globalisation, inequality and rampant capitalism. Dr Dimitrios Theodossopoulos, Senior Lecturer in the Department of Archaeology and Anthropology, is co-editor of this collection of studies of 'local' movements and campaigners opposed to cosmopolitanism and globalisation.

***A Palladian Villa in Bristol: Clifton Hill House and the people who lived there* by Annie Burnside** (Redcliffe Press)
This history of the University's first hall of residence was published to mark its centenary (and that of the University) in 2009. Annie Burnside, the hall's current warden, describes its Palladian architecture and recounts episodes from the lives of its residents.

PETER METELERKAMP

LIFE IN THE SHADOWS

History can be a very personal matter. Peter Metelerkamp, Senior Teaching Fellow in the Department of Drama: Film, Theatre, Television, wanted to record the passing of the white South African culture in which he was raised. He talks to Nick Riddle about photography and the experience of memorialising a world he'd always wanted to destroy.

JASON INGRAM

Main picture: 'Go Bokke'. Rugby has long been a vehicle for social bonding among white South African males, but the Springbok, with its apartheid-era associations, is now a controversial symbol. In a gesture towards greater inclusivity, the national cricket team was renamed the Proteas, hence the flower above the Springbok

Among the notes, schedules and photographs pinned to the board in Peter Metelerkamp's office is an award presented to him by students in 2002. The certificate announces that he was voted 'Most likely to appear in students' dreams'. Not one for the official CV, perhaps, but it's an accolade to treasure – and for a teacher and photographer concerned with getting to the heart of the human experience, it's an indication that, on some level at least, he's succeeding.

But when he talks about his work, failure is more of a theme. 'Photography is a kind of futile search for meaning,' he says. 'You grapple with the meaning of things by making pictures of them, all of which disappoint you in some way because none of them are commensurate with what life really is. It becomes a kind of addiction, and one of the modes by which you engage with the world around you and with your own existence.'

It was a larger failure – that of white South African rule – that has become Metelerkamp's subject. And he chose to tackle it in a way that is both highly personal and completely universal: by making pictures.

Descent and dissent

Metelerkamp is descended from settlers who arrived from Holland and Scotland at the start of the 19th century. 'My ancestors were not part of the mainstream of white South African society, but they were quite privileged,' he says. 'They were liberal patricians; my maternal grandparents helped to found the South African Communist Party in the late 1920s – and then turned away from it once the revelations about Stalinism came out in the late 1940s, but that wasn't enough to stop them being persecuted.'

His conscience was educated long before his visual sense, although his family were good friends with a number of South African artists, and his uncle was a painter. 'We grew up with

Opposite page, top left: 'Blanche Adams'. This is one of a series of formal portraits of direct descendants of the 1820 Settlers **Top right:** 'Farmhouse interior'. This was the home of an early 20th-century senator descended from 1820 Settlers, and later of the family of the doyen of South African rugby in the high apartheid era, Dr Danie Craven **Bottom right:** 'By order of the Town Clerk'. An archetypal 'No entry – by order' sign in Afrikaans, placed in a civic garden, is a reminder of a former era in which prohibition and pretensions to elegance combined to create a sense of exclusivity. Its visual aesthetic was more or less entirely constructed from a bricolage of second-hand influences

quite a lot of visual stuff around us,' he says. 'I was always aware of the power of images to disturb and to move.' But art was not something rarefied or high-flown; even at its most powerful, it was viewed with suspicion in white South African society. 'Art wasn't something a *real* man would ever think about doing,' he says. 'In the world I grew up in, men made money and played polo.'

Metelerkamp also failed to follow in the footsteps of his mother and grandfathers, who were lawyers: he rebelled against 'a positivist legal training that seemed, at best, palliative of the serious social issues of South African society'. Instead he studied English and Philosophy at the University of Natal. 'It was a very good, thorough education,' he says, 'but on a very cosy little campus, quite parochial and unworldly.' Desperate to avoid military service, he took advantage of the scholarships on offer and continued studying English. But eventually, the discrepancy between academic life and the South Africa of the early 1970s – with 60 per cent illiteracy and a yawning gulf between levels of education – became too obvious for him to ignore. He wanted to find a way to bridge that gulf.

'I thought, rather idealistically, that a way to reach people across a broader spectrum might be to make films,' he says. 'It was a form of social engagement, really – I've never been interested in film as mass entertainment, or in film for its own sake.'

Resistance

Metelerkamp went to film school in London, returned to South Africa and began making films, but then military service caught up with him. 'I was a pretty tormented soul, as you can imagine,' he says ruefully. 'I refused to go on an officer's course, and they said, "What the hell are we going to do with you then?". I said, "Well, I'm a film-maker, I can document your activities". It was incredibly cheeky of me, but someone somewhere was sufficiently enlightened to agree to it.'

His new job was a priceless opportunity to chronicle an era now passed into history – but Metelerkamp, with characteristic candour, says he blew it.

'I was so full of resentment and resistance to absolutely everything, every minute of every day, that it didn't occur to me that I could make useful and interesting films,' he says. 'I still wanted to make the films as good as possible, but I didn't make anything like as much as I could have of the chance to document military life.'

Metelerkamp sees this as characteristic of a failing common to both the romantic temperament and the colonial mindset, namely 'ignoring the stuff that's right in front of us and assuming that "real life" is always happening somewhere else. It didn't occur to me then that everything I was witnessing would vanish and that almost all of it would be completely unrecorded'. That's true, he argues, of the colonial history of white South Africa as a whole: 'The very thing that you didn't want to look at and wished every day would disappear, you now look back on and think "My God, I should have recorded it".'

After leaving the army, he resisted the lure of commercial film-making, studied adult education, and got a job running a university media centre. 'I felt that at last I was doing things that weren't worthless,' he says, then adds: 'Well, who knows in the long run, but they gave me a feeling of purpose.'

This state of affairs was shattered when political issues, never far from the surface in South Africa, came to a head. His then partner was active in the underground of the African National Congress, which led to 'a bit of a saga involving policemen with guns and being pulled out of bed in the middle of the night and her being thrown in jail'. They had to leave the country – and came to England, settling in Bristol, where Metelerkamp has lived ever since.

Back to monochrome

Having settled in at the Department of Drama as a lecturer in film and television, where he teaches students the techniques of film-making, he felt the urge to make things again. He turned to photography, partly because 'it wouldn't put me in competition for time and resources with my students', but also because he had always been fascinated by the power and complexities of the still image.

The huge resurgence of photography as a pursuit in the digital age has left its analogue predecessor somewhat in the shade. But Metelerkamp is one of a small number of practitioners who still work with film – and in black-and-white.

'Monochrome photography has a particular language of tone and form,' he explains. 'It's already at one remove from the thing being photographed, so you can't reduce it so easily to the referential meaning.'

As to the matter of what he should photograph, the answer to that had been staring him in the face for years. White South African settler culture – the world in which he was raised, and from which he fled – is a tattered anachronism in the 'new' post-apartheid South Africa. And Metelerkamp realised that documenting this late moment in its decline 'was the thing I needed to work on'.

Funding from the Arts and Humanities Research Council (AHRC) enabled him to visit the Eastern Cape of South Africa in 2006 and 2007 to record the legacy of settler culture and the fate of the descendants of the 1820 Settlers (colonists settled by the British government and the Cape authorities to consolidate the British presence in the region), who now comprise a fraction of one per cent of the region's rural population. Architecture with pretensions to colonial grandeur, self-conscious and often incongruous impositions of 'Britishness' on an unforgiving landscape – these physical signs of the 1820 Settlers' presence are fading, falling into neglect, or in some cases being repurposed by local communities.

So why the impulse to document these things now, at this stage in his life? 'Something starts to happen in early middle age,' says Metelerkamp. 'You start to feel that the grotesqueness of history is not your fault. You also develop an affection for the ordinary, because you become aware that things are passing, and the very fact that something exists is precious in itself.'

Metelerkamp's photographs are potentially valuable as historical records and as social anthropology – the AHRC has funded two of his South African projects so far – but

PETER METELERKAMP

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they're also, for him, inescapably personal.

'When I go there I have a very acute, painful, but also pleasurable, feeling about what it meant to grow up in that world,' he says. 'That's my touchstone: when I see something that makes me feel that feeling, I take a picture. The challenge is to give that feeling a visual shape that expresses something.'

As to *what* his pictures express, Metelerkamp acknowledges that there are layers of meaning that will probably only be found by people familiar with the culture of white South Africa. Viewers used to the in-your-face strategies of commercial or reportage photography will need to change gear and read the photographs as documents, as is true of many photographers (such as the American Walker Evans and the German August Sander) whose work Metelerkamp admires.

For what it's worth

'I've always loved teaching,' says Metelerkamp, 'especially that "aha moment" – it's a fantastically precious thing when you sense the students' thrill of discovery.' Aptly for someone who has learned to take the long view, he adds, 'I always tell them there's no way they're going to know what their time here is worth until five or ten years down the road.' That could almost be a message to his younger self – the angry young man stewing away in the army.

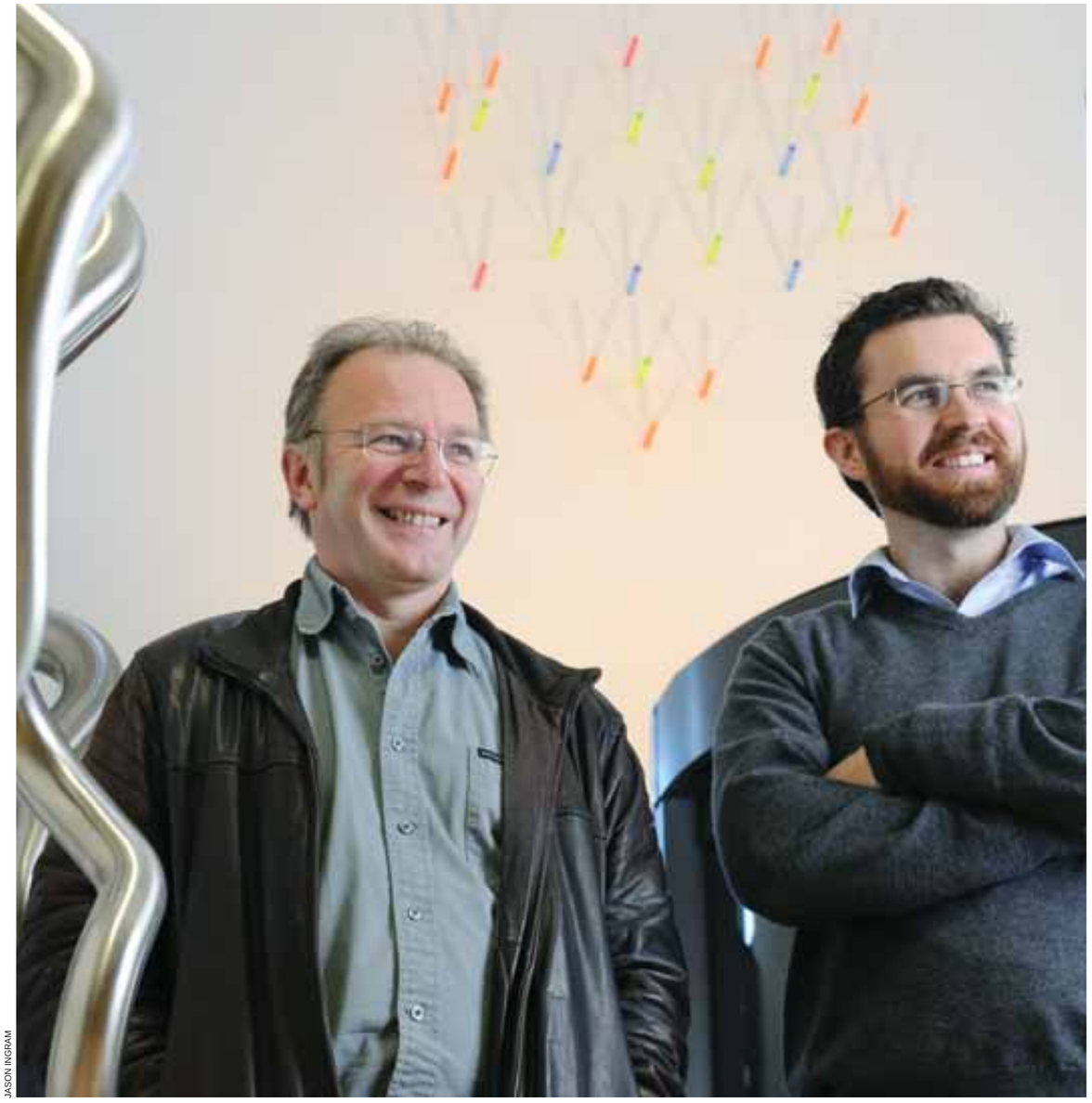
Metelerkamp seems to have reached a state of acceptance of the worth of his own work and the notion of failure. 'Life is so extravagantly enormous that any attempt to encompass it will fail,' he says. 'As the French photographer Henri Cartier-Bresson used to say, "Photography is nothing – it's life that interests me".'

But for those interested in life – and who isn't? – photography provides excellent tools with which to examine it as it passes. 'The world is strange and unfathomable,' says Metelerkamp, 'in ways that ask us to look again and again.'

You can see more photographs from Peter Metelerkamp's Settler project online at www.settlerlands.com and www.settlercountry.org

PETER METELERKAMP

SMALL TALK



JASON INGRAM

Mervyn Miles (left), Professor of Physics, has made a career of developing new tools for exploring at the nanoscale. Jeremy O'Brien, Professor of Physics and Electrical Engineering, is a leading researcher in the field of quantum optics, with a special interest in developing the world's first quantum computer. Together they represent the two-part mission of the University's new Centre for Nanoscience and Quantum Information. Nick Riddle listens to their discussion.

Blast-off

MM: I can't remember a time when I wasn't gripped by physics. My father was a hospital engineer, and he'd show me how to use lenses and how to build electrical things. The earliest thing I recall making – I must have been about eight – was a slide projector, using a magnifying glass, a torch and a shoe box. I was very fond of my Meccano set because it was such a good prototyping system. You know, we should get a big box of it for the department.

JO: My father's a maths teacher, and a mathematician generally – he's always got some problem he's working on. Similarly to Merv, he got me interested with bits of tinkering. When I was about four I asked my brother if we could use the reflection off Dad's tobacco tin lid as a torch, and he had to explain to me that you need a light source to do that. For a four-year-old that was an advanced principle.

MM: I remember trying to carry speech over a beam of light by modulating a light bulb and then having a photodiode at the other end to demodulate it. Then I thought of using the sun because it's so much brighter, so I had a mirror that rotated with the sun in the garden. People would call me Merlin because of my 'magical powers'.

JO: The best experiment I can recall was when was about ten; I devoted the best part of a weekend to scraping the sulphur off hundreds of match-heads, then compressing it all down into an empty bullet casing. My father, being a bit of a pyromaniac, decided it was safer if he was the one to launch it. So he made a launchpad out of a tobacco tin lid – Dad's tobacco tins featured heavily in a lot of our experiments – and heated the bullet with a match. Everyone was peering over, no safety glasses in sight. And it exploded, as you'd expect, and was gone, never to be seen again.

MM: As a kid you don't have a lot of equipment, so it makes you think about what you can do with the things you have available. My work now is not a million miles away from that sort of tinkering – I've just got bigger toys.

The butterfly effect

MM: I met a guy called Heinrich Rohrer by chance when we were both visiting Bristol for the European Biophysics Congress in 1984. He told me, 'I'm developing a new technique called scanning tunnelling microscopy'. He explained how you had to bring a very sharp metal point within about an atom's width of your sample, then scan it over the surface and build an image by measuring the quantum mechanical tunnelling current. And I thought, 'Dream on – he'll never get the stability to do that'. But two years later he got the Nobel Prize for it, and *I* was doing it too. This was right at the start of nanoscience, and it led to Bristol becoming a partner in an interdisciplinary research collaboration – Bristol's first-ever IRC – with Cambridge and University College London. I persuaded the then Vice-Chancellor, Sir John Kingman, that if we got this highly prestigious collaboration, he would provide suitable space. It took a while, but the 'suitable space' became the Centre for Nanoscience and Quantum Information that we opened recently. So there was a 'butterfly's wing' effect from my having bumped into that remarkable guy.

JO: I guess I had a similar moment as an undergrad: I'd started an arts degree, studying philosophy, psychology and maths, and got special dispensation to add physics after I got hooked by reading about some fascinating physical phenomena. In the second year we started to learn about quantum mechanics – and the whole class was buzzing about it. Then the *New Scientist* had a cover story on this new idea called quantum computing, which seemed like science fiction to us wide-eyed apprentices. I had a copy of that issue, so I became a library with a single magazine that I lent to the rest of the class one by one. A few years later, and here I am, trying to build one!

The agony and the ecstasy

MM: The excitement for me is developing a microscope to see things that people have never seen before – that moment when you see something as important as DNA directly through the microscope. You spend ages getting the microscope into shape and you work with a biologist or a chemist to get a good sample, then it all comes together on one day. That's just magic.

JO: Part of the joy is the effort that goes into it. When I first got into quantum optics as a postdoc, a colleague and I tried to make something called a quantum logic gate, and we spent 18 months doing 'good physics' – encountering problems, diagnosing them, finding solutions, moving forward, but never getting any results. One day in exasperation I said to the other guy, 'Let's build a brick wall tomorrow. We'll start with a pile of bricks and some cement, and we'll know exactly what we're setting out to do. We'll be able to assess when we've achieved it and how good a job we've done.' That was a dark moment – your career's just started and you feel it all slipping away. But when it all works, it makes everything worthwhile.

MM: Nature's tricky: you often design an experiment and it should work but it doesn't. But occasionally it's the other way round. We've become really known for our high-speed atomic force microscopy imaging; we can image 100,000 times faster than a conventional atomic force microscope. We just tried going really fast with the tip in contact with the sample, to see how bad the damage would be. But it didn't do any damage at all! It turns out to be something called superlubrication that's at work, but it was a lucky break. We can now go at crazy speeds, producing over 1,000 images per second. So we've leapfrogged our competitors by trying something different just to see if it works, then figuring out why it works and optimising it.

Always open

JO: I think just continuing in the same direction all the time is a recipe for disaster, especially nowadays when things move so quickly and the sub-disciplines are being redefined all the time. You can call yourself a high-magnetic-field-semi-conductor-transport guy, and maybe there's a future in that for the rest of your career, but it's also possible that there'll be some great breakthrough and everyone sweeps it all up and it's done. So you need to be prepared to do new things. We're given the opportunity to do that in a university research environment – we have the freedom to take risks and go off in new directions.

MM: And that can lead to those moments that you live for, when things line up in a new direction and you think, 'That's going to work'.

Living the (day)dream

MM: If you're sitting in a conference and you're bored stiff with a talk, your mind starts to wander. The idea that led to the high-speed atomic force microscope came to me during a boring polymer talk in Washington. I think the subconscious is always doing things – I really think you can load it so it'll work on things while you're not consciously thinking of them. It's daydreaming; you're wandering around in your mind and tenuously grabbing on to feelings. I always believe that if you have an idea you shouldn't write it down straightaway, because that can crystallise it when there's still time for it to evolve in some other way.

JO: I have the same sort of daydreaming thing at conferences. I also have a lot of ideas come to me at night, just as I'm falling asleep or waking up. Actually, being on the other side of the world on sabbatical for the better part of this year, without some of the usual distractions, really helped as well. I started a whole research programme after having had the time to let my subconscious chew on things, as Merv described, letting things wash over me a bit, and instead of rejecting them I could let that process go on for a little bit longer and think, 'Hm, actually, yeah…'.

MM: We don't really teach anything about how to be creative – it'd be nice to.

Telling the future

JO: Journalists always want to know when we'll have a quantum computer. And the answer is completely unknown. When you start predicting technology beyond five years it becomes extremely difficult because you don't know what other technologies are going to come along. I think that ten years is the upper limit for making any sort of sensible predictions – beyond that you're really fantasising. There's a socio-economic reason, too: it's going to take a huge amount of investment to build a quantum computer, so it's a question of whether we as a society really want to make that investment.

MM: I think my area is more complicated, because we're developing tools without knowing exactly what their applications will be. It's like all new tools. Our holographic assembler, for example, is something that people can use to move things around and build structures at the micro-nanoscale. Professor John Rarity's group in Physics is using it to build photonic structures for use in quantum optics, but it can also make tools to work with cells, and help with assessing cells for disease by 'feeling' them. The future of that depends on the uptake from medics; we'd like to put the assembler in a hospital and see what they do with it.

'You need to be prepared to do new things.'

There's a call from the Engineering and Physical Sciences Research Council for 'research in the wild' – taking your research into places where it might be applied before it's all nicely packaged up and commercialised – so we're hoping to do something that way.

JO: Laser is a great example – a bunch of physicists invented it, and who knew what to do with it? It took decades but now it's in every DVD player, supermarket scanner and what have you. I don't think anyone foresaw that. But that's what you learn from the history of technology – you have very little predictive power.

Friends and rivals

JO: The world feels small to me these days. We do science the same way all across the world, so you feel like you're attacking the same problems in the same ways. And your colleagues, competitors and collaborators are all the same people, roughly speaking. It's a pretty friendly field; if I visit a colleague in Munich, for example, we might start by saying 'You tell me what you're working on and I'll tell you what I'm working on'. If we find any overlap then we'll decide whether to agree not to talk about it, whether to join forces and collaborate on it, or whether we're at similar stages and could jointly submit something.

MM: There's so much to do, and there are so many different ways of doing it, even in the same area, that you'll never really be copying anyone else. We may all have the same information, but the way we think about it is different. But there are often 'landmarks' – clear goals you're all trying to get to.

Explaining

JO: I really enjoy talking to the public – it's such a great challenge. I think quantum mechanics is hard to explain because it's so uniquely different to everyday experience. Any analogy is flawed and would probably miss the whole point – it's the fact that it's different that's the point, and anything familiar that you attach it to isn't going to work.

MM: I think our field is probably a lot easier to explain to the general public than Jeremy's because we have pictures and movies. If we want to explain the atomic force microscope, we can use the record-player analogy; people who remember record players...

JO: They're dying out, Merv!

MM: That's true, the analogy's not going to work much longer. But take the idea of a sharp point bouncing along on a surface, then make it millions of times more sensitive. What's more difficult is finding out, when we meet members of the public, where we have to start. You can't tell just by looking at people; we had two grandmothers turn up at one event, and it turned out they both had PhDs in Physics from Cambridge.

JO: I ask people what their background is, and whether they want the one-minute, five-minute or half-hour version. When I was a PhD student, I guess because I was going to more parties, I would say to people, 'I'm happy to talk to you about this for as long as you want, but if you're just asking me to make conversation, I'm also happy not to talk about it'.

MM: I was talking to one woman at a public event where we were talking about forces, and I was explaining that there are different types – electrostatic force, magnetic force, and so on – and she asked me: 'Do you believe in forces between people?'. My expertise didn't help me much with that one!

WORK IN PROGRESS

JASON INGRAM

Family dynamics gave Kemi Oladapo an early introduction to people skills – the skills she now uses as Staff Development Manager in Personnel Services and Staff Development. She describes to Nick Riddle the roots of her own approach to change and the tricky balancing act between being an individual and working for a large institution.

'I would love to think of myself as diplomatic,' says Kemi Oladapo. 'I don't think I have that reputation at home. My family would say, "She speaks her mind: you know where you stand. If she thinks it, she says it, and it's over". At work, I'm not sure how that sits with being diplomatic – I hope I don't go round offending people.'

She doesn't, of course. Her role in staff development requires a high degree of tact and – in her specialised area of change management – a full measure of sensitivity. Because at the centre of her work is an intractable, undeniable and sometimes unwelcome fact of life: change.

Oladapo herself doesn't exactly relish constant change, although she's had her fair share. She was born a mere two weeks after her parents arrived from Nigeria in the sixties ('I'm lucky I wasn't born on the plane!'), and grew up in Stoke Newington with her younger brother and sister. But Oladapo also had two older siblings back in Nigeria, and when one of them joined the family in London, 'my nose was put *well* out of joint. I was about nine years old, and suddenly I had this older sister around. I was quite excited at first, until she started telling us what to do.'

Compared with her little brother, Oladapo coped fairly well. 'He would just defy her – he was quite a wind-up merchant anyway – but I was very careful not to upset her. I had to learn to use a lot of tact.' That approach was all the more necessary because of the nature of family culture in Nigeria, which demands that older siblings be treated with deference by the younger ones. 'When your older sister comes in, you're supposed to kneel in greeting,' she explains. 'And you call her "sister" because it's rude to use her first name.'

It quickly became obvious that that wasn't going to happen in Stoke Newington, but neither was the casual backchat that was standard behaviour between Oladapo and her baby brother. 'I'd call her by her first name, but I would be careful how I spoke to her. I would flatter her a bit and make sure she saw me as an ally, and try and get her to do what I wanted her to do. It didn't always work, but I had quite a good success rate. That must have taught me very good skills in how to deal with people – not that I was aware of it at the time.'

Nor was she aware of what her 'new' elder sister was going through. 'She was totally uprooted,' says Oladapo. 'Different culture, different climate, brothers and sisters that she felt she had nothing in common with.' After their parents separated, her sister's challenges mounted up. 'She just wanted to be a teenager and do what she wanted to do, but she had to look after all these kids. I had no idea of the emotional support she had to give our Mum. I was too busy avoiding having to cook.'

But Oladapo's grasp of diplomacy and human nature was clearly developing by her early teens, judging by her account of visits to their father. 'I didn't want us to have a horrible day, so I'd store up funny little stories to tell him and think of games we could play. I would feel much lighter when I could see him laughing. It would lighten his mood and we could build up to a stage where he would say something about a decision Mum had made and I could say, "Yeah, I can see how you'd think that, but to us she came from a different place, it wasn't done with that in mind" – and he would hear it. So I learned to create an atmosphere where we could have a discussion.'

Fitting in and getting on

After a degree in English and Religious Studies and a qualification from the Chartered Institute of Personnel and Development, she got her first job as assistant staff manager with Waitrose at their Head Office in Bracknell and various stores in London. The newly graduated Oladapo wasn't sure about corporate life.

It wasn't just the business dress. Lunchtimes involved sitting at certain tables in the canteen, depending on your position – an arrangement she found constraining. 'I would go and sit at

JASON INGRAM

other tables just to talk to different types of people,' she says. 'I would have to initiate the conversations – that must have been the energy of youth.'

No, Oladapo is not one to be stand-offish. 'Really, *really* not,' she confirms. 'You have to be careful because some people really want their own space, or maybe just at a particular moment. As I've got older, sometimes I'm like that, too. And you develop a sensitivity to when people want to be left alone. But it's my default setting – I like to talk to people.'

After 14 months of trying to start lunchtime conversations at Waitrose, she moved to the West Country to work as a personnel officer in the NHS, first in Weston-super-Mare and then in Bristol, where she stayed for 12 years, during which time she also completed an MSc in Organisational Behaviour. The public sector suited her better, with far fewer 'protocols about who you could be, where you could sit, who you could talk to'.

Shock of the new

The challenges of work and life don't have to be extraordinary or tragic to count as significant. Take parenthood – not exactly an exotic occurrence, but one of the most radical events in anyone's life. Oladapo's first experience of motherhood was an object lesson in how change can involve fear as well as fulfilment.

'I wasn't remotely prepared for what hit me,' she says. 'This was something I wanted desperately, and yet I'd never been so scared in my life. We were responsible for this little tiny baby and I barely knew which way up to hold him.' It took her a good three weeks 'to get to the point where I felt I could handle it'.

But it was a *lack* of change that began to nag at her when she returned to work after having her second child. 'I found some of the same cases waiting for me,' she says. 'Not even different cases of the same sort, but the same ones.' She decided that if she didn't go freelance then, she never would. 'So off I went. It was pretty scary, but at the same time I couldn't believe the freedom I felt – I was virtually skipping.'

Oladapo freelanced for almost ten years, both via agencies and through building up her own 'small but sturdy coaching practice with my own private clients'. When equality legislation was being strengthened, the Equality Foundation sent her round the country to train NHS boards in equality and diversity, 'looking at behavioural change and getting into the spirit of the law rather than the letter of it'.

But freelancing can be a solitary existence. She began to worry 'that I might be getting a bit odd' and found herself wanting to feel a sense of belonging again. Hence her arrival at the University in 2009 as a Staff Development Manager with a focus on change management.

Her job description covers a broad brief, including inductions and orientation sessions for new staff, awayday workshops on topics like teamwork, planning and decision-making, and one-to-one career development coaching. Sometimes the purpose of sessions like these can simply be to give members of staff room to think, and talk, about their experience of the work they do. 'It can allow them to raise pertinent questions – to which there are often no easy answers – and air concerns constructively,' Oladapo explains.

Change comes in many forms: it can be sudden or gradual, and it can involve anything from new technology or a change of premises to a shift in policy or aims, or the restructuring of a department. 'Our environment is never static,' she says. 'A lot of my work is about helping people to make sense of how things are and exert some kind of influence over their circumstances.'

If you're leading group sessions, it helps to have a little of the performer in your make-up. Sure enough, Oladapo's childhood featured talent competitions and amateur dramatics at her church, the latter involving plenty of improvisation.

'You do have to project something when you're working with a group,' she acknowledges, 'and you need to be pretty spontaneous. You don't know what everyone's going to bring, so you can't go in there with a script, although you need themes and objectives. Like most actors, I get dead nervous beforehand, but when we kick off, I'm completely focused. And I really enjoy it.'

Follow the fleet

When it comes to working in a university setting, Oladapo's philosophy, befitting someone who values frankness as much as diplomacy, is both forthright and circumspect. 'Someone described academics as "professionally argumentative", and they have very high standards – as do support staff, who are equally professional. In any organisation, there's a history and there are reputations – sometimes well deserved, sometimes not – and the only way you can overcome those and speak a mutual, constructive language is not to shy away from difficult discussions.'

It's clear how much thought Oladapo has given to reconciling her fervent individualism with her desire to contribute to something larger; that's a dilemma that many people working in higher education will recognise. 'I think I picked a good place,' she concludes. 'This is a job where I can make a decent contribution and still be me; *that's* what I'm after.'

And as if to clarify that the 'me' in question can itself change and develop, she adds: 'We may all work our own sails, but we're all in the same fleet and we have to go in the same direction. And I *must* have grown for me to say that!'

A HEAD FOR HEALING

Marianne Thoresen, Professor of Neonatal Neuroscience, has had remarkable success in translating her research into clinical treatment that makes a real difference to people's lives. She talks to Hilary Brown about how she refused to let family circumstances and personal illness get in the way of her search for a therapy to prevent brain damage in babies.

DAVE PRATT

‘I’m good at talking people into giving me things,’ says Marianne Thoresen with a serene smile. By way of example, she indicates a £30,000, top-of-the-range neonatal incubator donated to her Bristol lab by the business development director of a medical equipment manufacturer.

‘I collared him at a meeting of the Society for Pediatric Research in Baltimore in 2002 and spent some time bemoaning the expense of the clinical equipment needed for neuroprotection work,’ she recalls. ‘Maybe it was just the surroundings that made him feel generous – we were at an evening reception on a riverboat, the sun was shining, everyone had a nice glass of white wine – but something must have struck a chord because three months later a large package arrived on the doorstep.’

The spanking-new incubator was just what Thoresen needed to develop her experimental work with animal models that mimicked the situation of a baby suffering lack of oxygen at birth. These carefully controlled experiments recently culminated in international clinical trials with human babies which showed that lowering body temperature reduces the risk of brain damage from oxygen deprivation.

Beg, steal or borrow

It’s taken Thoresen 12 years to build up the Bristol lab, which is like a mini-neonatal unit, well stocked with ventilators, defibrillators and EEG equipment. No funding body is going to come up with £200,000 for three cooling machines, so she relies on the generosity of donors for clinical equipment.

Some of the parents whose children she treats are involved with the children’s medical research charity, SPARKS, which funds Thoresen’s research, and she spends many an evening speaking at fundraising events. Not that she begrudges a minute of it. ‘That’s one of the joys of research,’ she says. ‘It makes you do things you would never have done and meet people you would never have met otherwise.’

A lukewarm reception

Thoresen didn’t get the start to her career that she had hoped for. She wanted to be a doctor like her father, but when she was 16 he became paraplegic as a result of a surgical complication. ‘I had to help out a lot at home and the family couldn’t spare me for the time it would have taken to do a medical degree,’ she explains. She also had to contend with cultural expectations: ‘I grew up in a poor coastal community in post-war Norway where people were struggling to feed and clothe their kids,’ she says. ‘Studying wasn’t seen as “real” work.’

She settled on physiotherapy ‘because the course only lasted two years’ and began working with children with cerebral palsy. Before long, she found herself wanting to find out more about the causes of brain damage in babies and realised that she would have to study medicine after all, even if her parents were horrified at the thought of her taking out another student loan at the age of 25.

Things hot up …

During her medical degree at the University of Oslo, Thoresen met a physiologist who ran a research group and was happy for the occasional medical student to spend time in his lab. Thus inspired, Thoresen embarked on a PhD in physiology. ‘I’d finally met someone who thought I had something to offer,’ she says. ‘I’ve been hanging out in labs ever since.’

She began using Doppler ultrasound to measure blood flow velocity in the brains of newborn babies and her work attracted the attention of Professor Kenneth Cross at The London Hospital, who invited her to validate another blood flow method used in babies. The comparison showed that the UK method was wrong and Thoresen was impressed by her colleagues’ scientific honesty when she was encouraged to publish the results in the *Journal of Physiology*. She completed her PhD at the same time as graduating in medicine and followed it up with a postdoctoral fellowship at the Karolinska Institute in Sweden.

But back in Norway, training as a paediatrician, there were no posts that combined both clinical work and research, so Thoresen had to take long periods out of her training to continue her experimental work unpaid. Then came a windfall in the form of a women-only grant from the Norwegian Research Council, aimed in part at increasing the number of female academics in senior positions. This allowed her to initiate collaboration with institutions in the UK, Sweden and France, using magnetic resonance spectroscopy in cooling experiments. But she still couldn’t see a way of using her research to develop a treatment that would protect a baby’s brain; apart from the lack of suitable jobs, Norway had too small – and healthy – a population to enable her to get any meaningful results.

‘Reaserch makes you do things you would never have done otherwise.’

… and then cool down

At St Michael’s Hospital in Bristol, Thoresen had the opportunity to bring her work into a clinical setting. Collaborating with neuroscientists who worked on the mechanism by which cooling protects the brain, she looked at selective head cooling using a cap through which cold water circulated. In collaboration with colleagues around the world, she conducted successful trials with the CoolCap showing that brain damage caused by oxygen deprivation at birth can be avoided or reduced if a baby’s head is cooled to 3°C or 4°C below normal body temperature for three days, and the technique has since extended to whole-body cooling.

An important aspect of Thoresen’s work is building up relationships with patients and their families. Cooling is now standard treatment for asphyxiated babies and the success rate is high, but it doesn’t always work and some babies develop a disability. When this happens, Thoresen sees it as her responsibility to help the parents manage their baby’s condition. ‘It’s as much about encouraging people to believe in their child’s potential as it is about drug treatments,’ she says. ‘In physiotherapy, we often achieve results that far exceed our expectations. I’m convinced this is partly due to people’s determination to make the most of difficult situations.’

Mind over matter

Thoresen can say this with such conviction because of how she coped with her own rehabilitation after an unexpected illness. Shortly after arriving in Bristol, she developed a brain tumour and underwent surgery. ‘I received excellent care, but I struggled with memory and concentration problems for a long time afterwards,’ she recalls. ‘A desire to be well and continue with my work kept me going.’

She drew her inspiration from her father, who was in hospital for three years after he became paraplegic and came close to death on several occasions. ‘When he recovered, he was determined to continue working as a GP,’ says Thoresen. ‘My parents moved to a specially adapted house with a surgery on the ground floor so he could wheel himself into work every morning. The downside for my mother was that people always knew where to find him, so it was like living in a 24-hour A and E department.’

Working with sick babies takes its toll emotionally, but Thoresen remains positive. ‘It’s very sad when you can’t help your patients, but the point is that fewer babies now die or become severely disabled, and we’re working on new treatments that will help the sickest ones,’ she says. ‘And the injuries we deal with don’t stem from inherited conditions. If you’re unlucky enough to have a baby that suffers asphyxiation at birth, it’s unlikely to happen again. It’s great to hear from couples who have lost a child that they’ve gone on to have a healthy baby.’

Her father’s daughter

Thoresen plays down the fact that she has pioneered a life-changing therapy, preferring to concentrate on enthusing her research fellows in the same way that she was encouraged by her PhD supervisor. Besides, she’s more apt to consider her father’s eventual acceptance of her career choice as one of the high points in her life. ‘He was proud of what I accomplished, even though he died before the cooling treatment was introduced in clinics,’ she says. ‘I like to think of him before his accident, cycling round to his patients’ houses with his doctor’s bag on the handlebars, doing what he loved best. In the end, he came to see that this was what I was doing too.’

THE PLOT THICKENS

Escapism isn’t always what it seems: when you look closely at popular culture, you end up looking out at the world. Dr Jutta Weldes has made it her business to examine some of the stories we lose ourselves in, and how they shape our assumptions about global politics. She talks to Nick Riddle.

They say everyone’s a critic. But studying your favourite TV drama for parallels with US foreign policy and questioning the orthodoxies involved is probably not a majority pastime. It’s entertainment, after all. But when the entertainment industry is so influential in forming our impressions of the world, it’s a good idea to look at what its stories are telling us. That’s certainly how Dr Jutta Weldes, Reader in International Relations in the Department of Politics, feels about it.

‘There’s so much ideology built into all forms of popular culture,’ she says, ‘and studying that is crucial if we want to be critically aware of the kind of beliefs and arguments we’re being inculcated with.’

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Birth of a fascination

The German-born Weldes was raised in the States and studied German and politics before getting interested in international relations as a graduate student. But it was while she was off duty that the beginnings of a major new research topic began to stir.

'I watched a lot of re-runs of *Star Trek* in graduate school,' she recalls, 'and we'd sit around talking about what we were watching and how it seemed to relate to US foreign policy.' On the face of it, this might seem to have little to do with the 'high politics' studied in academia – diplomacy, military actions, economic issues and now climate change. But consider the global reach of a cultural product like the *Star Trek* franchise, and its sheer pervasiveness in everyday life; the assumptions behind those military and diplomatic strategies are also at work in the narratives and attitudes of TV drama, movies and the mainstream media in general.

The original *Star Trek* series created a universe that seems at first glance liberal and progressive, with a multicultural cast and plenty of storylines critiquing racism, aggression and – obliquely – the Vietnam War. But look beneath the surface, says Weldes, and you find subtexts that reinforce the militaristic and interventionist stance of US foreign policy.

'The mission of the Starship *Enterprise* is supposedly scientific, but Starfleet is a military organisation with ranks and pips, and there's a clear hierarchy of races,' says Weldes. 'And they're always intervening in the affairs of other planets: there are countless episodes where they encounter a new race and effectively say "We have to protect them from themselves". In one storyline they destroy the computer that's been running a society because everyone's too happy, and societies are meant to struggle to develop.'

She wrote a paper teasing out these parallels, then edited a book on science fiction and international relations called *To Seek Out New Worlds* – a sign that the field is gaining acceptance. Weldes also teaches a final-year undergraduate unit on popular culture and world politics.

The hills are alive with dubious gender politics

Weldes finds that undergraduates, by and large, get the point of the exercise pretty quickly. 'They may not be politically critical, but many of them are very astute about how the media works, because they've grown up with all this stuff and they're much more adept at reading multiple layers of meaning. I try to get them to think more explicitly by giving them theoretical tools to do that.'

Unpacking the baggage that many cultural products contain can lead to some nasty surprises; if you're examining a movie you're particularly fond of, it can be a little like dissecting a beloved pet. Weldes recalls a student who wrote a paper on *The Sound of Music* – 'her favourite film ever' – and was startled by some of the subtexts she discovered. 'She suddenly saw all these problematic ideas about gender relations, class relations, world politics…' says

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Weldes. 'She was really upset that I'd spoiled her favourite movie.' She now cautions students that disillusionment comes with the territory – more than that, it's really the whole point.

The course is popular, probably because, as Weldes says, students 'like being able to look at something that's so clearly a part of their everyday life'. But a large part of her job is to make them realise how political everyday life already is. 'World politics doesn't just happen somewhere out there,' she says. 'If you buy your clothes from certain stores, or drink certain brands of coffee, that's connected up to some major issues in world politics. I do think they get it, and hopefully they're more critical about what they consume.'

Altered States

You might think that the difference between fiction and real-life events is pretty clear-cut. But when a major, traumatic event becomes the subject of a narrative in the mainstream media, many issues are the same: assumptions become fact, contexts are left out, and a 'common sense' emerges to reinforce political policy. Weldes encountered a perfect example of this when she taught at Kent State University in Ohio.

Kent State occupies a controversial place in American history. On 4 May 1970, at the height of the Vietnam War, members of the Ohio National Guard opened fire on students protesting on the campus, killing four and wounding nine. The incident, now enshrined in the American consciousness as May Fourth, still resonates today.

'When I went there for the job interview in 1993, they took me to the site where the students had been shot,' she says. 'It's still a huge deal: the university set up the Center for Peaceful Change, and there's an annual commemoration and a range of academic work related to it.'

But to say that not everyone has felt the same way about May Fourth over the past 40 years would be putting it mildly; even some of the basic facts are disputed. Some conservatives – including President Nixon, whose decision to send US troops into Cambodia sparked the original protest – have portrayed the students as troublemakers who 'got what they deserved', and a significant portion of the student body has argued that the time has come to stop the memorialising and move on. Kent State itself has gone through a tortuous process of self-examination: 'First they tried to distance themselves from it,' says Weldes. 'They changed their logo, and staff were told to refer to it as Kent rather than Kent State. But eventually they decided to embrace their own history, so they redid the logo and put Kent State front and centre again.'

Weldes co-wrote a paper on how the mainstream US media's interpretation of May Fourth tended to fall into step with the views of Nixon and other politicians. Foreign policy was frequently removed from the picture, as was the presence of the military on campus. What remained was a snapshot of a bunch of students on the rampage.

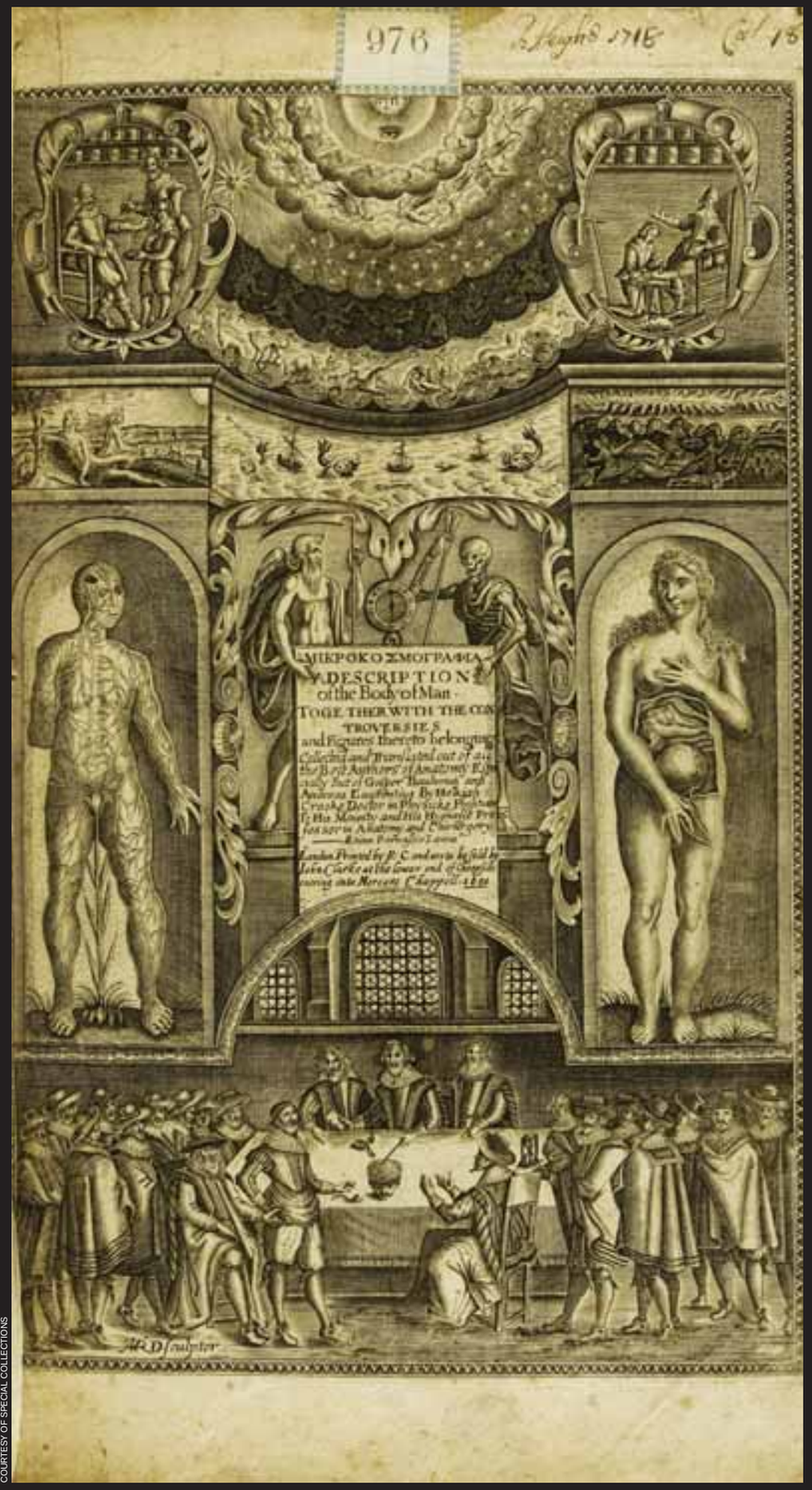
In another paper, she compared this to 'official' US accounts of the 9/11 attacks and the 'Why do they hate us?' rhetoric that ensued. 'The narrative that developed after 9/11 completely wrote out the history of US foreign policy in the Middle East,' argues Weldes. Remove that key perspective, and you're left with a skewed picture of an irrational enemy. 'If they're irrational, you can't negotiate with them, so what do you do? You use force. These are all really common arguments. During the Cold War, it was argued that the Soviets didn't understand anything but force. If you've got the majority of the population convinced that you have irrational enemies who hate you simply because you're so good, that helps to drive foreign policy in a particular direction.'

New worlds and old

For Weldes, clearly, context is everything. And the context of her own upbringing sheds some light on the nature and evolution of her research. 'My parents assimilated and became total Americans, but at home we spoke German,' she says. 'We had a German Christmas, which happens on Christmas Eve.' As is common in such cases, her parents' version of German culture was frozen in the 1950s when they emigrated, leading to the persistence of a few archaic customs: 'As a kid I had to curtsey, long after everyone in Germany had stopped doing it,' she recalls. That feeling of not quite fitting in can sharpen one's awareness of the undercurrents of popular culture and what they tell us about the world and our place in it.

So does she think of herself as German, American, German-American…? 'My kids think I'm German, and they talk about themselves as German, even though they were born in the States and brought up in Britain. But sometimes they'll tell you that they're American, so who knows? I wish they'd think of themselves as British, but they like being exotic.'

Don't we all? The stories we tell about ourselves can say a lot about our deeper assumptions and motivations. What Weldes has helped to illustrate is that the same is true of whole societies – whether real, fictional, earthbound or interstellar.



COURTESY OF SPECIAL COLLECTIONS

THE ILLUSTRATED MAN

The study and practice of medicine in Bristol and Bath has an unusually long history. Consequently, the University Library's holdings include a remarkable concentration of historic medical literature.

Pictured here is the engraved title page from one of the collection's jewels – a 1651 edition of Helkiah Crooke's *Mikrokosmographia: A Description of the Body of Man*. This popular treatise was first published in 1615, with a second edition in 1631 for which this title page was commissioned. The engraver was Martin Droeshout, whose iconic portrait of William Shakespeare is the most famous engraving in publishing history.

The Library possesses all three editions of *Mikrokosmographia*; this 1651 edition was presented to the Bristol Royal Infirmary by the 19th-century surgeon, Richard Smith, Junior.

To see more treasures in the University Library's Special Collections, go to www.bristol.ac.uk/is/library/collections/specialcollections/archives/treasures (a virtual gallery created for the University's centenary celebrations in 2009).

Photography for these images was made possible by a generous grant from the University of Bristol Alumni Fund.

Endnotes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DAVID FAY


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COURTESY OF THE BRISTOL GALLERY


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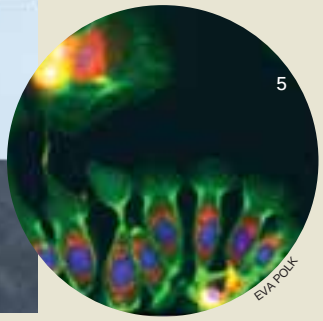
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EVA POLK

1 ‘Overcome in the midst of the city’, by David Fay (taken in Place de la Bourse, Bordeaux), one of the winning entries in a photographic competition for students in the School of Modern Languages. Third-year language students were invited to enter photographs they had taken during their year abroad. The competition aimed to harness students’ talent and to create an opportunity for entrants to reflect on the culture of the country they had lived in and promote the year abroad to fellow students.

2 Pictured from left to right are Rachel Minns, Becky Unitt, Maxine Martin-McLellan and Sarah Armstrong from the Language Centre, who hosted a Mad Hatter’s Tea Party to raise money for the BBC’s annual Children in Need appeal last term.

3 ‘Fairy tale’, by Hywel Livingstone, a postgraduate student in the Department of History of Art. The sculpture was one of a diverse array of works by contemporary European artists that were recently brought together in the To Be Confirmed exhibition at The Bristol Gallery. The exhibition was co-curated by History of Art MA student and Bristol Gallery manager, Holly Lopez.

4 A still featuring members of the University’s rowing and swimming clubs from *Centenary Portraits*, a film made by award-winning video artist Terry Flaxton to round off the University’s centenary celebrations. The film, which features around 200 of the 23,000 students and staff who make up the University community, can be viewed at www.bristol.ac.uk/centenary/look/art/portraits-film.html.

5 ‘Sunrise’, by Eva Polk in the Department of Physiology and Pharmacology. The image was one of the winning entries in an annual competition organised by the Faculty of Medical and Veterinary Sciences that invites postgraduates to represent their scientific research through confocal images, photographs, original artwork or computer models. The resulting compositions were exhibited in the At-Bristol café.

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