

# genesis of genius

BY LEE ELLIOT MAJOR

PORTRAITS BY  
TRICIA MALLEY AND  
ROSS GILLESPIE

As Imperial launches a campaign to sustain scholarships and financial aid for future students, *Imperial* magazine catches up with an alumnus, who is using his own experiences to guide boys from under-represented backgrounds into higher education.

By pure chance I meet Dr David Pollard (Physics 1978, PhD 1983) a few days after the Prime Minister has done him a huge favour. The news pages and airwaves are still busy covering David Cameron's criticism of Oxford University's 'disgraceful' under-representation of black pupils among its undergraduate ranks. What has catapulted this story up the news agenda is not the alarming fact that only one Afro-Caribbean student made it into Oxford in the 2009–10 academic year. No, the press have pounced on Cameron's wider and inaccurate claim that there was a solitary 'black' student admitted last year. Oxford was quick to issue a potentially embarrassing rebuttal to its former student: in fact, 27 British students of its 3,000 new undergraduates were self-declared as black last academic year. (The equivalent figure from Imperial is 42 out of 2,574.)

The episode says as much about the preoccupations of the white-centric Oxbridge educated elite of the British press as it does about the accuracy of the PM's briefing notes. But for David (pictured left on a return visit to Imperial) the high profile mistake has been an unexpected publicity boon. No amount of campaigning could have highlighted so succinctly one of the toughest educational challenges facing the country: the tragic waste of academic talent among black Afro-Caribbean boys.

"I would have preferred it if he had got his facts right, but it is very good of him to raise the issue," says David. "As it turns out, the mistake has made people more aware of the big differences between black students of Caribbean rather than African extraction."

David's passion is ensuring that bright black boys – many from broken homes on inner-city estates – fulfil their academic, specifically scientific, promise and gain entry to the country's elite universities.

Some say it is a scandal that still only around half of all pupils at age 16 in England leave school with the very basic attainment measures – gaining at least five C grades and above in their GCSEs including English and maths. Among black Caribbean boys, only just over a third – 37 per cent – passed this minimum threshold in 2009–10.

David is ideally qualified to speak on the subject. As a young man from Guyana, he was one of two or three black students among the sea of white faces in the undergraduate physics lecture theatre at Imperial College in 1975. With a PhD, also earned at Imperial, and a high-flying career behind him, he is now active at Imperial again.

David is chairman of Generating Genius, a university access scheme with a specific aim: to turn talented black boys, particularly those with Caribbean heritage, into scientists and engineers.

It all started at a school reunion, when David got chatting to Dr Tony Sewell, chief executive of Generating Genius, and found a kindred spirit. Here was someone who shared his concerns and was doing something about it. The two, perhaps unwittingly, have become role models for a special group of protégés.

In 2006, 25 boys aged 12–13 spent three weeks during the holidays on a summer school at Imperial, engaged in ‘hands-on’ science with some of the College’s leading academics. Every year since, most of the group has returned for more. These are no ordinary out-of-school lessons: in one project, the boys present their plans for combating malaria; in another they apply their new-found knowledge of cutting edge robotics. At the end of the summer school, the students present their work to a panel of experts.

The work of the charity is underpinned by two fundamental insights. The first is that it is not colour or creed, but culture and class that drive low aspirations and achievement among the boys. The second is that their educational decline needs to be halted during early secondary school, before the boys have reached their teenage years, and when a place at an elite university like Imperial or Oxford is yet a distant dream.

Writing in *The Daily Telegraph* in the aftermath of Cameron’s comments, Tony sums up the challenge: “The real issue is that this group, whose grandparents came here in the 1950s, have simply integrated into the wider poor working class, and fallen victim to exactly the same problems.”

“Caribbean children are more likely than any other to come from a seriously disruptive family background – whereas their African cousins, blessed with stable families and the new arrival’s determination to build a better life, are shooting up the educational rankings. Just like the white working class, the Caribbean community has become mired in a culture of dependency, where you can still be rewarded for doing nothing.”

This appears to be a distinct phenomenon in Britain: the white working classes and Caribbean cultures have melded into one to create a new anti-educational sub-culture. Two groups of children have become conspicuous for being bottom of class in inner city schools across the country: white working class and Caribbean boys. The much debated black-white gap in the United States has less meaning on the UK side of the Atlantic.

The impact of different family cultures came into sharp focus, David says, when Eton College, the famous independent school near Windsor, approached the charity with a potentially life-transforming proposition. “We had a generous offer from Eton for some of our boys, or others whom we could nominate, to try for a scholarship to study at sixth form there from autumn 2010,” he says. “But we could get very few Afro-Caribbean families to go for that. They just weren’t keen at all on sending their children to what they saw as some posh place in the country. What we found was that the children getting put forward were, to a man, black African. The Africans didn’t have a problem at all, but black Caribbeans just didn’t want to know.”

It is little wonder that Afro-Caribbeans make up such a tiny minority of the few places won by black students at Oxford or Imperial. As universities are at great pains to explain, their admission figures are largely the product of earlier educational gaps that emerge before and during school. For black Afro-Caribbean boys, results during primary school are quite good, says



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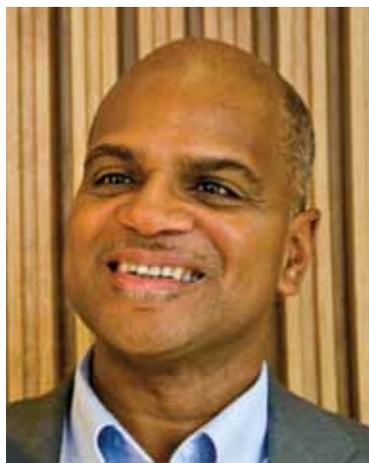
David, “but it all goes to pot by the time they do their GCSEs at age 16”.

David believes the downward spiral of academic results during the teenage years is partly due to the dysfunctional home lives that many boys lead but also, he asserts, “the whole view of the system towards them changes”. This includes, he argues, many teachers, who are fearful of the young men in their classroom. “It creates the wrong environment for someone to shine academically,” says David. “The kids are very able, but their lives can be difficult and chaotic. You realise that if you don’t help them, if you don’t keep carrying the ball now, it will be dropped, and it will be difficult to get it back.”

All this is a far cry from the aspirational upbringing enjoyed by David during the 1970s in the small Caribbean country of Guyana on the northernmost tip of South America. “The (grammar) school always had high expectations of what I would become and what I was doing,” he says.

One role model at the school was head boy, Trevor Phillips (Chemistry 1975), now head of the UK’s national equalities body. David’s father was a leading academic at the University of Guyana, establishing a social work degree course; his mother was also a social worker. It is fair to assume that they played a large part in instilling the

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academic fervour and social conscience that characterises their son and David still retains a keen interest in the politics of Guyana.

David travelled to London to study physics at Imperial in 1975, taking a first class degree. Then at Cambridge, he gained the notoriously tough Master's degree – the Mathematical Tripos Part 3 in applied maths and theoretical physics and got engaged to his wife Annabelle (now a consultant gynaecologist). He then returned to Imperial to do a PhD in theoretical physics. It was as theoretical as it gets: estimating the cosmological constant, the number that tells us when the universe will stop expanding.

After a stint at the University of Guyana, he returned to the UK. David became a senior physicist at BP – applying science to develop large oil and gas production projects. Then a headhunter from the City came knocking in search of physicists like David, who could apply their differential equations to predict trends in the financial markets instead. At the Citigroup bank David was, until 2007, a director developing strategies and valuation tools for high frequency bond trading. He now continues on a freelance basis.

“It turns out that the equation that governs how you price an option is the same equation that governs heat conduction in pipes,” says David. “The diffusion of information on stock prices is not that different from the kinetic diffusion in molecules.” What he finds most satisfying about the job is the immediacy of the feedback. In his academic work on the cosmological constant, “you could live and die and not know whether you were wrong or right”, he explains, whereas in finance, “you know by the end of the day when you see the profit and loss statement”.

A generation on from his studies at Imperial, David remains the exception for male Caribbeans in Britain. For the Pollard family, this came to light when David's daughter, Arésé (Biological Sciences 2005, MSc Business School 2006), won a place to study biology at Imperial in 2002. The make-up of the lecture theatres had changed a lot in three decades – with ethnic minorities now a significant presence. But it was predominantly young Asians who had broken into the elite university ranks. And it was mostly females making up the small contingent of black Caribbeans. Universities have seen a huge expansion of student numbers since

the 1980s; yet black Caribbean boys remain the educational outcasts.

In frugal times, the challenge for Generating Genius is now to raise more funds and scale up. The charity wants to recruit more cohorts of black students and offer activities during holidays throughout the school year. One idea has been to start Saturday classes. But funds have been hard to find. “We are not touching as many as we could do,” says David.

But now the charity is armed with actual results. Seventeen of the original 25 boys lasted the five-year programme, between 2005 and 2010. All have received offers to study at an elite university (including five from Oxford, Cambridge and Imperial), and 90 per cent are predicted to get A or A\* grades in their science A-levels this summer.

While it is difficult to discern the exact impact the programme is having, these are impressive outcomes for a group where 90 per cent are from single parent backgrounds, and 95 per cent will be the first in their family to go to university.

These 17 are the few bucking the national trend. But David argues that the importance of this agenda goes beyond the small numbers involved: “In terms of Britain's reputation for fairness and opportunity, I think it is an important thing.”

So, how soon does David think it will be before Britain has its own Obama moment – the first black PM? “We will more likely find someone of Asian background before a black person has a chance,” he says. “I would have thought that would be a generation away at least.”

And what would he say, if asked for advice on this issue by the current Prime Minister? David says: “I don't think there is one silver bullet that will work. We need to find the people involved with other organisations like Generating Genius – those who are getting somewhere with this thing – and support them until there is enough momentum for a national policy to emerge.”

He does however believe that there is a lot still to do at universities today. “When they see a black kid there, they are not thinking here might be a next Stephen Hawking or Roger Penrose. That has got to change.” He has a dream of course – that one day such a genius may be generated at Imperial. 

#### CREATING OPPORTUNITY

Far left: Generating genius Chief Executive Tony Sewell (l) and Chairman David Pollard aim to turn talented black boys, particularly those with Caribbean heritage, into scientists and engineers.