Reviewing the structure and practices of architectural education

The changing status of the architect in a changing society

Education for a smarter profession

Gordon Murray

We must build for this nation a big passion for innovation. We must make the development of the creative mind a national agenda. Unless we get really serious about cultivating creativity and promoting innovation, the transformation to an innovation economy will not really happen.[1]

The profession of architecture and its uneasy bedfellow, architectural education, now require a systemic shift, recognising the sea change required in problem-solving in the built environment; part of which is brought about by global realignments in economies, energy-production and urbanisation. Architecture is no longer simply about designing buildings, places and spaces. It has not been for some time. To quote Cedric Price: 'Architecture is what Architects do'. Central to this is an understanding of the holistic relationship between design, craftsmanship and environment, between thinking and making. The practitioner can build learning outcomes where the difficult and the incomplete can co-exist with the structured; reflecting the realities of industry and business and the practice of architecture. This is not to argue for a prosaic, vocational approach, rather it is to focus on the essence of what architects do – what they are required to do – in the twenty-first century.

'the holistic relationship between design, craftsmanship and environment, between thinking and making'

Alberti to Soane

In over a millennium of building, the history of structured tuition in mathematics, proportion, mechanics and physics – the subjects essential to its development – is perhaps 600 years old. Formal architectural education is perhaps only 200 years old and the professional institutions of Architecture are children at only 150 years old. Alberti was clear on the role of the Architect:

> *Him I consider Architect, who by sure and wonderful reason and method, knows both how to devise through his own mind and energy and to realise by construction, whatever can be most beautifully fitted out for the noble deeds of man by means of weights and the joining and massing of bodies.*[2]

This is surely more than Vitruvius's Commodity, Firmness and Delight. It affirms that architecture is not only about design and construction but also about the means by which that construction is implemented. Alberti had a clear idea of architecture as a vocation for a gentleman with a liberal education and a special knowledge of mathematics and geometry; but his view of architecture as a profession appears indistinct.

In *De re aedificatoria*, written in about 1450, he expressed the modern (or is it Modernist?) view of an architect as the complete designer, capable of planning cities and designing everything from palaces and churches to a humble farmhouse. But he had nothing to say about the training of an architect or about building practice except in the vaguest terms. A century later, Phillibert de l'Orme was able to envisage a self-governing profession of specialists with accepted standards of training and clearly defined responsibilities and privileges. Yet this profession was a long way off. The tradition he foresaw was founded on the belief that any artist could design a building since it was the conception of the work that mattered rather than the construction. This conviction derived from the custom of treating the three arts of painting, sculpture and architecture as three branches of the same art of design. Vasari noted this phenomenon and ascribed to the fact that artists were trained in *disegno* – 'the father of our three arts' – a theory of artistic creativity, the foundation of the liberal status of the practice of art.

'a self-governing profession of specialists with accepted standards of training'

A few leading architects had joined the Society of Artists when it was set up in 1761 but Sir William Chambers, after quarrelling with James Paine, was the prime mover behind the foundation of the Royal Academy of Arts in 1768. Of far greater significance for the future was the Architects' Club, established in 1791 by George Dance, James Wyatt, Henry Holland and S. P. Cockerell, later joined by Chambers, Adam and a dozen others. Eligibility was highly exclusive, restricted to Royal Academicians, holders of the Academy's Gold Medal and members of distinguished foreign institutions. The last decades of the eighteenth century saw various attempts to distinguish between the designer as such and the other traditional roles embraced by

doi: 10.1017/S1359135513000171

https://doi.org/10.1017/S1359135513000171 Published online by Cambridge University Press

architects since the sixteenth century. In Dr Johnson's celebrated *Dictionary* of 1755, 'surveyor' and 'architect' were virtually synonymous terms. The two roles continued to be associated, however, until the foundation of the Institution of Surveyors in 1868 and even then the final break was not made until the 1930s.

'a broadening gulf between the growing professional organisation and the increasingly inadequate training available'

This unparalleled expansion of professional functions and the introduction of novel building types such as railway stations, specialised hospitals, offices and factories, as well as a host of technical innovations in heating, lighting and drainage, all served to accentuate a broadening gulf between the growing professional organisation and the increasingly inadequate training available. The pupilage system at its best is revealed by a detailed study made of Sir John Soane's office between the 1780s and the 1830s. During this time some thirty pupils in all underwent training in surveying, measuring, costing, superintendence and draftsmanship for twelve hours daily over a period of five to seven years. Premiums or fees paid on entry to the office ranged from £50 in Soane's early career to sums between 100 and 175 guineas according to his increasing eminence after 1788, when he was appointed Architect to the Bank of England.

Uomini-universali

When, in 1841, T. L. Donaldson, the first Secretary of the RIBA (Royal Institute of British Architects), was appointed Professor of Architecture at University College London, he gave two courses of lectures for part-time students on 'architecture as a science' and 'architecture as an art' – a symbolic division which was to flaw Victorian architecture throughout the century, producing confrontations like that of George Gilbert Scott's hotel and William Henry Barlow's train shed at London's St Pancras Station. This has continued as a conundrum into the twentieth century, as in C. P. Snow's 'two cultures'. However many in our profession see a symbiosis rather than a paradox:

> *Creativity is craftsmanship. It involves a circular process that draws you from an idea to a drawing, from a drawing to an experiment, from an experiment to construction and from construction back to an idea again.*
>
> *For me, this cycle is fundamental to creative work. Truly creative work is a circular process. Teamwork is essential if creative projects are to come about. Teamwork requires the ability to listen and engage in dialogue. Into the creative cycle – think, draw, spend time at the site, and go back to thinking again. If this can be defined as creation, then there is no real contradiction between art and science, modernity and tradition, and freedom and obligation.*[3]

This was Renzo Piano's view as expressed in a Radio 3 interview with John Tusa and it is reinforced by Joseph Rykwert:

> [...] *there is no theory without practice, and no practice without theory. Making is the continual improvement of a theoretical position. Theory is based on experience and history but requires an essential ingredient of external criticism.*[4]

By the end of the nineteenth century, still only 10% of architects belonged to the relatively newly formed RIBA, an organisation which *The Times* had dismissed in 1870 as 'a highly respectable trades union'. Those who remained outside it included such eminent figures as Philip Webb, William Butterfield and Norman Shaw. The deciding factor for most of these architects who objected to the compulsory examinations, established by the RIBA through its revised Charter in 1887, lay in a romantic belief in artistic autonomy. However, it was the need to establish organised training, rather than the debate over artistic capacity or professional status, which finally resolved the issue. During the last decade of the nineteenth century, rapid progress was made in the long-neglected field of architectural education. By 1887, the RIBA had organised its examination into three parts – Preliminary, Intermediate and Final – where, interestingly, the first two were voluntary and the third was the obligatory qualification for associateship. By 1900, the battle for a closed profession was largely over – some 15,000 architects were by then members of the RIBA – although a reluctance to legislate over the ability to design continued until 1931 and 1938 when two Architects Registration Acts were passed.

In 1948 Robert Matthew, Leslie Martin and others recognised major problems, not only associated with the massive rebuilding required after the war when three million homes and twenty million square feet of office space had been destroyed in Greater London alone; but also in delivering the nascent NHS and Education Reforms. With William Holford, they set about rethinking the profession and its education. Thus, by 1960 a significantly larger profession had been created than existed before 1939 with almost 70% of registered architects employed in public service via Local Authorities and PSA, NHS etc. Even by the late 1970s, still more than 50% of the profession was employed in local government architects' departments. By the 1980s, with Margaret Thatcher's administration dismantling local government powers, this had dropped to less than 30% in Scotland at least, part of a total of 30,000 architects in the UK. While the last ten years may have seen growth in design and construction of education building and other public works, it has not led to a significant growth in public architecture departments. The great eras of public buildings seem long dead.

In 1971, Alex Gordon became President of RIBA with the mantra 'Long Life, Loose Fit, Low Energy'. As a mission statement LL:LF:LE has never been bettered and certainly not by any subsequent RIBA policy document. The idea of building for permanence by optimising materials' performance, recognising the need to be flexible enough to accommodate change over a building's lifetime while minimising energy consumption is surely the ultimate holistic objective for any architecture. Why then has such a desirable situation taken forty years to even approach fruition in the wider built environment? After hearing the news of the 2012 Stirling Prize winner (Stanton Williams's Sainsbury Laboratory at the University of Cambridge), I went to Reyner Banham's essay 'Vehicles of

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https://doi.org/10.1017/S1359135513000171 Published online by Cambridge University Press

Desire' from 1955. There Banham identifies a particular problem, the central problem, in my view:

> *Far from being* uomini-universali *architects are by training, aesthetics and psychological predisposition, narrowly committed to the design of big permanent single structures and their efforts are directed merely to focusing big permanent human values as unrepeatable works of art.*[5]

In the ensuing period architects appear to have taken this to a state-of-the-art condition. While physics and gravity ensure that some form of logical restraint is applied, the drift toward confirming Banham's view is apparently unstoppable. With digital technology permitting a direct translation from CAD image to built reality, all (or most) seems possible. Yet just because we can do it does not mean we should. In reviewing some of the most recent newly published architecture from around the world, I am reminded of the styling wars of the 1950s among Detroit car manufacturers: bigger tail-fins, more chrome. Banham goes further in his essay: 'a good job of body styling should come across like a good musical – no fussing after big, timeless abstract virtues but maximum glitter and maximum impact'.[6]

In more recent times, Rem Koolhaas stated that the Harvard Design School Project on the City began as a response to the 'pervasive' condition of architectural practice in which the architect is asked to intervene in, but never to understand, a given situation:

> [...] *an architect's interests are ultimately determined by a series of random encounters with projects and clients that do not allow an independent investigation of issues or conditions outside their field of vision. Thus architects operate with ulterior motives. The capacity for analysis, research or investigation is simply not within their repertoire.*
>
> *It is therefore, becoming increasingly important for architects to operate on a level independent of any architecture in order to understand the phenomena affecting the development of architecture and the city.*[7]

This begins to suggest a reformation in the way we think about architecture and education.

Despite all of the above suggesting seismic cultural shifts over the last decade at least, little has changed; in the lifespan of my career anyway and, in reality, since the 1950s, in the way that architectural education is defined or in the manner in which it is used as regulatory mechanism for entry into the profession. For far too long, an architectural education has been synonymous with the profession, directly linked to it and regulated by it. An education in the liberal arts or, at the other end of the spectrum, medicine is not that prescriptive, allowing for a variety of outcomes.

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Generalists and specialists

To my sorrow, but understandably given the nature of the system, parts 1, 2, and 3 of RIBA validation and ARB (Architects Registration Board) prescription have been a major topic of discussion for all the time I have been involved in architectural education. Yet we know that they are largely irrelevant in the greater context of the benefits of architecture as both a generalist and specialist subject. The diverse destinations of graduates, while perhaps not yet fully calibrated, is testimony to the fallacy of this presumption. Students have always been smarter at detecting trends, opportunities and threats. Similarly, the profession is in decline, both numerically and as a political and artistic force – not terminal, but down from an artificial high engineered by a false economic theorem which will never exist again and on which no future development or funding strategies will ever be founded. We will all be doing less with a lot less. The economy will never recover to the levels of the last half-century unless it is serving overseas growth alone, and that also is a diminishing return as emerging economies learn how to do it themselves. As I indicated earlier, a world war and a Labour government building on a socialist agenda kick-started a growth in the profession that has proceeded unabated until this century, in almost blissful ignorance of a changed world order. Herman Hertzberger, when accepting a long overdue RIBA Gold Medal, lamented the 'fading role of the architect': 'we are not buried next to the king anymore – not the master of the whole thing'.[8]

The construction industry has long been an economic barometer. Currently on its knees, it is seeking a future growth model that will develop new forms of wealth creation and built form production. In many countries, that share of the economy made up by construction has fallen sharply over the past decades. Construction as a percentage of GDP is at its lowest for fifty-five years in Britain. It is at a nineteen-year low in the US and a twenty-five year low in France and Denmark. More interestingly – or maybe simply of greater concern at the other end of the spectrum – environmental artists such as Thomas Heatherwick, Martin Boyce or Donald Judd are making major critical commentaries upon, and impact in, the built environment. Not providing 'shelter' as an absolute, perhaps, but operating in an area of our profession once carved out by more radical architects while influencing perceptions on what constitutes architecture. Sadly, it seems that we have to look elsewhere than the profession for today's Cedric Price or Buckminster Fuller.

Conversely if, as academics rooted in an artisan activity, we cannot be measured in our own terms then we are doomed. It is feasible that we could reconfigure the current shape of courses to create a three-year generalist undergraduate degree in Architectural Studies. This may suggest following the US model of graduate schools for architecture proper with a possible one-year full-time or two year part-time Master of Architecture and a one year M.Sc. in Professional Studies. This model would provide three possible courses aimed at wider markets and providing greater accessibility and usefulness to a variety of entrants. We are already seeing an increasing number of our students seeking advice on how the architectural education that they are embarked upon, and that they enjoy, can benefit them in a sector where even good students are choosing not to enter the profession. Instead they are looking at history, conservation, property investment and management, construction, community engagement and activism.

Within a depleted profession, perhaps even a sharper and smarter one, entry would be more

https://doi.org/10.1017/S1359135513000171 Published online by Cambridge University Press

rigorous, more specifically structured and certified. This is not the only model. But in UK culture, where artistic values are largely dismissed and cost overrides quality on almost every occasion, there is no counterculture to arrest the view that design innovation does not matter, that visual literacy is irrelevant.

'Innovation can happen in niches we haven't even thought of yet. This will further define the potential opportunities for the profession and the requirements of its second renaissance skills set'

This view is changing, albeit very slowly and in a manner which will create opportunities for creativity and innovation across a broader set of cultural activities or business sectors than in the past. Innovation can happen in niches we have not even thought of yet. This will further define the potential opportunities for the profession and the requirements of its second renaissance skills set. Yet we can view this landscape from different heights. I could have instead focused on what Bernard Rudofsky called, in the MOMA exhibition of 1964, 'architecture without architects' or 'non-pedigreed architecture'. However, I will simply quote an almost limit state theory from that exhibition;

> *Not only is the need for confining the growth of a community well understood by the anonymous builders, it is matched by their understanding of the* limits *of architecture itself. They rarely subordinate the general welfare to the pursuit of profit and progress. To quote* [Johan] *Huizinga, 'the expectation that every new discovery or refinement of existing means must contain the promise of higher values or greater happiness is an extremely naive thought.*[9]

As the history of most countries informs us, to build is a political act. Architecture is very much in the political arena even if its voice is muted. It may be a practical art but it is also viewed with envy, suspicion and duplicity by those standing on the outside, imagined as facts and figures from a closed language used for specific ends. How can we separate the achievements of a piece of architecture from the budget provided for its creation, and for the potential leverage possible by using this budget for wider gain in place-making or community transformation; essential but difficult to measure. Yet the restorative impact of well-designed environments on health, well-being and knowledge enhancement is both self-evident and well researched.

More difficult is assessing the cultural benefits achieved by the architect in reasserting existing values or in shifting them positively to some new territory. If architecture really is a public art, an essential part of our everyday lives, and if architects mean to be taken seriously at a level that convinces all of their relevance – public and politician alike – then we are going to need to be a lot smarter and more innovative. A lot more effort needs to go into ensuring that practices – often the young, smaller and more intellectually agile outfits, already working and innovating in such cross-over environments between practice and academe – are given airtime.

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Notes

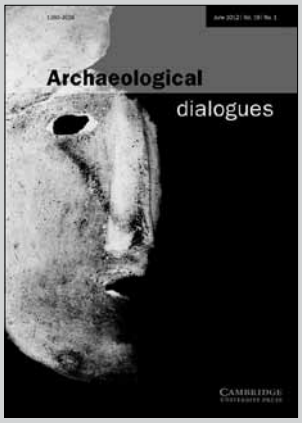
1. Limkokwing University of Creative Technology Malaysia, *Prospectus*, 2011, cover.
2. Spiro Kostof, *The Architect: Chapters in the History of the Profession* (Berkeley: University of California Press, 2000), pp. 185-207.
3. 'Renzo Piano', *The John Tusa Interviews*, BBC Radio 3, 4 May 2003, transcript at <http://www.bbc.co.uk/programmes/pooncb6z> [accessed 22 March 2013].
4. Joseph Rykwert, Lecture at UIA Congress, Istanbul, July 2005.
5. Nigel Whiteley, *Reyner Banham: Historian of the Immediate Future* (Cambridge, MA: MIT Press, 2002), p. 92.
6. Ibid., p. 95.
7. Rem Koolhaas and others, *Mutations* (New York: Actar, 2000), p. 116.
8. Herman Hertzberger, 'Royal Gold Medal Lecture 2012', <http://www.architecture.com/Awards/RoyalGoldMedal/175Exhibition/WinnersBiogs/2010s/HermanHertzberger.aspx> [accessed 22 March 2013].
9. Bernard Rudofsky, *Architecture Without Architects: A Short Introduction to Non-Pedigreed Architecture* (New York: UNM Press, 1964).

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