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Decisions by Design

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There is no denying that design & technology is under a bit of pressure at the moment, with the EBacc; GCSE courses being reduced; timetable time under pressure; and even whole departments disappearing. In response to these troubling times, my friend and colleague David Barlex (with others) has published a manifesto for 'Rebuilding design & technology'. Whilst I don't agree with all of it, I applaud them for providing teachers and schools with some ammunition with which to counter the current difficulties. Their 're-building' argues for four kinds of validity for design & technology: an economic argument (about jobs); a personal argument (about satisfaction); a social argument (about social justice in a technological world); and a cultural argument (about the designed world). All of this seems to me to be entirely sound. But I think they have missed the validity argument that – for me – is the core justification for design & technology.

Some years ago, the Design Council was worried about undergraduate design courses. Having looked at the numbers of graduates and the number of design jobs, the Design Council feared that (i) only a small percentage of those graduating could expect to be employed in the design industry and that (ii) this might bring design degrees into disrepute at least to the extent that they are regarded as vocational preparation. So they asked us in TERU at Goldsmiths to address ourselves to the question … 'What are designers good at if they don't do design?' Essentially we were to explore the transferable value of designing. Thus was born the project that led to our report 'Decisions by Design.' (TERU Goldsmiths 1997)

It is important to understand the methodology we used to dig out the qualities that make designing such a valuable learning experience. We started with a group of senior managers in primary and secondary schools. There were 8 of them and they were typically deputy heads in the London area (for logistic reasons). Each school undertook to provide 20 days throughout a year for the 'teacher-fellows' to spend with us at Goldsmiths. The focus of our enquiry was 'decision-making', and we began by asking them each to create a case study of an important decision that had recently been taken in their school. We asked that the case study should include the background to the decision; the steps that had been involved in making the decision; the mechanism of taking the decision; the mode of implementation of it, and the aftermath of that implementation. All sorts of fascinating decisions emerged and were exhaustively analysed, including implementing a one-way system to overcrowded stairways and corridors; re-organising lunch-time queuing and seating arrangements; and re-organising playground security and access. All were driven by the dissatisfaction of the schools with their previous arrangements and the desire to eliminate problem areas and ensure more harmonious and safer experiences for students and teachers. The case studies were shared in round-table seminar sessions and were all agreed to represent decision-making practice in relation to key features of life in schools. The accounts were then filed and (for about 10 months) forgotten.

We have at Goldsmiths a series of undergraduate and postgraduate design programmes running throughout the year. We were able to place pairs of the teacher-fellows into several studio environments as interacting observers of what our design students were doing. In each case they

were able to observe at least one project from start to completion (typically one ten-week term), as well as being part of other structured design experiences managed by design tutors. Their brief was to note the practices that they observed and particularly when they saw anything that surprised them or had what appeared to be significant impact on the design students. Being regular members of the design groups over many weeks – the teacher-fellows inevitably developed good working relationships with the students. At points through the year, we convened teacher-fellow feedback days in which they shared some of their experiences. And at the end of the process, they were asked to produce a collective, summary report of the features of design practice that they thought had been particularly beneficial to the students, and/or that had particularly surprised the teacher-fellows, and/or that they could see as valuable in any decision-making setting. This was compiled by the teacher-fellows alone – and then shared in a round-table seminar with the TERU team.

It is important to remember that the teacher-fellows were not designers. Rather they were intelligent observers, looking in upon a set of designing experiences to tease out some of its uniqueness. Whilst our subsequent report dealt fully with all the strategies that were identified, for the purposes of this piece I will mention just five that were seen to be crucial.

Un-packing tasks: Students were frequently engaged on tasks with no obvious outcome. They were complex, multi-dimensional and messy. We know the literature talks of 'wicked tasks'. The teacher-fellows were impressed by the students' repeated un-packing of the elements of this messiness to clarify what (and who) is involved.

Playing with reality: We are familiar with the depiction of design as 'goal-directed play'. This was new to the teacher-fellows – but obvious in practice as students allowed their imagination to operate. "Being able to move in perception and thought away from the concrete given on 'what is' to 'what was', 'what could have been', 'what one could try for', 'what might happen' " (Singer and Singer 1990)

Optimising values: Design is about improvement, and the concept of improvement is essentially value-laden. A playground security system has stakeholders that include teachers, parents, pupils, governors, and support staff as well as external players like the police and fire service. It is inconceivable that the members of these groups would share a single set of values for the proposed product. They will not. They never do. Accordingly most of the dispute about whether a new design is an 'improvement', will in reality be a dispute about values. The teacher-fellows were amazed at the young designers' insistence on 'seeing through the eyes of others'.

Modelling futures: Designers continually model their concepts of the future to explore them, to experience them vicariously and thereby make informed judgments about them. The teacher-fellows saw two sides of this. First that modeling provides very direct feedback about the quality of the thinking. But – even more important – that this enables the designer to manage the risks that are naturally attendant upon the new and the innovative. Risks can be taken in the thinking and development because modeling allows the designer to mitigate and offset the risk in advance of coming to a resolution.

Making thinking explicit: It is too often the case that our thinking processes remain locked in the inner recesses of our minds. But one of the defining features of designerly thinking is that it is out in the open with all kinds of externalisations that take the designers thinking out of the mind and

express it in the public world. When thinking is in the public domain, it can be shared, examined by others, and thereby refined.

At the end of this process, the teacher-fellows were re-acquainted with their case studies and invited to see them through the eyes of a designer. And invariably the reaction was embarrassment, since almost none of the processes that they had identified as being such powerful aids to decision-making were at all evident within those accounts. No modeling of one-way systems; no recognition and optimizing of value positions with the playground; no playful exploration of possibilities for queuing & seating; and never was their thinking made explicit. Typically, obvious solutions had been implemented … 'lock the gates' … creating other (sometimes profoundly) difficult results.

As with many of the projects we have undertaken in TERU, there is always an ostensible purpose; a purpose on the surface that the funding agency can feel confident about. But there is also often an underlying purpose that has to do with some of the fundamental beliefs that inform our commitment to design & technology. 'Decisions by Design' was one such project with a purpose that went beyond the demands of the funding agency. We deliberately chose to focus the project on decision-making rather than (say) 'employability' because decision-making is such a fundamental human quality. It goes to the heart of the intellectual argument for validity that I believe is the real justification for design & technology. A good design & technology experience might help you get a job, or enable you to better understand the made world, or give you personal satisfaction, but more important than all of that it will empower you to think better and make better decisions.

Education ought to be about enriching our ability to make good decisions. John Dewey believed that intelligent decision-making was a fundamental pillar of a strong democracy, but Bronowski went further than that. If our civilization is to survive and flourish (he argued in 1973 in The Ascent of Man) we need a 'democracy of the intellect' in which each student is empowered to make good decisions to inform the 'un-ending adventure at the edge of uncertainty'.

We tend to assume that educated and well-placed people (like our teacher-fellows) are smart enough to make good decisions. But they demonstrated for us – and to themselves - that their performance was not so smart and that to start thinking as a designer would seriously have enriched their decision-making. I believe that this applies in all walks of life and in all professions. And not least in politics, where a few decisions-by-design would be a very welcome innovation.