Three views on the RAE

Design and the computer

RAE 1: a tool for fragmentation
I read with interest the detailed arguments presented by our colleagues at the Bartlett, complaining of the treatment of Architecture by Unit of Assessment (UoA) panel 33 (arq 6/3, pp203–207). We and our colleagues from other disciplines at the University of Edinburgh were shocked at the RAE result. We had been confident of at least a 4, but were awarded a 3. We spent a disappointing day with the architectural historian on the panel to ascertain how we could have been so wrong in the internal estimation of our rating. I also had private discussions with another architectural panel member. Those on the panel we spoke to seemed to know little about our work. Our portfolios of refereed designs were not called for. It seems that our groundbreaking books linking the history of engineering and architecture were too far removed from what engineers usually do, and were not rated. Our books and articles on theories of design and information technology seem to have been of no interest.

Clearly architecture as a discipline was under-represented on the UoA panel, and early complaints to this effect went unheeded. The panel was biased towards the science and technology aspects of the built environment and seemed to have little appreciation of Architecture as a discipline that crosses the boundaries of the humanities, arts and sciences. There was little appreciation of the value of creative design output, or of book output that crossed the technology/history/theory divides.

Should we redirect our considerable research energies into devising strategies for the next RAE? We know of at least one building science department in another institution that assigned some staff to the General Engineering UoA (where they attained a 2) and others to the coveted Built Environment UoA where they retained a 5.

Were we to strategize for the next RAE, we would do as some architecture departments did for the last round and put our design output into Art and Design, our history into History of Art, Architecture and Design, building science into Built Environment, and computing into Computer Science. The RAE should not serve to fragment a discipline in this way, and there is great resentment that the workings of this particular panel had precisely this effect for architecture.

RICHARD COYNE
Edinburgh

Richard Coyne is Professor of Architectural Computing and Research Director of the School of Arts, Culture and the Environment at the University of Edinburgh

RAE 2: an official enquiry?
I am deeply concerned by the issues raised by Bill Hillier and Philip Steadman’s article in arq 6/3 (pp203–207).

I became recently aware of the under representation of architects on the panel, and have written to Higher Education Funding Council for England (HEFCE) on this matter as part of their retrospective consultation on the RAE. I was, however, not aware of the other disturbing issues raised by this painstaking analysis. Such meticulous work in an area of such importance cannot be ignored and I believe that HEFCE has some questions to answer to maintain their credibility. As large sums of money are at stake, not to mention the reputation and careers of individuals, it would be reasonable to call for an official audit or enquiry.

Looking to the future, the lessons are clearly spelt out. I accept that the RIBA should be fully engaged in this process and I will be happy to join with leading academics to discuss how to respond to the next RAE round once details of the new procedure are published for consultation.

JACK PRINGLE
London

Jack Pringle is Vice President RIBA (Education) and a Partner in Pringle Brandon

RAE 3: let’s all look ahead
Architectural education is under pressure: economic pressure to enrol more students, political pressure to award more degrees and more recently pressure from the Architects Registration Board (ARB) and RIBA to maintain and, in some cases, to improve standards. If this was not in itself enough, the schools must also undertake increasing amounts of research to obtain essential, additional HEFCE funding. Many schools have accepted the challenge and commendably are directing resources into research. While the current RAE process is not perfect (arq 6/3, pp203–207), the importance of this funding to architectural education cannot be overlooked.

For the profession this represents a remarkable opportunity. The RIBA should act now to support and encourage the schools in their endeavours. The RIBA is ideally

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For the profession this represents a remarkable opportunity. The RIBA should act now to support and encourage the schools in their endeavours. The RIBA is ideally
placed to play a central role; carrying out its own research, holding data, disseminating information, coordinating study and making connections with associated fields. From research comes knowledge and from knowledge comes authority.

Anyone who doubts the benefits of research need look no further than CABE which has already established an impressive research record and now leads the debate on design quality, the importance of the public realm and public procurement.

Practice should also not overlook this new opportunity. In a world where architects often rely on opinion, based on anecdotal evidence, the chance to partner with schools of architecture to develop a sound knowledge base seems irresistible.

Could research be the much needed catalyst for practice to engage more fully with architectural education? I hope so.

IAN DAVIDSON
London

Ian Davidson was a Director in Lifschutz Davidson and a member of the Architects Registration Board. He died shortly after writing this letter.

[The ARB has declined to send a reply for publication in answer to the question asked of it in our last leader (arq 6/3, p195). This had pointed out that HEFCE claimed to have consulted the previous regulatory body, the Architects Registration Council (ARCUK), on nominations for RAE assessors. In our leader, we asked where the ARB stood on the RAE debacle. At the time of this consultation, ARCUK had been abolished and ARB was established at the same address. We assumed therefore that the matter was dealt with by ARB. Ed.]

Fundamental questions of design
The two articles on canopies in the last issue of arq (6/3, pp214–229 and 230–245) make interesting reading. The briefs must have been quite similar – but what a difference in approach to design! Both canopies had to provide temporary cover to a fairly small area, during the summer, at about the level of a normal storey height, and both had to be easy to put up and take down in a fairly short time. The canopy in a courtyard in Amsterdam had to relate to the building and was originally intended to partly surround a tree [1]; the canopy for the Chelsea Flower Show was freestanding in the garden [2]. But the
differences in situation do not account for the differences in design approach. The only common points here were that both were designed by a collaborative effort between architect and engineer – surely the only way to design something like this – and for both the starting point seemed to be, by implication, the rejection of anything totally regular, and the need to be innovative.

The design of the canopy for the Chelsea Flower Show developed in a more or less conventional way out of doodles and discussions between architect and engineer as they searched for a line of approach or a theme. As usual in this process, the minds of the designers gradually became tuned to the problem; as usual, there were some quite wild changes in direction, and various ideas were tried out and rejected before the final scheme emerged. When it did, one felt that Sarah Wigglesworth and Jane Wernick understood where they were and why they had got there. They had thrashed out all the implications of materials and construction and had understood in detail how it would be made.

By contrast the design of the Amsterdam canopy was developed by a computer. A predetermined method of spanning space, using the principle of triangulated panels, like the geodesic dome, but allowing irregular and non-uniform panel shapes, was fed into the machine, together with a set of performance parameters. The computer then proposed idealized solutions for the pattern of the structure and calculated forces and stresses. It would be very interesting to know more about how this was done. One believes, and certainly hopes, that a computer will never be as clever or as quick as the human brain at intuitive design. But is this right? Could a human brain have come up with this solution?

Whether a good design emerges from this process must of course depend on the power of the programme and on the selection of the performance parameters. In this respect, designing by computer must be similar to designing by pencil and paper – i.e., the quality of the design still depends on the quality of the designer. But I do feel worried that there are some real problems in using a computer like this. Every engineer knows that even in the much simpler processes of structural analysis, the use of a computer does in some way take the design away from the designer. When we do our sums by hand we know what we are doing and we know that we are in charge. We discover directly how, by changing the size or interaction of the structural members we can change the forces in them, and which aspects of the structure are significant and which are not. As we do the sums we can think about how the thing is to be made. When we do the sums by computer we have to be very careful to understand what we have put in and what we get out. This is all the more important when the problem is too difficult for us to solve by hand, and we have to rely on a computer and a process that is in some ways a mystery.

The same is also true of computer drawings. It is easy to forget the man making the building – of course the computer can cope with 500 pieces of glass, all slightly different in shape – but is it as easy for the glazier? It would be unfair to carp at the efforts of what must have been an inspiring student scheme in Amsterdam, but it is probable that had they designed and drawn their canopy on scraps of paper they wouldn’t have had to start thinking, when they got on site, about how the pieces of wood were to be fixed together. And if they had done the sums by hand – surely not too difficult if one used a few simplifying assumptions – they would probably have discovered more about the way that their design actually stood up.

The question of dimensions, and the 500 pieces of glass, may be much more significant to architecture than the simple issue of pragmatic convenience. As we all know, the Gothic cathedrals were built without the use of a steel tape. The master mason controlled ‘the measure’ and every dimension was a multiple of it. This gave a geometrical basis for the whole, and may possibly contribute to our understanding and pleasure. From the Golden Section to the Modulor, architects have tried to develop this inherent underlying consistency in their designs. Will the computer allow us to finally free ourselves from the tyranny of dimensions, and allow us to produce designs that are dimensionally random, but without the physical and intellectual rigour that may be an essential to a good design. Will it, in short, allow us to produce something that we do not quite understand?

Sam Price
London

Sam Price is an engineer and a Partner in Price and Myers

Theory is still alive…

In his article, ‘No hope, no fear’ (arq 6/3 (1999–2002)), Michael Speaks presents what appears to be an ‘anti-theory theory’, a piece of eloquent theoretical writing in which he maintains that theory in architecture has come to an end. Much depends on how one defines ‘theory’. Speaks refers to theory as a ‘limited set of mostly French, German and Italian tracts that arrived in the US in the late 1970s through departments of comparative literature’. This kind of theory, according to Speaks, was ‘portable’ in that ‘it could be attached to almost any field of study, film, literature, anthropology, art, history, even architecture’. Just as it had been ‘attached’, it has now become detached. ‘Theory’, according to Speaks, ‘has lost touch and no longer has consequences for the practice of architecture’.

Speaks paints himself into a corner by offering such a restrictive understanding of theory. There have been many different kinds of theory in architecture, ranging from the prescriptive theories of writers such as Vitruvius to the more open processes of critical thinking popular within the contemporary intellectual landscape. Whatever theory one favours, however, I would claim that architectural culture has always been constituted by the production of designs inscribed within a body of theoretical ideas. Despite the latent antagonism towards theory within Anglo-American culture, where linguistic expressions such as ‘in theory’ impute a certain impracticality to theory, every action, I would maintain, is based on some background thinking, and every building – whatever banal – is informed by some theoretical outlook. It is surely a mistake to think that there could ever be a theory-free mode of practice, and if we are not to descend into some unflexible form of neo-positivism, we would do well to recognize this. There is, moreover, a form of ‘material philosophy’, as Manuel DeLanda has described it, within the work of various engineers and material practitioners, which is an intelligence that comes from working with materials.

If one defines theory in the broadest sense as reflexive thinking, it is clear that theory is very much alive within architectural practice. A cursory look at some of the most influential and innovative practitioners around – designers
such a Greg Lynn, Rem Koolhaas, Lars Spuybroek, Ben van Berkel, Alejandro Zaera Polo and Daniel Libeskind, designers who not only practise architecture, but also write intelligent theoretical tracts about their practice – reveals that theory still has a vital role to play in contemporary architectural production. But even if one keeps to Speaks’ restrictive understanding of theory, as an off-shoot of Continental philosophy, I find it difficult to concur with Speaks’ conclusion. Theory was never simply ‘attached’ to architectural thinking. The work of Derrida and others was appropriated (or ‘misappropriated’ as many would say) by architectural culture, and became a lens that distorted and changed for ever the course of a certain strand of architectural production. Its legacy is here to stay. Moreover, a visit to any of the leading educational establishments – including Speaks’ own – would reveal that the theories of Deleuze and other Continental philosophers are still very much in vogue and continue to inform the education of our future architects. Rumours of the death of theory would appear to be greatly exaggerated.

Neil Leach
Bath

Neil Leach is Professor of Architectural Theory at the University of Bath and the author of a theoretical appraisal of the Amsterdam canopy (employing the theories of Gilles Deleuze) in the latest issue of Archis No 5, 2002, pp35–39. The canopy was featured in arq 6/3 (pp230–245) and is referred to by Sam Price in the preceding letter above.

...and theory is changing

While I enthusiastically welcome Michael Speaks’ article ‘No hope no fear’, which draws attention to a significant shift in the culture of the architecture studio (arq 6/3, pp209–212), I question the advisability of announcing ‘the death of theory’, as it is going to be misunderstood, with unhelpful consequences. We have had theory of a sort for as long as we have had architecture, but this is not the sort of theory whose death is announced. The theory whose death is announced is much more closely defined, and while it has flourished in some places, in others it has hardly taken root. There are some ‘traditionalists’ to use Speaks’ term, who have well-developed theoretical ideas, and others (whom I would prefer to call philistines) who think that we can get along perfectly well without anything more analytical than common sense and intuition. ‘The death of theory’ belongs to a recognizable tradition of such rhetorical deaths as that of the author, and – most pertinently here – Foucault’s ‘death of man’. As in those cases, ‘we’ might get excited about a world-changing cataclysm, but most people will continue as if nothing had happened, and there is no doubt that theory will continue to flourish, in just the way that authors flourish and ‘man’ flourishes, despite being long dead.

There is change however. What I think is happening is that we are seeing the end of the over-excited consumption of a particular range of texts, that has gone gone hand in hand with a tendency to lose sight of the empirical evidence of which a theory would try to give an account. Once we have lost sight of an empirical base, then theory can be pursued for its own sake – pure theory – and can happen, but all that matters is lost. If a theory is not helping us to design better buildings, or enabling us better to understand what is going on when people and buildings come into contact, then it is not a theory that has any place in the architecture-world. It will not be taken up and used. It will die. We are witnessing the death of theories that no longer look useful, the death of theory as such.

The emergence of Deleuze as a pivotal figure in recent developments is heartening, as he is now being understood as I believe he ought to be, as a thinker who has more insights in common with the pragmatist tradition – Dewey, James, Peirce, Rorty – than with other Continental philosophers, though his writing in French and his style of presentation have disguised the points of contact for his anglophone audience. In this realignment Deleuze is redescribed (Rorty’s term) or reterritorialized (Deleuze’s term) and under his influence rather than thinking of ‘theory’ as a unified and systematic enterprise, we come to see it rather as a swarm of theories, some of which will be useful now, others later, some connecting together to make precise or powerful machines, others lying dormant, waiting to be actualized.

Deleuze sounds principled but old-fashioned in asserting that the philosophy-world (where concepts are invented) is governed by different values from the commerce-world (where concepts are exploited). Speaks sees it as an intellectual failing of Deleuze that he could not welcome commerce, and perhaps now that the culture of global capitalism is so widespread there is a tendency to treat it as a force of nature that it is foolish to resist. Whether one sees Deleuze as weak-minded or as resolutely principled in this matter will probably depend on whether one sees the pressing problems of the market as how to find new markets, or how to find ways of sustaining development without the fall-out of social exclusion of an extensive underclass. It is not a problem that finds ready resolution, as the delegates at the World Economic Forum at Davos or its shadow, the World Social Forum in Brazil, have recently highlighted. Each side of the argument brings its own discomforts, and neither of them can be dismissed as negligible.

Theory is certainly changing, but if it is moving away from the confessions of fragments of sacred texts, and towards well-formed arguments that can lever empirical substance and sensation into place, then it will show itself to be a vital force.

Andrew Ballantyne
Newcastle

Andrew Ballantyne is Professor of Architecture and Director of Architecture in the School of Architecture, Planning and Landscape at the University of Newcastle

The ‘S’ word

I am grateful to Tom Woolley (arq 6/3, pp198–199) for taking the trouble to point out that David Lea’s pottery buildings at Cheriton can be used to demonstrate a thesis on sustainability in doing so he adds further weight to my general argument that small-scale, tightly budgeted projects may lead to architecture of substance. But the central point of my article (arq 6/2, pp130–143) was, as is clear from its title, to explore the relationship between ‘Necessity and Poetry’. In pursuing this I took Lea’s proposition, quoted in the article, that ‘Light, Surface, Material and Space are the four basic elements of architecture’, as my reference and worked with these in elaborating my theme. It was my judgement that the point was well enough made. To have raised, explicitly, the question of sustainability would have confused the issue.

On the more general point, about reconciling the ‘two cultures’ of architecture, I am as devoted as Professor Woolley is to bridging
that gap and have laboured long and hard on many fronts to make the point. My keynote paper, ‘Sustainability and architectural synthesis’, given at the PLEA 2000 conference, addressed just that question, as did my book The Environmental Tradition and The Selective Environment. I hope that, in their modest way, these complement Susannah Hagan’s interesting and important argument in Taking Shape.

I also hope that this commitment is demonstrated in my built projects. Perhaps my perspective on this question is conditioned by my efforts as a practitioner. In the conception and realization of a building the issue is, or should be, to find a judicious balance between the cultural, social, technological and aesthetic concerns that bear upon any work of architecture. This is not a reductive, mechanically analytical process. At the drawing board the struggle is to find that difficult viewpoint, Simon Sadler’s article (arq 6/3, pp247–255) seems historically convincing. I might, though, nuance the emphasis on Archigram ‘cultivating the anti-establishment reputation of 1960s youth’ and ‘an ill-tempered generation gap in early 1960s British architecture’. Most people, especially when young, proclaim themselves as outside the establishment tent, pissing in. So it’s surely not noticeably ‘ironic’ that pre-War AA students did too. But there seems to me a world of difference between the soft ‘youthquake’ of early 1960s Britain (Quant, Bailey, the other Peter Cook, etc) and the leftist atmosphere of post-1965, the delayed echo in Britain of America’s Vietnam and Civil Rights struggles. The first ethos – aesthetic, chirpy, self-mocking, and largely apolitical – nurtured the surrealist technophilia of Archigram’s most interesting projects. The second, which really was ill-tempered and anti-establishment, made Archigram seem irrelevant or worse, as the article points out.

I certainly recall that when Archigram first burst stylishly into the Cambridge School, the school’s ‘establishment’ (notably Sandy Wilson and Colin Rowe – not the most senior faculty then, but hardly young punks) were among its enthusiasts. After all, Pop Art was by then the art élite’s uniform, and Reyner Banham’s enjoyment of the Futurists and Russian Constructivists, not to mention the Cambridge ‘Bowellists’, seemed pretty much shared by all generations.

This is not to say that Modernism was not the school’s dominant ethos. The doctoral thesis of Peter Eisenman, then teaching first year, concerned Modernism’s formal grammar. And the message of Banham’s Theory and Design, that functionalist Modernism was not obsolete but had been temporarily diverted from its true Buckminster-flavoured destiny, seemed universally accepted – so came as no surprise, as the article suggests, when voiced by Archigram. One Modernist idea, that the architect’s duty was primarily to make the world better, was particularly resistant to cynical decay. I suspect it was this, rather than ‘60s rebelliousness, that had for some years supported the idea of the architectural student ‘as an active agent of change’ and ‘teaching … as a mission, not a job’. That said, the bumptious inclusiveness of the Archigram message undoubtedly encouraged a networking of schools at student level, and the pluralistic free market in ideas and formal languages which characterized the ‘unit’ system pioneered at the AA. Archigram was the product of its personalities as much as of its ideas.

So the success or failure of ‘Archigram’s educational project’ could be better gauged if we knew the ‘pedagogic tree’ linking the Archigram team to successive generations of students and teachers – something beyond the scope of this article. But it may be worth stressing that Peter Cook, Dennis Crompton, David Greene, Colin Fournier and Mike Webb remain prominent teachers, as did Ron Herron before his recent death.

Phil Tabor
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The Editors reserve the right to shorten letters


Archigram’s invisible university
My student years, 1961–67, exactly coincide with Archigram’s first and best flourishing and, just as Jon Harris, in my Cambridge Architecture year, was the Cambridge salesman for the first issue of Private Eye, I was the Cambridge salesman for the first issue of Archigram. From this contemporary though partial viewpoint, Simon Sadler’s article (arq 6/3, pp247–255) seems historically convincing. I might, though, nuance the emphasis on Archigram ‘cultivating the anti-establishment reputation of 1960s youth’ and ‘an ill-tempered generation gap in early 1960s British architecture’. Most people, especially when young, proclaim themselves as outside the establishment tent, pissing in. So it’s surely not noticeably ‘ironic’ that pre-War AA students did too. But there seems to me a world of difference between the soft ‘youthquake’ of early 1960s Britain (Quant, Bailey, the other Peter Cook, etc) and the leftist atmosphere of post-1965, the delayed echo in Britain of America’s Vietnam and Civil Rights struggles. The first ethos – aesthetic, chirpy, self-mocking, and largely apolitical – nurtured the surrealist technophilia of Archigram’s most interesting projects. The second, which really was ill-tempered and anti-establishment, made Archigram seem irrelevant or worse, as the article points out.

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