Dr Eddie Norman, Loughborough University

This Issue marks the publication of Professor Richard Kimbell's Footprints in Shifting Sands: Ten years of editorials from the DATA Journal (1996-2005). Attempting to copy Richard's writing or editorial style when I took over as Editor of what is now the D&T Association's research journal would clearly have been mistaken, and I must hope that I bring other strengths and approaches to 'my watch'. Suffice it to say that I am delighted that Richard completed the 10 years by starting the tradition of a 'Reflection' piece in the journal in the mould of his editorials. Professor Ken Baynes has written the Reflection piece in this issue on the perennially important matter of 'Design Education: What's the point?'. Ken Baynes has been stalwartly making this case since his days at the Design Education Unit at the Royal College of Art in the 1970s. It is not that the case is not strong, or that it is not well made, it is just that inevitably there seem to be new people who need to hear it. I am sure that the arguments that Ken Baynes presents will strengthen those available to any reader of this iournal who is called upon to make them. Richard Kimbell's editorials and reflections have similarly been an on-going source of ideas and challenge, that has helped to maintain the sense of purpose of many D&T professionals during a turbulent decade. In this editorial it seems more appropriate to hear from some of them, and the following extracts are from 'Reflections from the barricades', written by five D&T professionals from different areas concerning their appreciations of Richard Kimbell's contributions to the journal. These reflections appear at the end of the book of collected editorials. A review of the book by Dr Stephanie Atkinson also appears in this issue.

Firstly 'A head of department reflection' from Martin Chandler of St Angela's School, North London.

In his editorials, especially Vol 5 No 1, Richard highlights what is for me the key challenge for good teaching in design and technology: the challenge of creativity. In my last performance review, my line manager said that I am a creative person, so it must be true. It is always difficult to imagine what other people think and how their brains work to arrive at solutions. How did Brunel conceive the idea that created the Clifton suspension bridge or the mighty SS Great Britain? As an architect and design teacher I would like to think that I can understand at least some of this process – but what of the bureaucrats who constantly inspect me and who have such disproportionate power over our learning, teaching and assessment practices?

"Divide your paper into six and draw a new idea in each box!"

"Sir that's the idea I want to do, why do I have to do more?"

"If you don't I can only give you 3 marks because you don't have a range of ideas!"
"And by the way, you haven't handed in your research yet? Is it neatly mounted on A3 with a border? ...and is it annotated?where did you say your inspiration came from? ...and how will the examiner understand that? ...Just do a sheet to show that you know how to. Then I can give you the marks!"

"The research needs to be in a separate section, ...no, no don't link it to the ideas or the examiner won't know which bit they should be marking!"

...I recognise the pre-National Curriculum development of the subject that Richard describes (Vol 4 No 1 and especially Vol 5 No 2) through the 1980s. I remember the days (and nights) discussing what we were trying to do. We had meetings to develop new projects; to re-write existing projects; to experiment and share ideas. And we made headway and dramatically changed the D&T experience for our young people...

...In Vol 5 No 1 Richard reminds us of the delicate intellectual, practical and emotional balance that such exciting work demands.

How do we support leaps of imagination and how are we to deal with chaotic work with just a nugget of brilliance?

So here we are in 2006, with strong professional associations in the Design and Technology Association and NAAIDT and a body of research supporting our work as a successful subject in the curriculum. We are challenging the boundaries of our subject and ever moving forward, not least through innovations in the classroom. And we will continue to need the kinds of help and support that the D&T Association – including the journal – has consistently provided.

(Chandler, ibid: 117-118)

There is also 'An occupational reflection' (Ruth Wright, Engineering Council), 'An HMI reflection: or 'A View from the Balcony' (Mike Ive), 'A LEA adviser's reflection' (Ian Punter, Hereford & Worcester and East Sussex) and 'A higher education reflection' (Kay Stables, Goldsmiths College, University of London). Here is just a short extract from each of these, which indicate the range of topics Richard Kimbell's editorials covered.

To me, D&T's reason for being (why we bother at all) is about attempting to enable a way of thinking-acting - trying to look at our world from others' perspectives and seeking to intervene to make life better for people. Its intensely humanistic and practical purpose is possibly only realisable not as a bounded 'subject' but as a flexible, synthesised, learning experience – "something for which there are opportunities across the school curriculum" (Design Council, 1987:9.2). However, as editorial Vol 2 No 3 highlights, the intensity of curriculum change, implementation, inter-subject and inter-phase barriers, targets and notions of education and training as a 'deliverer' of market-ready products, has left us little space to think through why we do what we do, let alone develop better ways to go about it. Yet our designerly ways of thinking should lead us towards reflection, to interest in people above things, to notions that human beings

socially construct knowledge and attempt to shape their world, to a Manheimian tradition of relationship between ideas and their social context and to Darke's and Schön's notions of living with risk and chaos. As Richard reminds "it is challenging and uncomfortable to exist in a constant state of evolution. But we would do well to remember that the alternative to continuous evolution – at the edge of chaos – is extinction" (Vol 2 No 3).

(Wright, ibid:120)

One of the problems we suffer from in design and technology is that most people in education do not understand, from their own experience, just what we are about. Such educators and administrators are 'people of the word', bounded by literary traditions and practices. We emphasise additional ways of 'knowing'. Some of you will recall my account of the senior administrator discussing design and technology with me who excused his ignorance by explaining that he "didn't do 'hobbies' in his school"! Such people trivialise what we are about. Greater credit tends to be given to those who write about design than those who actually design themselves - with some notable exceptions, of course!

Despite this assertion, I have to admit that, as a subject community, we are not good at explaining why we do what we do.

Fortunately, a few communicators and academics help us overcome this weakness, and this is one of the great strengths of the DATA Journal editorials.

Fortunately, too, we have had some advocates in high places that do understand and support our approach. As an example, David Hargreaves, then at QCA, in his brilliant paper 'Towards Education for Innovation' in 2000 (see Vol 6 No1) spoke enthusiastically of both the pedagogy and our approach to knowledge in design and technology – what the APU paper *Understanding Design and Technology* in 1981 referred to as a designerly view of knowledge.

(Ive, ibid: 122-123)

In the editorial in Vol. 1 No 2 (Summer 1996) Richard asked the question 'What is an editorial for?' In answer to his own question he drew parallels with newspaper editorial writing and came to the conclusion that an editorial has a dual purpose – to reflect informed opinion and to influence public opinion on the matter in hand. This is exactly what he achieved throughout the following ten years and my recent re-reading of the editorials has been a reminder of the qualities that made them for me, required reading.

Richard's accessible writing style is a key factor here. How could you not read on with titles like - 'Gi's a Job'; Crash! Bang! Whizzo!; 'Digital capture and the Club Med. Test'; 'At the edge of chaos'; 'A box of delights'? Once he had our attention Richard would always entertain with references to popular culture, everyday events, and personal experiences, but always with a point that was unerringly sharp, wellinformed and sometimes hard hitting. Richard used simple language, humour and metaphors to explain the detail of developments and their consequences in a way that brought clarity to situations that might have first appeared more complex. This rooted and common sense approach always seemed to fit well with the design and technology maxim of 'keeping it simple'. (Punter, ibid:124)

Richard's editorials have always been enjoyable to read – sometimes amusing, invariably provocative, always making me stop and think. And in this piece I plan to 'stop and think' about one of my favourite topics – designing.

This topic appeared implicitly in an early editorial (vol 2 No 3) 'The edge of chaos'. This editorial reflected on a view of evolution wherein, to avoid extinction, complex systems need to live "between the need for order and the imperative for change ...at the edge of chaos". Richard drew parallels with the survival of design and technology,

reflecting that, historically, it has been balancing "chaotic individualism and centralised conformism" that had made the subject. Seduced by the concept, he observed that all the 'best' D&T lessons "teeter on the edge of chaos". I would surmise that by 'best' Richard was remembering lessons where there had been excitement, creative tension and an element of the unexpected in the air as learners were transported beyond even their own expectations to produce risky, innovative designs. Conformism is the easy part -National Curriculum, league tables, the myth of 'parental choice' and Ofsted inspections have seen to that. Maintaining the innovation – the creative edge – has been the challenge and, as Richard points out, it has been the brave, individualist, entrepreneurial, maverick teachers who have kept this creative edge alive.

(Stables, ibid:126)

So, an easy man to follow then! My view of the role of editorials for the relaunched research journal differs in that I see one of their key functions as providing context for the published research. Research papers are not always easily accessible reading and there are gains to be had from explaining why they have been published and what the benefits might be from exploring them. There are two such examples in this issue. Papoutsakis from the University of Crete reports on a research project analysing the importance of technology education for new product development. It is a connection which many people assert – from D&T teachers to Government ministers, but there is limited direct research evidence of such links. Papoutsakis's article is interesting, not just for its positive conclusions concerning such links, but also for the strategy employed. He identified 10 research enablers (or factors) relating to technology education and traced their importance through the different phases of new product development. More research studies are needed in this area in order to develop a complete understanding of how the (design and) technology curricula around the world influence wealth creation, although of

course this is just one aspect of the sustainability of a democratic society.

Lehtonen et al report the results of a European funded research project concerning the development of pedagogy for computer-mediated learning (MOMENTS). What constitutes the equivalent of D&T's traditional 'hands on' approach when students are working in virtual environments? This is clearly a vital topic and there are evident links in the research findings with the focused-practical tasks which are now an established feature of traditional practice.

Also included here is the published version of the John Eggleston Memorial Lecture which I was privileged to give at the D&T Association's 2006 International Research Conference. The abstracts of the research papers presented at the conference are also included, and the on-going strength of D&T education research is evident from them. They represent a tradition which Professor John Eggleston helped to found, and which Professor Richard Kimbell nurtured, and long may it continue.

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E.W.Norman@lboro.ac.uk

Copies of Richard Kimbell's book 'Footprints in Shifting Sands: Ten years of editorials from the DATA Journal (1996-2005)', can be ordered from the D&T Association, Tel; 01789 470007 Email: pam@data.org.uk

Abstracts and full papers from the 2006 D&T Association Annual Conference are available for members to download at the website: www.data.org.uk.

The book of research papers is also available for purchase from the Association, Tel: 01789 470007, email: pam@data.org.uk