

The Myth of Function

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The itch I propose to scratch in this essay could be described as the baffling philistinism of English architectural criticism, or, more specifically, the different ways in which notions of *function*, *functionalism* and the *functionalist aesthetic* are handled in English writing as opposed to Continental sources. The period I am interested in is the thirties, but from the perspective of the immediate postwar years – 1948–55. It is, I suppose, a sub-question of the larger inquiry as to why the collapse of Modernism has been so damaging and so complete in this country, but that is another story.

I'm trying here to map out a fruitful terrain for investigation, and this essay must be seen primarily as a ground-clearing exercise. Some of my difficulties come from reading a book which I hoped might provide useful material for this endeavour: Larry L. Ligo's *The Concept of Function in Twentieth-Century Architectural Criticism*. Ligo's method was to restrict himself to the references in the *Art Index*, which immediately biases his research towards English language sources.¹ Most of the writings selected were post-1940.² He chose to cover only applied criticism, as opposed to theoretical or more general criticism. And he picked a list of thirteen famous modern buildings as a way of further selecting the extracts.³ The arbitrariness of this procedure tends to provide extracts which lack specificity and accentuate the iconic status of the buildings and the generalised nature of the criticism.⁴

More seriously, Ligo allows for a creeping inclusiveness in his definition of function to encompass everything from structural articulation, physical function, psychological function,⁵ social function,⁶ and 'cultural-existential' function.⁷ These are, in fact, chapter headings in his book.

On the other hand, the book is of interest precisely because it preserves and displays many of the confusions and contradictions rooted in the period under discussion. Ligo is at pains to point out that few architects

themselves believed that a building's function should determine its form or be used as a criterion for judging its beauty. It was largely in the post-hoc criticism that notions of functionalism assumed ever greater significance. And he asks the fruitful question: 'How . . . did the idea of absolute functionalism come to be so dominant, in fact to be thought of as a synonym for "modern architecture"?'⁸ This is the question I would like to pursue.

First, a few matters of definition. In conventional parlance, the word 'function' means little more than 'use' or 'purpose'. When given the suffix '-ism' or '-ist', it refers to *values* placed on the satisfying of material functions (from shelter to planning, etc.). From Vitruvius onwards, most architectural theorists have found an important place for the premise that a building should be judged, in part, on the intelligent use of materials, the way that it performs its purpose and its social utility.⁹

These values invariably spill over into the realms of the aesthetic or the ethical but they are not necessarily exclusive. Only very few functionalists ever asserted that architecture *consists in* the satisfying of functions and that no other values (such as beauty) are relevant.¹⁰ And when they did, they invariably used the term 'building', or '*Bauen*', instead of 'architecture', or '*Baukunst*'. It is also worth noting that virtually every architect and writer on architecture of any standing at all has taken pains to renounce 'functionalism' as the sole guiding principle of architecture.¹¹

A functionalist, then, may claim that a building which meets important practical or social purposes is in some sense a good building, but this is not to say that it qualifies as Architecture or that it is beautiful. He may go so far as to claim that an architect is morally bound to adapt his practice to serve important social functions, but this ethical or political principle, while determining some of his choices, will not necessarily determine those which define all the formal or signifying elements of his buildings.

Similarly, a building may be praised which lacks 'social utility' or Truth to Materials, but only extreme formalists suspend all knowledge of the world, including a knowledge of how a building serves its purposes, when forming architectural judgements.¹² Therefore, when discussing functionalism, we have to try to measure how much weight is being placed on the satisfying of functional requirements and what causal links are being claimed between these functional arrangements and the form, or beauty, of the building.

I am going to use the term 'functionalist aesthetic' to refer to theories which identify a causal relationship between function and beauty. Here, too, we will have to distinguish between various versions of this general

argument. The most austere theory simply asserts that what is functional will *de facto* be beautiful. Few writers have made this claim. But even if a writer accepts that satisfying a building's functions can never be a sufficient condition for beauty, he or she may still insist that it is a necessary condition for 'good' architecture and that functionalism therefore necessarily underpins architecture. More frequent are theories which look for common properties or chains of association between the functional and the beautiful (such as the chain between 'truth', 'rationality', 'calculation' and 'functionalism') and therefore argue that the one overlaps with the other. In its weakest form, the functionalist aesthetic simply claims that functionalism prepares the ground for beauty by stripping away inessential details and grounding a design in rational principles. It may often appear unclear whether any causal link to beauty is being claimed, or whether functionalism merely performs an enabling rôle for architecture.

I want now to make a small detour to examine Le Corbusier's *Vers une architecture* in the light of these reflections on functionalism and the functionalist aesthetic, since it was this book, as much as any other, which caused many of the confusions in Britain which I want to address.¹³

In British writing from 1927 to 1939, Le Corbusier was invariably described as a functionalist. But can Le Corbusier properly be described as a functionalist, and do his views conform to what I am calling the functionalist aesthetic? Le Corbusier was clearly not a functionalist of the exclusive kind:

Architecture is the masterly, correct and magnificent play of masses brought together in light.¹⁴

and:

You employ stone, wood and concrete, and with these materials you build houses and palaces; that is construction. Ingenuity is at work.

But suddenly you touch my heart, you do me good, I am happy and I say: 'This is beautiful.' That is ARCHITECTURE. Art enters in.¹⁵

There is clearly a separation here between building and architecture and we can identify an independent formal judgement as to what qualifies as Architecture or art. In fact, Le Corbusier specifically considered and rejected the two common functionalist claims that architecture must express its structure and that there is a causal relation between function and beauty.

One commonplace among architects (the younger ones): *the construction must be shown.*

Another commonplace amongst them: *When a thing responds to a need, it is beautiful.* But . . . to show the construction is all very well for an Arts and Crafts student who is anxious to prove his ability. The Almighty has clearly shown our wrists and our ankles, but there remains all the rest!

When a thing responds to a need, it is not beautiful; it satisfies all one part of our mind, the primary part, without which there is no possibility of richer satisfaction; let us recover the right order of events . . . ARCHITECTURE is the art above all others which achieves a state of platonic grandeur, mathematical order, speculation, the perception of the harmony which lies in emotional relationships. This is the AIM of architecture.¹⁶

So, functionalism is a necessary precondition for 'satisfaction', but not a sufficient condition for architecture. And yet David Watkin felt able to call Le Corbusier's arguments 'functionalist' without qualification.¹⁷ On examination, it turns out that Watkin's mistake is due to his antipathy for Le Corbusier's attitudes to decoration and personal hygiene. Actually, it is hard to examine Watkin's text here since he does not address any of Le Corbusier's principal arguments, preferring to pick about among some of the peripheral examples of what he calls the pathetic fallacy. The fact that Le Corbusier's personal attitudes and Historicist views committed him to trying to create a new kind of architecture has no bearing on his rejection of the functionalist aesthetic. Watkin's distaste for what he wrongly identifies as Le Corbusier's revolutionary message blinded him to the essential humanism of Le Corbusier's intellectual formation.

Watkin stands in a line of British architectural critics who either wilfully or ignorantly conflated political, social and functional considerations in order to condemn Modern Movement architecture as functionalist, when what they really objected to was the spectre of communism, cosmopolitanism, social purpose and the stripping away of traditional detailing. Within a year of the arrival of European Modernism (in the persons of Berthold Lubetkin, Erich Mendelsohn, Walter Gropius, and Marcel Breuer), the term functionalism was being used in this very general sense.¹⁸

Much of the power of *Vers une architecture* comes from the juxtaposition of images, many of them taken from civil engineering, aeroplanes, cars, and ocean liners. To many critics, the imagery amounted to more than the message, so that it was commonly claimed that the author was advocating the imitation of grain silos or factories. It is remarkable how Le Corbusier aestheticised these images by selecting views to accentuate aesthetic properties he admired, even going so far as to touch up the

photographs. But it is a mistake to imagine that he saw a simple and direct relationship between their functions and forms. His ideas can be paraphrased roughly as follows. Because engineers employ rigorous calculations in order to use their materials as efficiently as possible, they often end up using those geometric forms (the Phileban solids) which invariably satisfy the aesthetic faculties. Similarly, the processes of mass production and competitive marketing will tend to 'purify' and improve the forms of industrial artefacts, just as natural selection works to perfect organic forms. Furthermore, these new forms are the characteristic products of a period of civilisation radically changed in almost every way by industrialisation and urbanisation. A sense of propriety suggests the need to 'learn the lessons' from these objects and see if architecture should follow a similar path. All this, however, amounts only to an argument concerning cultural history or fashion. The criteria for recognising beauty and designing good architecture, according to Le Corbusier, remain independent of these determinants.

We will return to Le Corbusier and the functionalist aesthetic later. But first, we must consider some cases where functionalists, while not actually advocating a necessary relationship between function and form, have held views which could be seen to have had bad aesthetic consequences. These may be described as the negative case against functionalism. I can only summarise them here.

First is the argument that modern architects were driven by functionalist criteria to seek to wipe out tradition and 'history'. It is certainly true that very many architects, by 1900, agreed that it was increasingly difficult to defend architectural eclecticism (*les styles*). And it is true that the main reason for this was the feeling that meaning had gone out of architecture with the loss of any real reference to contemporary life. The 'devaluation of symbols'¹⁹ (banks dressed up as temples, department stores as palaces) was associated with a refusal to accept the new social realities, and the substitution of ersatz materials and processes for skilled hand craftsmanship was coming to be thought repugnant by architects who were not in any sense Modernists. The problem was, how could architects substitute for the imitation of past styles? Most architects, like Le Corbusier, tried to recover what they saw as the essential lessons from the architecture of the past, renouncing the superficial, but some thought that architects could do without any reference to the past. It is said that Gropius used to advise students at the Bauhaus to ignore history. Behind all the rhetoric, however, the influence of the German classical tradition, notably of the Schinkel type, influenced every design Gropius ever made.

On the whole, however, the English tradition in the thirties was to contrast the supposedly rational and organic Georgian architecture with the eclectic and 'superficial' Victorian. A good example is the frontispiece of Yorke's book *The Modern House in England*,²⁰ which juxtaposes Gropius's house in Church Street, Kensington, with a Georgian terrace row.

To the extent that the eclectic use of style was devalued, however, architects began to look for *reasons* for selecting certain forms and not others. The 'clean sheet of history' was often compared with the 'clean sheet of paper' which architects were encouraged to imagine free of predetermined solutions. And this is why functionalism was blamed for supplying the answers, since it was seen as filling the vacuum left by tradition and style.

They definitely ignore the past. They no longer study it, and in this deliberate ignorance it is easy for them to cut adrift, and start afresh on their own. They have some excuse in the nineteenth century, that disastrous interlude in the arts which, though it had men of genius, undid the work of the eighteenth century, and landed us in our present chaos. But civilisation is far too old and complicated for a complete sweep . . .

In the second place the modernist view of architecture, its translation into mere functionalism, is absurdly inadequate as a conception of architecture.²¹

It remains to be seen, however, whether architects genuinely did substitute functionalist criteria for the 'masterly, correct and magnificent play of masses brought together in light'. In fact, the most casual reading of Le Corbusier's prodigious output shows that his main aim is exactly to supply a broad, rich and prestigious set of references and arguments in support of modern architecture.

It is significant that, in Frederick Etchells' Introduction to the English edition of *Vers une architecture*, this is well understood:

But it will be said, we cannot escape the past or ignore the pit from which we were hewn. True; and it is precisely Le Corbusier's originality in this book that he takes such works as the Parthenon or Michael Angelo's Apses at St Peter's and makes us see them in much the same direct fashion as any man might look at a motor-car or a railway bridge.²²

Unfortunately, however, Etchells placed a subtle emphasis on Le Corbusier's supposed functionalism and radical Modernism. For a start, he changed the title from *Towards an Architecture* to *Towards a New Architecture*, perhaps assuming that the English reader would not understand the cultural implications in the original title, with its connotation of restoring a lost unity. It was precisely Le Corbusier's

project to attempt to reunite the skills of the architect and the engineer, rent asunder by the Industrial Revolution. Secondly, Etchells' Introduction places great emphasis on innovation in engineering and materials, and his illustrations emphasise the stark brutality of these new realities. In particular, an illustration of Walsh and Maddock's Operating Theatre offered a hostage to fortune for the next decade.²³

Here we come close to the heart of the problem. British architectural critics and commentators, compared to their Continental colleagues, have always been reluctant to include a highly theorised or aestheticised vocabulary. The central British tradition was that of 'Good manners', 'Common sense' and practical experience²⁴ and its characteristic vocabulary that of a patronising explanation to the man in the street. In this kind of writing, humour and practical wisdom were always rated most highly, and the touchstone of functional efficiency was invariably given great value, long before Continental Modernism came to Britain after 1927.

In England, perhaps more than in any great European country, there has obtained, and still exists, a natural antipathy to any application of logic or analysis to questions of art . . . Hence we find installed, most particularly in England, the great conservative system of 'Follow your betters' and 'Don't think out loud about abstract principles of design'.²⁵

Whether it is profitable to make comparisons with the British utilitarian and empirical traditions in philosophy or with the characteristic forms of British painting and sculpture, the dominant impact made by Pugin, Ruskin, Morris and Lethaby set the agenda for architectural discourse until well into the twentieth century.

Another negative argument against functionalism was that it was the agent of social revolution. The fact that most of the protagonists of the Modern Movement in architecture had political aims which envisioned at least some kind of radical change in society, made it seem only too probable that they proposed to use architecture as part of a revolutionary levelling process. In France, when the articles for *Vers une architecture* were being written, the political atmosphere was deeply conservative and nationalist. Le Corbusier's social idealism was tempered by a natural tendency towards élitism and an urgent practical need to curry favour with the industrialists, bankers and bourgeois dilettantes who made up the bulk of the readership of *L'Esprit Nouveau* magazine. When he added the chapter 'Architecture or Revolution' to the book, it was precisely to appeal to the men in authority to patronise the new architecture.

In Germany, however, Modernism grew up in social chaos and fuelled by the fervour of political radicalism. Furthermore, the idealism of the early twenties was actually channelled into practical housing projects in cities like Berlin and Frankfurt, where Social Democrat local governments placed Modernists like Martin Wagner and Ernst May in positions of real power. By 1929, therefore, when European Modernism with a German flavour first began to penetrate the English consciousness, it was natural to associate modern architecture with socialism. The key text here was Bruno Taut's book for Studio Vista, *Modern Architecture*. Taut had been building social housing of various kinds since before the war and had by then a mature political outlook. Like most of his European contemporaries his views were formed in the Historicist and holistic Hegelian tradition, so that he took for granted a two-way relationship between 'ideas' and social progress. Just as the 'Spirit of the Age' dictates to the architect where society is going, it is part of the architect's job to help this 'progress' with his buildings. And Taut does seem to link this to a functionalist aesthetic:

If everything is founded on sound efficiency, this efficiency itself, or rather its utility, will form its own aesthetic law. A building must be beautiful when seen from outside if it reflects all these qualities . . .

The architect who achieves this task becomes the creator of an ethical and social character; the people who use the building for any purpose, will, through the structure of the house, be brought to a better behaviour in their mutual dealings and relationship with each other. Thus architecture becomes the creator of new social observances.²⁶

This is not the place to put Taut's statement into its German context. As it happens, Taut very rarely espoused the functionalist aesthetic in this crude form, but it is highly relevant that he did so here, and linked it to a social message. The illustrations in the book, showing a decade of solid achievement in a range of types of architecture, from social housing and factories to private houses, must have seemed unbelievably exotic to the English reader.

To such readers, the link between functionalism and socialism (normally referred to as 'Bolshevism'), could be identified as the wish of the modern architect to reduce people to robots.

France having discovered the dramatic implications of 'fitness for purpose', a ruthless and wholly material functionalism now directs French modernist architecture. This functionalism is objective; but the buildings designed by the modernists are designed for creatures that have lost their human characteristics . . . Le Corbusier is always designing for the standardised, mechanised beings

that he considers so much more efficient and desirable than humans. He and his disciples are creating the architecture of inhumanism.²⁷

It is interesting that Gloag's pragmatism forces him to accept the 'objectivity' of functionalism and look to the dehumanising processes of Le Corbusier's supposedly revolutionary social planning to deliver the clincher. Larry Ligo cites a number of articles by Lewis Mumford from the 1920s which make a similar point,²⁸ defending logical and non-aesthetic American architecture against the politicised and puritan extremists of Europe. Ligo also cites Banham's judgement, which was that many Modern Movement architects decided to fight on the 'narrow front' of common-sense solutions and economic realities, in order to win support in 'politically-suspicious Fascist Italy, aesthetically-indifferent England and depression-stunned America'.²⁹

By the mid-thirties, however, the political debate within the Modern Movement had been radically altered by Stalin's rejection of Modernism in the USSR. Now the key issue on the left was, 'Should architects lay their skills at the feet of politicians in the interests of a greater good, that of raising standards and political awareness in the proletariat?'³⁰ It now seemed as if the stripped Rationalism of Modern Movement architecture was an indulgence which did not serve the interests of the poor and homeless whose plight had always been used as an argument for the materials, methods and forms of Modernism. By the end of the thirties, modern architects in Britain were distancing themselves rapidly from the cold, hard look of 1920s European Modernism, introducing curves, organic forms, 'natural' materials, irony, ornament, and symbolism. A key moment in this transition was Lubetkin's Highpoint II block in Highgate, with its explicit reference to Vitruvius (a caryatid) and its abandonment of the symbolism of social engineering.³¹ Paradoxically, as modern architects were abandoning the forms associated with the functional aesthetic, critics were fixing functionalism into the currency of architectural debate.

The thirties in Britain has often been described as a period of increasingly polarised attitudes. A whole generation of young artists and architects came to feel themselves excluded by those who held positions of power both in government and in the professions. It was a decade in which appeasement in politics could be contrasted to the just cause of Spanish Republicanism, and the continued stranglehold of the senior members of the newly professionalised RIBA could be contrasted with the exciting prospect of Continental Modernism. Furthermore, the increasing bureaucratisation of the processes of planning permission

brought Modernists repeatedly into conflict with hostile representatives of the community.³² Berthold Lubetkin, who always reserved a very important rôle for the artistic in architecture, noted that these struggles led to a diversion of attention from the aesthetic to the practical:

The result of this tremendous body of prejudices and obstructions, supported as it is by the authority of the law, has been to lend a disproportionate importance to very small points. To obtain permission to build a flat roof is in itself such an achievement that it is likely to overshadow, in the mind of the architect, the significance of his original conception. The result is that at present it is almost impossible to judge objectively the aesthetic qualities of a building.³³

It is hardly surprising that the political rubbed off some of its flavour on to the aesthetic, even when the real links were often extremely superficial.

You are a writer, a critic, you *must* find a word for this new thing, which disturbs your critical equilibrium. You look about, and find a word which is already an important one in the vocabulary of architecture . . . you add an 'ist' or an 'ism' to it, and you call it 'functionalism'.

The new word has a 'modern' ring about it, it's 'smart' and 'hard', and perhaps a bit 'bolshy' too. (That will be very useful later on.) And thus, for the time being, the critical balance is restored, by a fresh bright word.³⁴

Now, it is often the case that the most extreme statements of the functionalist aesthetic in Britain did coincide with an extreme political position held at the time by the writer. Here is Herbert Read:

If an object is made of appropriate materials to an appropriate design and perfectly fulfills its function, then we need not worry any more about its aesthetic value: it is *automatically* a work of art.³⁵

This was written in 1941, after Read's conversion to anarchism. But in *Art and Industry*, published in 1934, Read had preserved the notion of an abstract art in the service of industry whose field was purely aesthetic: 'art implies values more various than those determined by practical necessity'.

A key circumstance to explain the nature of the debates in Britain during the thirties was the impact of the postwar economy and Depression on the building industry. The pricing out of hand craftsmanship presented all architects with problems for which they were ill prepared. The consensus response was to look to Scandinavia, Holland, and North Germany, where a style of stripped Rationalism in brick and wood seemed to offer a mixture of functionalism with a judicious traditionalism and humanism. By 1930, while Le Corbusier was moving

away from white, rendered, reinforced concrete to an increasingly 'organic' approach to materials, and while modern architects everywhere were re-evaluating the tenets of functionalism, a generation of young British architects were presented with the *fait accompli* of 1920s Modernism in the form of a number of books and articles. These books increased the austere appearance of modern architecture by stripping out colour and texture and wrapping them in a defensive argumentation often remote from that of their creators. Furthermore, the arrival of the emigrés from Europe (notably Walter Gropius, Erich Mendelsohn, Berthold Lubetkin and Marcel Breuer) tended to perpetuate and set in aspic developments which elsewhere (at least outside Germany) continued on a more organic path.

It was Gropius' partnership with Maxwell Fry which set the real agenda for postwar British Modernism. Gropius' dry austerity, mixed with Fry's sensitivity to English landscape, created the housing scheme for St Leonard's Hill, Windsor Park, with its housing slabs based on Gropius' Wannsee apartment blocks of 1928. This scheme was wittily and appealingly promoted in the *Architectural Review* under the title 'Cry Stop to Havoc'. The concluding sentence reads:

This can be regarded as one of the first efforts to reconcile the English tradition of good living with the requirements of contemporary town and country life.³⁶

But this appeal to a consensus reasonableness was not a real one. Thirties culture was fragmented not only across the 'schools' of Modernist, Rationalist and traditional architects, but within the Modernist tradition. The deeply imbued notion of pragmatic relativism, allowing everything its proper place within the scheme of things, provided that it does not challenge the main hierarchies, emerges from a characteristic article in the *Architectural Review*. Entitled 'Beauty in Machinery', the article included some immensely seductive photographs of machinery, lit and composed by photographers Francis Bruguière and E. O. Hoppé.

We are bidden to seek the purpose for which a thing was made, and advised that if we put ourselves into sympathy with that purpose we shall find by trial the literal truth that the more efficient a device is, the more beautiful *in its own style* it becomes.³⁷

Rejecting the functionalist aesthetic, the author argues for a pluralistic aesthetic, where the *right kind* of purpose, perfectly fulfilled, will engender a feeling of appropriateness and admiration akin to the aesthetic.

Modern Movement architects even accepted this hierarchic and compartmentalised view of the world as a constraint on their own freedom of action. When the partnership Connel Ward and Lucas submitted a competition entry for the civic buildings in Newport, South Wales, they were arraigned before a tribunal of MARS (Modern Architectural Research Group) to explain why they had the temerity to betray the movement by pandering to official commissions. It was such a fixed notion at the time that different styles had their proper place (Classical for government buildings and banks, stripped Rationalism for minor public buildings and schools, Modernism for fringe commissions such as zoos, health centres and private houses)³⁸ that it seemed impossible to break out from the appointed station of buildings in society. The consequence was that modern architects in Britain never had to concern themselves with the large issues of meaning in architecture. Confined to a subculture, they were able to exchange with their painter friends and their political allies on the left an empty rhetoric of 'hard' functionalism and grim social purpose, precisely because they were largely deprived of the opportunity to carry any of their schemes out in practice.

As a result, much of the debate in the magazines or on the radio was safely contained within a fantasy of 'opposition' between two camps, neither of which had much standing or importance in the community.³⁹ After the war, however, many of these same architects found themselves suddenly in positions of power (rebuilding city centres, designing new towns and cathedrals), untrammelled by either legal or established constraints. And the poverty of their architectural theory was rather suddenly exposed.

There has been a tendency in the literature surrounding Modernist furniture to divide it off from the trades and practices from whence it sprang, to analyse it as a commodity floating free from such things as artisan traditions, retail outlets, popular demand and government legislation. Once the division has been made, a history of style can be constructed which develops a convincing internal logic. In this essay, the 'proto' period, as it were, of modern French furniture is reunited with the specific conditions prevalent at the time, in an attempt to explain why, exactly, one style succeeded another, and why the formal innovations of Modernists at the end of the 1920s were so rapidly and easily appropriated into the repertoire of even the most pragmatic of Parisian artistes décorateurs. Ultimately, one is left to wonder whether indeed there was a Modern Movement in French furniture at all, and if there was, what it constituted and when exactly it occurred.

- 5 *Ibid.*, p. 318.
- 6 J. Mordaunt Crook, *William Burges and the High Victorian Dream* (London, 1981), p. 120.
- 7 Clive Wainwright, *The Romantic Interior: The British Collector at Home 1750–1850* (New Haven and London, 1989). Plates 85 and 107 illustrate these.
- 8 A. W. N. Pugin, *The True Principles of Pointed or Christian Architecture* (London, 1841), p. 56.
- 9 *Ibid.*, p. 1.
- 10 John Ruskin, *The Stones of Venice* I (London, 1851), p. 370.
- 11 'Sources of Expression in Architecture', *The Edinburgh Review*, October 1851, p. 371.
- 12 John Ruskin, *The Seven Lamps of Architecture* (London, 1849), p. 161.
- 13 Pugin, *True Principles*, p. 45.
- 14 C. F. A. Voysey, *Individuality* (London, 1915), p. 89.
- 15 Hermann Muthesius, *Das Englische Haus* (Berlin, 1904), new English edn. trans. Janet Seligman (London, 1979), p. 156.
- 16 Le Corbusier, *L'art décoratif d'aujourd'hui* (Paris, 1925), new English edn. trans. J. I. Dunnett (London, 1987), p. 132.
- 17 William Wordsworth, *A Complete Guide to the Lakes* (London, 1843), p. 159.
- 18 *Ibid.*, p. 162.
- 19 Kata Phusin [John Ruskin], 'The Poetry of Architecture', *The Architectural Magazine*, v (1838), p. 98.
- 20 W. R. Lethaby (ed.), *Ernest Gimson: His Life and Work* (London, 1924), p. 37.
- 21 *Ibid.*, p. 30.
- 22 Ruskin, *Seven Lamps*, p. 33.
- 23 A. J. B. Beresford Hope, *Public Offices and Metropolitan Improvements* (London, 1857), p. 22.
- 24 A. J. B. Beresford Hope, *The Common Sense of Art. A Lecture Delivered in Behalf of the Architectural Museum At The South Kensington Museum, December 8, 1858* (London, 1858), p. 15.
- 25 Huss, *Rational Building*, pp. 194–5.
- 26 Viollet-le-Duc, *Lectures*, p. 87.
- 27 *Ibid.*, pp. 80–1.
- 28 Robert William Billings, *The Power of Form Applied to Geometric Tracery: One Hundred Designs and their Foundations Resulting from One Diagram* (London, 1851), p. v.
- 29 *Ibid.*, p. 9.
- 30 A. W. N. Pugin, *Floriated Ornament* (London, 1849), p. 3.
- 31 Ruskin, *Stones of Venice* II (London, 1853), p. 181.
- 32 Le Corbusier, *L'Art décoratif d'aujourd'hui*, p. 194.
- 33 Sir Reginald Blomfield, *Modernismus* (London, 1934), pp. 165–6.

2 Tim Benton: *The Myth of Function*

- 1 'In addition to providing a workable quantity of material, this method, I believe, insures (sic) the material's consistently reputable quality': Larry L. Ligo, *The Concept of Function in Twentieth-Century Architectural Criticism*, (New York, 1984), p. 4.
- 2 This must in part be due to the vagaries of the *Art Index*. Ligo asserts that 'there was a real dearth of architectural criticism during the first three or four decades of this century' (p. 16). But this simply reflects the Anglo-Saxon bias and ignores the wealth of material in journals such as *Das neue Frankfurt*, *Wasmuths Monatshefte*, *Architecture d'Aujourd'hui*, *Wendigen*, *de 8 en opbouw* and many others.

- 3 Louis Sullivan, Carson Pirie Scott; Frank Lloyd Wright, Robie house; Gerrit Rietveld, Schröder house; Walter Gropius, Bauhaus, Dessau; Mies van der Rohe, German Pavilion, Barcelona; Le Corbusier, Villa Savoye; Frank Lloyd Wright, 'Falling Water'; Alvar Aalto, Baker house dormitory; Frank Lloyd Wright, Guggenheim Museum; Mies van der Rohe, Farnsworth house; Le Corbusier, Ronchamp; Louis Kahn, Richards Medical Research building; Paul Rudolph, Yale School of Art and Architecture.
- 4 Many of the articles were written after 1940 about buildings already two or more decades old, and after the first main wave of monographic publications on the history of the Modern Movement (Platz, Giedion, Pevsner, Mumford, etc.).
- 5 Ligo says that this '... refers to the "feelings" which buildings stir in their viewers, users and critics, including vertigo, claustrophobia, directional confusion, psychic comfort, or less specific feelings and emotions'. Clearly the borderline with aesthetic experience is a blurred one. Ligo, *Concept of Function in Twentieth-Century Architectural Criticism*, p. 5.
- 6 Defined as 'the concretization of social institutions and values characteristic of particular cultures or eras'. *Ibid.*
- 7 'Cultural-existential function' refers to the concretization of universal values or subconscious structures of spatial and psychological orientation which are related to man's essential humanity rather than to his life in a specific time and place. *Ibid.*
- 8 *Ibid.*, p. 12.
- 9 Vitruvius' famous formula of *firmitas, utilitas, and venustas* was taken out of context; his more complex formula for the 'Fundamental Principles of Architecture' in Bk I, Ch. 2, was more formalistic: 'Architecture depends on Order (in Greek *taxis*), Arrangement (in Greek *diathesis*), Eurythmy, Symmetry, Propriety, and Economy (in Greek *oiconomia*)' (in Morgan's translation, Dover edn., New York, 1960, p. 13). Since many of these terms seemed obscure, and Vitruvius' further explanations deliberately mystifying, later theorists latched on to the simpler triad.
- 10 Roger Scruton goes to some trouble to assert that the theory of functionalism 'as an account of the nature of building, is simply vacuous'. But he gives no example of such a theory, and indeed has some sensible things to say about the interdependence of functionalism and aesthetic criteria. R. Scruton, *The Aesthetics of Architecture*, (London, 1979), pp. 38-43.
- 11 Even Wells Coates, who flirted with functionalist rhetoric, was specific: 'As architects we know that there are a great many different solutions of the purely technical and economical problems of efficiency and organisation, and of assembling and construction: from all these we take those solutions which dispose of such problems and give also the qualities of form and space, fine scale and proportion, cleanliness and service and comfort and convenience, which we call architecture.' Wells Coates, 'Modern Dwellings or Modern Needs', a radio debate between Geoffrey Bournemouth and Wells Coates, printed in *The Listener*, 24 May 1933, pp. 819-22. A commonplace in England was to reiterate Wotton's version of the Vitruvian triad 'Commodity, Firmness and Delight'; this was used as the structuring principle for the MARS exhibition in the New Burlington Galleries, January 1938.
- 12 David Watkin at times appears to believe that architecture can be appreciated intuitively and autonomously, with a knowledge of architectural style and traditions but without regard to the rest of the real world. See his description of architecture 'involving taste, imagination and scholarship', in *Morality and Architecture* (Oxford, 1977), p. 12.
- 13 John Gloag, a fierce critic of Le Corbusier, noted that 'It is significant that few discussions about modern architecture take place, either in the press or in books, or at the meetings of societies that devote their time to aesthetic analysis, without the name

- of M. Le Corbusier being mentioned, either with acrimony or approval'. John Gloag, *Men and Buildings* (London, 1931), p. 200.
- 14 Le Corbusier, *Towards a New Architecture*, ed. Frederick Etchells (London, 1927), p. 29. Note the comparable assertion by Geoffrey Scott, 'Architecture, simply and immediately perceived, is a combination, revealed through light and shade, of spaces, of masses, and of lines', *The Architecture of Humanism*, (London, 1914), p. 210.
 - 15 Le Corbusier, *Towards a New Architecture*, p. 203.
 - 16 *Ibid.*, p. 10-11.
 - 17 Watkin, *Morality and Architecture*, p. 40.
 - 18 For example, *The Listener* published the results of a 'symposium' based on a questionnaire sent round to a number of British architects on 26 July 1933. This listed as its second question: 'Has functionalism in building gone too far?' Although most of the responding architects tried to qualify the term, it is clear from the debate that the Modern Movement was commonly accused of 'functionalism'. Reginald Blomfield assumed that the new architects were selling the fort of architecture to the engineers, and he called this abnegation of aesthetic responsibility, combined with a denial of tradition, functionalism.
 - 19 The expression was used by Sigfried Giedion to describe the bombast of Percier and Fontaine's designs for Napoleon. S. Giedion, *Mechanization Takes Command* (London and New York, 1949).
 - 20 F. R. S. Yorke, *The Modern House in England* (London, 1937).
 - 21 Sir Reginald Blomfield, response to the questionnaire 'Is Modern architecture on the right track?', *The Listener*, 26 July 1933.
 - 22 Le Corbusier, *Towards a New Architecture*, p. x.
 - 23 *Ibid.*, p. xv. A comparable image did appear in Ozenfant and Le Corbusier's article, 'La Formation de l'Optique Moderne', *L'Esprit Nouveau*, but not in *Vers une architecture*.
 - 24 See Trystan Edwards, *Good and Bad Manners in Architecture* (London, 1924).
 - 25 Howard Robertson, *Architecture Explained* (London, 1927), pp. 165-6.
 - 26 Bruno Taut, *Modern Architecture* (London, 1929), p. 9, cited in Watkin, *Morality and Architecture*, p. 40.
 - 27 Gloag, *Men and Buildings*, p. 205.
 - 28 Lewis Mumford, 'Machinery and the Modern Style', *New Republic*, xxvii, 3 August 1921; 'Architecture and the Machine', *American Mercury*, III (September 1924), pp. 77-80; and 'The social background of Frank Lloyd Wright', *Wendings*, VII, no. 5 (1925), pp. 65-7 (cited in Ligo, *Concept of Function in Twentieth-Century Architectural Criticism*, p. 15).
 - 29 Ligo, *Concept of Function in Twentieth-Century Architectural Criticism*, p. 16, citing *Theory and Design*, p. 321.
 - 30 See the interview with Colin Penn quoted in Charlotte and Tim Benton, *Thirties British Art and Design Before the War* (London, 1980), p. 61.
 - 31 Where Highpoint I had incorporated a large common vestibule and tea-room as an expression of the theory of the 'social condenser' (based on Russian theoretical principles), Highpoint II has a minimal lobby and direct access by lift to each apartment. Lubetkin's own penthouse suite here, with its exposed brickwork, vaulted ceiling, rough wooden chairs with cow-skin covers, colour and Chelsea dogs, marks a strong contrast with earlier work.
 - 32 See F. R. S. Yorke's introduction to *The Modern House in England*, where he outlines a number of such conflicts.
 - 33 Berthold Lubetkin, 'Modern Architecture in England', in *American Architect and Architecture*, February 1937, cited in Charlotte Benton (ed.), *Documents* (Milton Keynes, 1975).

- 34 Wells Coates, 'Response to Tradition', *Architectural Review*, November 1932, pp. 165–8. Part of a polemic with Edwin Lutyens, whose article entitled 'Tradition Speaks' was also published in this issue.
- 35 Herbert Read, 'To hell with culture', *The Politics of the Unpolitical* (London, 1943), p. 55; cited in Robin Kinross, 'Herbert Read's *Art and Industry: a history*', *Journal of Design History*, vol. 1, no. 1 (1988), pp. 35–50.
- 36 *Architectural Review*, May 1935, p. 192.
- 37 H. T. Pledge, 'Beauty in Machinery', *Architectural Review*, March 1932, pp. 85–7.
- 38 See Charlotte and Tim Benton, 'Architecture: contrasts of a decade', in *Thirties British Art and Design Before the War*.
- 39 This is especially true of the series of radio talks put on between 1933 and 1934 (reprinted in *The Listener*), which, for example, pitted Wells Coates against Reginald Blomfield (see Charlotte Benton, *Documents*, for reprinted extracts of a number of these talks).
3. *Paul Greenhalgh: The Struggles within French Furniture 1900–1930*
- 1 See Paul Greenhalgh, *Ephemeral Vistas: Expositions Universelles, Great Exhibitions and World's Fairs, 1851–1939* (Manchester, 1988).
- 2 *Reports of the American Commission on the Paris Universal Exposition 1889*, vol. 2 (of 5) (Washington, 1890).
- 3 *Diplomatic and Consular Report 1906–1907, French Imports from the UK*. Foreign Office unpublished document.
- 4 I took it from an article of that name by Jeffrey Daniels.
- 5 Emile Bayard, *Le Style Moderne* (Paris, 1919).
- 6 Quote from 'Ruhlmann'.
- 7 This illustration came from the *Art et Décoration* of that year, p. 88.
- 8 Quoted from Olmer Pierre, *Le Mobilier Français d'Aujourd'hui* (Paris, 1926).
- 9 Taken from *Rapport Général, Exposition Anglo-Latine, Section Française* (Paris, 1913).
- 10 Louis de Fourcaud, 'Le Bois', from *L'Art à l'Exposition Universelle de 1900* (Paris, 1900).
- 11 *Ibid.*
- 12 Bayard, *Le Style Moderne*.
- 13 Emile Sedeyn, *Le Mobilier* (Paris, 1921).
- 14 *Ibid.*
- 15 Bayard, *Le Style Moderne*.
- 16 *Ibid.*
- 17 'International Exhibition of Modern Decorative and Industrial Art, Paris, 1925', Department of Overseas Trade translation of Regulations and Classification of Exhibits (London, 1924).
- 18 Pierre, *Le Mobilier Français d'Aujourd'hui*.
- 19 See Select Bibliography for further reading.
- 20 The Groutt illustration is taken from the special issue of *Art et Décoration*.
- 21 Edited by Maurice Dufréne.
- 22 See Tim Benton (ed.), *Le Corbusier: Architect of the Century* (London, 1987), especially Charlotte Benton on 'Furniture Design', and the Open University Course authored by them, *History of Architecture and Design 1890–1939*, Units 15–16, 'Design 1920s' (Milton Keynes, 1975).
- 23 Quoted from Charlotte Benton, 'Furniture Design' (see n. 22). In 1925 Le Corbusier and his associates had not fully developed their own designs for furniture, but by 1929 they were able to present a full suite in the recently completed gallery of the Maison La

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