

The three pioneers



James Drife

According to the countdown on the FIFA website, I'm writing this 66 days, 9 hours, 49 minutes and 4 seconds before Japan and Cameroon kick off in the Free State Stadium at the start of Mangaung/Bloemfontein's first match in the 2010 World Cup. Gosh! The city will only just have begun to calm down after the excitement of the 2010 SASUOG Congress before the streets fill up again, this time with soccer fans from Tokyo, each bowing and videoing, perhaps simultaneously.

I wish I could be there – for the Congress, if not for the soccer. As a retired obstetrician I have happy memories of ultrasound, but I've never visited Bloemfontein. The closest I got was Kimberley Railway Station, 100 miles to the west. In 1997 a party of us arrived in style on a luxury train. I seem to recall a red carpet on the platform. After viewing the Big Hole we returned to our carriages in high spirits and waved graciously to the citizens. I still remember the way they waved back.

Bloemfontein's most famous son is J R R Tolkien, who left the Orange Free State at the age of three and became Professor of English at the University of Leeds. Not immediately, you understand, although achieving a chair at age 32 was still impressive. Unfortunately he then moved to Oxford and wrote *The Hobbit*, pioneering a genre that is now politely called 'heroic fantasy'. The first volume of *The Lord of the Rings* appeared in 1954. The saga captured the imagination of one of my classmates, whose literary taste was regarded with pity by the rest of us.

Four years later, three real pioneers appeared. In the *Lancet* of 8 June 1958, Donald, MacVicar and Brown published their famous paper on ultrasound. They too had a Bloemfontein connection, albeit a tenuous one. Ian Donald was a graduate of the University of Cape Town, but his wife was the daughter of an Orange Free State farmer. Donald was born in Cornwall and trained at St Thomas's Hospital, London, but he moved to Glasgow in 1954, and Scotland has taken him to its heart as an example of the Scottish genius for inventing things.

At that time I was going to school not far from Glasgow, but I knew nothing about ultrasound until I started my obstetric training in Edinburgh. Our unit was involved in cutting-edge research on serum alpha-fetoprotein measurement. Patients had to go to a neighbouring hospital for A-scans if the gestation required checking. I still remember the face of a colleague when a fetus was aborted and found to have only a tiny defect, and not a

lethal myelomeningocele. These things happened in the days before the imaging caught up with the biochemistry.

During my career, ultrasound moved from being a complex technique suitable only for superspecialists to becoming a tool we could all use, and then back again to machines deemed too expensive for the ordinary obstetrician to handle. The day it arrived in our antenatal clinic, around 1979, is stamped on my memory. One of my fellow-trainees was pushing a mobile scanner, with a big smile on his face because at last we could distinguish a breech from a cephalic presentation. Since then, sadly, scanning in the UK has become formalised and less accessible, and the undiagnosed breech has returned with a vengeance.

Ian Donald died in 1987. I met him in the 1970s, when he was retired and famous but still attending local medical meetings. Much later I met Tom Brown, the junior engineer who had volunteered to help Donald extend ultrasound from metallurgy to obstetrics. Brown went on to design undersea machines for the North Sea oil boom, but in the new millennium he was persuaded (with some difficulty) to come to the RCOG and receive belated recognition for changing the face of medicine.

The third author, John MacVicar, became foundation professor of obstetrics and gynaecology in Leicester, where I was his senior lecturer. Passionate about clinical care and teaching, John rarely talked about the old days. As Donald's registrar, it had been his job to experiment late into the night, sometimes getting wet. Sonar had originally been used for detecting submarines, and it was a while before the team realised it did not have to be done under water.

It was not much fun for John, as an aspiring clinician, to endure the hilarity of Glasgow's most distinguished consultants at the antics of their academic team. Today I'm as suspicious as the next doctor about new ideas, but I think of that trio when I'm tempted to scoff. They were three very different characters, united by dogged persistence. I sometimes try to imagine them seeking approval for their research proposal in today's bureaucratic system, but usually the effort is too much for me.

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