

Art and Design: The Ulm Model



HfG buildings at night, 1960

Part 1. History

Original Retreat from Politics 1946–54

The Hochschule für Gestaltung Ulm (HfG) was established in Southern Germany as a political instrument in the aftermath of the Second World War. It had developed out of a community college, the Volkshochschule (vh), founded by educationalist Inge Scholl and graphic designer Otl Aicher in 1946 with the express purpose of curbing what nationalistic and militaristic tendencies still remained, and making a progressive contribution to the reconstruction of German social life. It was to be named after Scholl's sister and brother, Sophie and Hans, murdered three years earlier by the Nazis for their part in the 'The White Rose' resistance movement. The initial plan was that the school should offer a 'universal education' including the study of politics, journalism, radio and film alongside instruction in art (photography and painting) and its practical application in advertising and industrial design. It was Marxist writer Hans Werner Richter, then an active participant in the school, who was chiefly responsible for the broad scope of the early curriculum which was to encompass to every aspect of culture and thereby direct its formation as a whole according to the principles of democratic socialism.¹

Things changed, however, with the arrival in 1950 of Max Bill, artist, architect, Bauhaus alumnus and president of the Swiss Werkbund.² Bill had been recruited partly in the hope that his international profile would attract badly needed funding. The plan succeeded, but placed the ambitious Bill in a controlling position. He insisted upon a tightening of the curriculum around design subjects and the exclusion of those directly concerned with politics. Bill's project, not entirely harmonious with that of Scholl and Aicher, was to re-establish the Bauhaus. Indeed, it was his intention to take the name, suggesting that the new school be called Hochschule für Gestaltung, the subtitle of the Weimar Bauhaus, with the idea that it would one day assume the full title.³ This is not to say that the objective of social transformation was stripped out. Rather, it was reconceptualised in a more 'spiritual' and less programmatic mode. For Bill, design work should proceed in accordance with the 'spiritual substance' of modern art.⁴ There was no need, as he saw it, for designers to receive instruction in political criticism before their work could be socially formative. Whether in town planning, building, product or graphic design, it would be a direct part of the social environment and as such inevitably exert a powerful influence on its users. As far as Bill was concerned design was necessarily a socially effective and implicitly political activity, rendering political instruction redundant.

Sidelined, Richter left the project. But the matter of the school's relation to politics was not settled with his departure. A bundle of enmeshed issues – the school's relation to the Bauhaus (and thus also to art), the relation of design to social ends, the terms in which these were to be understood and the means through which they might be achieved – were held in unresolved tension throughout the brief period of the school's existence. Indeed, the internal history of the school, up to its premature closure in 1968, was shaped as a sequence of incompatible positions taken up by its leading members on these issues. Ultimately, politics would return as an indispensable element of design training and practice just as the development of events forced the closure of the school.

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Richter was co-founder of *Der Ruf*, a left post-war journal, and Gruppo 47, a literary circle organised in part to overcome post-war restrictions on the publication of radical political views.

2

The Swiss association of artists and designers.

3

Martin Krampen, *The Ulm School of Design: Beginnings of a Project of Unyielding Modernity* (Berlin: Ernst & Sohn, 2003), 85.

4

Max Bill, *Form: A Balance-Sheet of Mid-20th Century Trends in Design* (Basel: Verlag Karl Werner, 1952), unpaginated.

Designer as Artist: the Rectorship of Max Bill 1955–58

For Bill, the mass production of goods decisively shaped culture, and with it the general form of life. According to his concept of ‘good form’, which he had widely promoted through a traveling exhibition under the same title, the beauty of industrially produced objects arose from their particular reflection of function at the level of form. But form, if it was to be beautiful, could not be developed automatically out of an object’s function as a logical entailment. Rather, an object’s beauty stemmed from the particular way form ‘meshes harmoniously’ with purpose.⁵ For this reason, the fine arts, by definition unconstrained by external considerations of use, had an essential contribution to make in equipping the designer with the (artistic) means of giving form to function. The aesthetic aspect of design consisted, then, in the disclosure, in an artistic mode, of facts pertaining to use. The particularity of an object’s beauty stood also as an emblem of *truth*, imparting a universal moral content to Bill’s aesthetics. In this way, objects might serve a higher function beyond their immediate purpose as moral beacons transmitting the values of modesty, honesty and social usefulness. It follows from this that bad design – that is, the production of objects whose form relates only arbitrarily to their purpose or in contradiction to it – would not only be bad from an aesthetic point of view, but also from the point of view of morality.⁶ Predicated on shabby and dishonest values, ugly objects would inevitably propagate those principles amongst their users, thereby harming the social fabric. Consequently, ‘good form’ described an aesthetic standard that was at the same time, for the designer, a moral imperative. Bill announced his

[...] firm belief that bad, incompetent, or commercially minded artists ought never to be allowed to design for mass-produced goods, and this immensely responsible task should be exclusively reserved for those designers whose outstanding skill in craftsmanship is known to be governed by a high sense of moral duty to the community.⁷

Needless to say, Bill’s notion of the social utility of design was based on a naïve political idealism that prioritised thought in an unmediated relation to the world: he took moral principles (honesty, prudence, the self-evidently correct) as immutable givens, whilst society appeared as a pliable substance directly shaped by ideas. The only issue for Bill was whether the ideas were the right ones. The exaggerated agency that Bill was inclined to bestow upon design placed it in a position of exteriority to the social world that would be influenced by it. This was echoed in the designer’s position within the process of industrial production. Whilst it was certainly necessary for the designer to have full command of the relevant technical factors, a good result could not be achieved solely at the level of practical problems, as it might in the work of the engineer. The ‘perfect correspondence [of form] with purpose’ required the designer to move beyond the sphere of technique into that of art. For this reason, the industrial designer was required to be both part of the industrial process and also outside it, capable of directing the process according to principles not found within it.

The necessity that designers be equipped both with a high level of technical understanding and, for the sake of a higher social purpose, a capacity to respond intuitively without recourse to rules, carried definite implications for the training of designers.

⁵ Max Bill, *Beauty from and as function*, lecture given in 1949 (Zürich: Lars Müller Publishers, 2015), 143.

⁶ Bill expressed particular disdain for the developing practice of streamlining, which he described as ‘an epidemic’.

⁷ Max Bill, 147.

Their education would need to be general, providing a comprehensive understanding of design for mass production through the study of ‘theory and practice in all fields of design as well as the basic concepts of statics, mechanics and physics’.⁸ But this had also to be accompanied by the ‘development of personality’, that is, the training of designers as ‘true artists’.⁹ Under Bill’s influence, the curriculum of the HfG in its first years followed the composition of his own aesthetics. Instruction was divided between a range of technical subjects and artistic training in an intuitive mode. At the opening ceremony of the HfG buildings, Bill announced his programme for the school in terms reminiscent of William Morris’ Arts and Crafts movement as the interaction of industry, art and moral probity:

The founders of the school believe art to be the highest expression of human life and therefore their aim is to help in turning life into a work of art. [...] We mean “to wage war on ugliness”, and ugliness can only be combated with what is intrinsically good – “good” because at once beautiful and practical.¹⁰



Max Bill teaching, 1956

⁸ Ibid., 142.

⁹ Ibid., 143.

¹⁰ Max Bill, ‘The Bauhaus Idea from Weimar to Ulm’ in *Architects Year Book 5*, ed. Morton Shand (London, 1953), 29–32.

¹¹ For details of the hostile reception met by Bill’s attempt of form a personal atelier within the school see René Spitz, *The Ulm School of Design: A View Behind the Foreground* (Fellbach: Edition Axel Menges, 2002), 201.

New Developments 1957–60

Bill was an authoritarian, pedagogically disposed towards the development of a personality cult. The paradox of his self-effacing self-regard was at least consistent with his political aesthetics. But whilst Bill’s style of instruction certainly did not sit well with many of his colleagues, it was his concept of the artist-designer and what this entailed for training that proved decisive in his rapid alienation and eventual departure from the school within just three years of its opening.¹¹ Tensions, in particular, arose between Bill and Walter Zeischegg, Otl Aicher and Tomás Maldonado, instructors who shared a different understanding of the requirements of industrialised production, the social effects of new forms of consumption and the implications these held for design education.

Of Bill's numerous critics Maldonado formalised his objection most clearly, and publicly, in an address delivered in 1958 at the Brussels World Fair. The address was subsequently published under the title 'New Developments in Industry and the Training of the Designer' in the Ulm journal, where it occupied 40 of that issue's 44 pages.¹² Maldonado considered Bill's alignment with William Morris to be highly problematic: both treated art as an ameliorating balm and failed to recognise the emancipatory potential of industrial technology. Bill allowed for developments in the conditions of production since the nineteenth century only to the extent that he had added the degeneracy of kitsch to the more immediate soullessness of earlier industrially produced goods. On Maldonado's analysis, Bill could maintain this position only by his failure to acknowledge the transformation that had taken place in the conditions of industrial production and also, crucially, those of consumption. He identified this turn with an event that had placed subsequent industrial production in a 'critical situation', namely, the American economic crisis of the 1930s.¹³ Automated mass production had saturated markets. Henceforth the industrial designer would perform a new role on the side of manufacturing in the creation of product differentiation and the stimulation of false needs. Importantly for Maldonado, this solicitation took place within the broad category of 'applied art'. The question of the form that this art took – 'neo-academic' (Max Bill) or kitsch 'stylism' (Raymond Loewy) – was a matter of indifference. The two were but 'different sides of the same coin: the idea that the aesthetic factor is basic to the creation of the product, i.e. industrial design as art'.¹⁴ Either way, the difference between good and bad design was predicated on their negative differential relation as opposed market positions, not, as Bill had thought, on the positive ground of authentic principles. On Maldonado's understanding of design's implication within a system of production and consumption, Bill's notion of the designer's critical exteriority was negated.

Moreover, the ontological basis of Bill's aesthetics, the natural ground of pure use, was revealed to be illusory. Use, it turned out, was not some timeless element that existed before and outside of the system of exchange; it was the very condition of exchange. And, in the final analysis, the use to which members of the German upper middle classes might put objects of functionalist design, namely social distinction and existential compensation, was not different in kind to that sought by consumers of cars with overly expressed tail fins. Both cases could be regarded equally as socially problematic. What the situation demanded of the industrial designer was a rather more sophisticated and critically reflexive relation to practice, one that was able to address the profession's collusion with the forces of social domination. Such a practice, Maldonado suggested, would require the development of what he called, following Henri Lefebvre, a 'theory of needs'.

Finally, Bill's position was found to be outdated in its failure to grasp the reality of industrial production simply at a technical and operational level. As Maldonado saw it, the standing demand for efficiency had reached a tipping point in the relation between production methods and product form. In the past, working under the imperative of ever increasing efficiency, methods had adapted to produce the required form. But under that regime, a maximal level had been attained. Now it was the product that had to adapt to best fit the most efficient means available for its production.

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Ulm 2: Quarterly bulletin of the Hochschule für Gestaltung, Dr. Hanno Kesting ed. (Ulm: October, 1958): 1–40.

13

Ibid., 29.

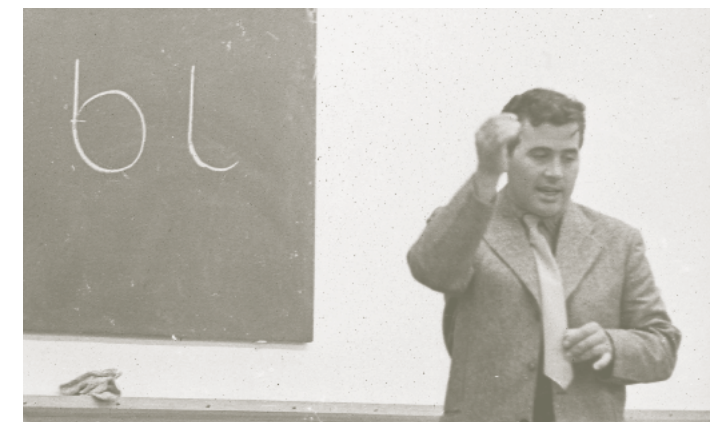
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Ulm 3: Quarterly bulletin of the Hochschule für Gestaltung, Dr. Hanno Kesting ed. (Ulm: January, 1959): 31.

Building form, for example, would be principally determined by methods of prefabrication and techniques of systematic construction. This, combined with new technologies of electronic miniaturisation (the transistor) and the development of computerised data processing, called for a very different mode of relation to the process of production on the part of the designer. No longer directing production by decree according to artistic principles from an external position, it had become necessary for the designer to become fully integrated within the production process. What was needed of the designer was the capacity to grasp the complexity of the production process, in all its aspects. Under these conditions, the designer's success would depend on

*[...] the finesse and precision of his methods of thought and work, on the breadth of his scientific and technical knowledge, as well as on his capacity for interpreting the most secret and most subtle processes of our culture.*¹⁵

Maldonado's corrective of Bill harbored an acknowledged tension that a few years later would express itself again as a crisis in design's claim to social legitimacy. For no account was given of how the designer could be thoroughly integrated within the production process at an operational level and at the same time adopt a critically reflective position on the social process of production.



Otl Aicher teaching, c.1953–54

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Ibid., 40.

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Max Bill, quoted in Paul Betts, *The Authority of Everyday Objects: A Cultural History of West German Industrial Design* (London and Berkeley: University of California Press, 2004), 167

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Ulm 3, 32.

18

Spitz, *The Ulm School of Design: A View Behind the Foreground*, 18.

Scientific Operationalism and Methodolatry 1960–62

Bill left the school on bad terms, accusing it of having suffered a 'technoid degeneration of its once good idea'.¹⁶ On the basis that 'aesthetic considerations have ceased to be a solid conceptual basis for industrial design', Maldonado set out the implications for a design education adequate to the realities of professional practice.¹⁷ Changes were made to the HfG curriculum that reflected the students' preparation for a critically reflective practice of design that Maldonado referred to as 'scientific operationalism'. Subjects and methods of teaching, such as instruction in colour, transposed directly by Bill from the Bauhaus, were dropped. The Architecture Department led by Bill was renamed – first, shorn of its universalist and metaphysical associations, as the Department of Building and following that with greater emphasis on its systematic orientation as Industrialised Building.¹⁸ These years saw the introduction of the Ulm Model, a novel form of design pedagogy that combined formal theoretical and practical

instruction with work in so-called ‘Development Groups’ for industrial clients under the direction of lecturers.¹⁹ A number of new positions were created for instructors of theory in areas taken to be essential for the preparation of designers capable of engaging with the complexities within which industrial design now operated. These new subjects included cybernetics, games theory, mathematical operations analysis and ergonomics, taught, amongst others, by mathematician and physicist Horst Rittel, philosopher and sociologist Hanno Kesting, and the Swiss art historian and political economist Lucius Burckhardt.

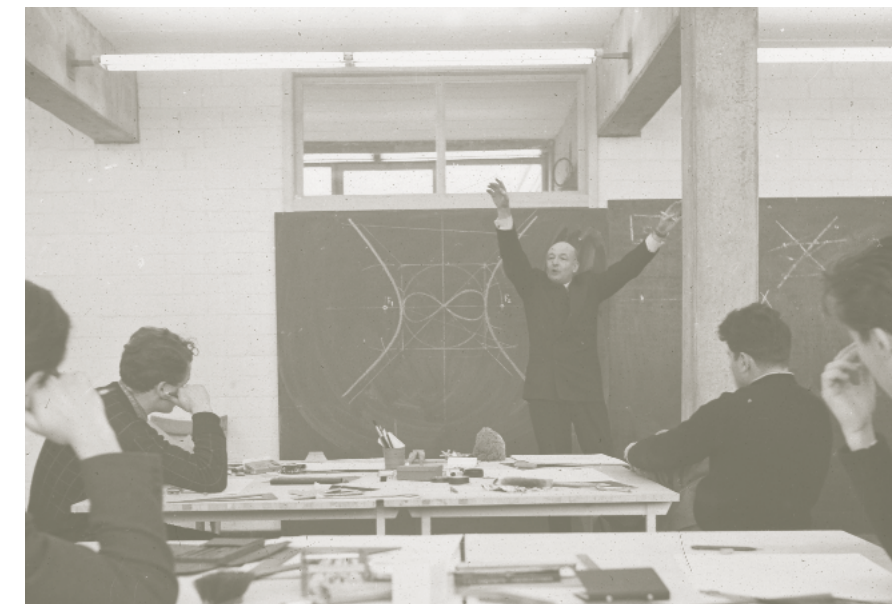
Maldonado had not anticipated that the new appointees would have ideas of their own about the overriding importance of theoretical subjects. Nor did he foresee that once designers were outnumbered by scientists within the school’s management structure, the latter would express their preference for instruction in theoretical subjects over practical training through an aggressive colonisation of the curriculum. Maldonado’s corrective to Bill’s spiritual idealism had sought to rationalise design’s relation to industry and society. The project remained social, within the critical horizon of design’s interaction with industry. But the approach brought by the scientifically oriented theorists went a good deal further. They amplified Maldonado’s insistence upon the complexity of the various communicative and operational systems within which design for industry was positioned, whilst breaking design’s connection to social transformation, the validity of which they did not recognise. In a bid to render their analytic processes fully objective they sought the removal of elements that did not allow to ultimate justification. In this group’s positivistic view, the sphere of values, in particular, lacked rational foundation. Attempts to define ultimate values led into a regress of principles, were circular or based on faith and sheer assertion. In the name of rationality, precision and objectivity the design process was to be purged of all non-rational framing devices, whether these were taken to be normative, ethical or political in kind.

The validity of the principle of scientific objectivity itself, supposedly operative in the ‘value-free’ analyses of semiotics, information theory, cybernetics and games theory, was subject to rather less critical scrutiny. As a result, scientific methodology became something of a fetish for its zealous proponents. Kenneth Frampton describes this as the school’s moment of ‘heuristic determinism’, expressed in the distinctly irrational attitude that would prefer to ‘forego a solution rather than arrive at a synthesis that could not be entirely determined algorithmically’.²⁰ What had begun as rigour descended into what Maldonado referred to disparagingly as ‘methodolatry’.

¹⁹
The industrial commissions the school was able to attract also proved vital for its funding.

²⁰
Kenneth Frampton, ‘The Ideology of a Curriculum’, in *Oppositions* (3), May 1974

Hermann von Baravalle teaching, c.1955–56



Socially Oriented Industrial Design 1963–67

Things reached a crisis point in 1962. The scientific faculty pressed for a theoretical transformation of the very concept of design, severing the practice’s association with aesthetic form-giving, which it considered the result of a category error, and service to values, which it took to be ill-construed and irrational. But the intensely abstract theoreticism that these instructors wished to set up in place of traditional design wasn’t what students had signed up for, and the increasing allocation of teaching hours to exercises that bore no discernable relation to professional practice made them at first confused, then angry. In a special memorandum of 1962 signed by close to half of the first year, students expressed their frustration with the new course the school seemed to have set for itself:

After four months of study, we are deeply disappointed. We do not want to become sociologists, or physiologists, and certainly not structural theoreticians, statisticians, analytical thinkers, or mathematicians, but designers! The lectures only have value for us if the material refers to problems of design or at least is presented in such a way that we ourselves are capable of seeing the connections.²¹

The design-oriented faculty was no less disturbed than the students. Finally moved to act by the dawning realisation that they were faced with a de facto coup, Aicher, Maldonado and Zeischegg succeeded in restoring design in a more practically oriented mode to its previous position only by a rearguard action that involved a re-drafting of the school’s constitution.²²

Writing for the Ulm journal in 1963, after the dust thrown up by this last conflict had settled, Maldonado reflected once more upon the HfG’s relation to the Bauhaus. The deepest line of connection, he suggested, lay in the institutions’ common grasp of the emancipatory potential of industrialised production. For the Bauhaus had ‘tried, though without success, to lay open a humanistic perspective on technical civilization, i.e., to regard the human environment as a ‘concrete field of design activity’.²³

²¹
Quoted in Spitz, *The Ulm School of Design: A View Behind the Foreground*, 259.

²²
For a detailed account of these complex events see: Spitz, 256–279.

²³
Tomás Maldonado, *Ulm 8/9: Quarterly bulletin of the Hochschule für Gestaltung*, Tomás Maldonado ed. (Ulm: September, 1963): 13.

But the Bauhaus had gained access to technology in its productive aspect only by a critique of its prevalent mode of application, namely, the administrative rationalism of industrialised capitalism. Thus, when ‘people tried to perpetuate the oppressive and unsteady order of technical rationalisation, the Bauhaus claimed to provide this rationalisation with social content’.²⁴ Maldonado identified this project with the period of the Bauhaus’ second incarnation under the directorship of Hannes Meyer, following its relocation to Dessau. Although no direct reference was made in this article to earlier disputes, Maldonado’s specification of the Meyer period was clearly pointed. In passing over the earlier expressionist Weimar Bauhaus, Bill’s artistic idealism was again implicitly skewered, whilst the insistence that technical development alone would only serve to strengthen the existing order was directed more archly towards the consequences of the scientists’ blindness to the social conditions of their practice.

The task falling to the HfG, then, was *actually* to provide technical rationalisation with social content, something that Meyer’s Bauhaus had intended but failed to achieve. This aim renewed the question of the agency of industrial design as a factor of social transformation. More specifically, it raised again the question of the relation of industrial design to capitalist exchange. Earlier, Maldonado had disparaged Bill for failing to take into account the social ground of needs. But a full clarification of the role of a critical design practice in distinguishing real from illusory needs, let alone the contribution it had to make towards the latter’s correction was still not forthcoming. Meyer’s insistence that ‘the people’s needs’ be met over the ‘needs of luxury’ offered little guidance to a Germany already in the throes of the ‘Wirtschaftswunder’ – the ‘economic miracle’ – an orgy of consumerism that in the space of few years had propelled its economy to a position of global power.

In an HfG seminar led by Instructor Abraham Moles, subsequently published in *Ulm 19/20*, the question of design’s relation to society was posed in terms of this problem. Scientific Operationalism maintained the contradictory requirements that design be both critically exterior to and operationally integrated within the process of production. Maldonado had assumed that these functions were compatible within a single practice; Moles’ presentation called this into question. He identified a grave inconsistency arising from the practice of functionalism under the conditions of ‘the affluent society’.²⁵ The logic of functionalism is eliminative according to the criterion of utility, he claimed. It applies to the removal of superfluity from an object (expression, ornamentation, redundant function) and in case the object is superfluous, removal of the object itself. Taken as a programme, this reduction to necessity amounts to a ‘philosophy of life: that of scarcity, of the rational application of existing means for clearly defined purposes’.²⁶ But this ‘philosophy of life’ runs into contradiction under the conditions of production for the ‘affluent society’, which for the sake of ever expanding production requires that needs remain unsatisfied. The strategies developed to maintain and extend consumer demand – built in obsolescence and the stimulation of desire for products not otherwise desirable – are in contradiction with the tenets of functionalism. Moreover, the result of applying functionalist methods to production under these conditions is only to exacerbate the problem by contributing to the further ‘rationalising of the mechanism of affluence’.²⁷ Moles ends with

²⁴
Ibid.

²⁵
The term is John Kenneth Galbraith’s; its use reveals the liberalist limits of Moles’ critique, which centers on wealth as a distributional problem as opposed to one of the social relations of its creation. Abraham Moles, ‘Functionalism in Crisis’, in *Ulm 19/20: Quarterly bulletin of the Hochschule für Gestaltung*, Gui Bonsiepe ed. (Ulm: August, 1967): 24.

²⁶
Ibid., 26.

²⁷
Ibid., 25.

a comment on how the HfG might respond: ‘It would be advisable to anticipate the incipient crisis of functionalism within the design institutions and so control the end of the crisis. One should be the subject instead of the object of a crisis’.²⁸ But his suggestion – that design takes more fully into account the social conditions of its practice and, ‘with the help of sociology and the psychology of objects’, begin to fill out the space for a new practice of political design – still lacked a concrete account of how design, as critically reflexive praxis, was to grasp the levers of the situation.

Functionalism in Crisis 1967–68

Moles’ ‘Functionalism in Crisis’ had identified the challenges to the continuation of functionalism, leaving open the question of its fitness to meet them. In that regard, the sense in which the situation constituted a crisis was limited to that of a matter demanding urgent attention. Others, such as the Italian design educators Carlo Argan and Achille Perilli, whose dialogue on ‘The Crisis of Objects’ was published in the same issue of *Ulm* as Moles’ essay, used the term with more precision as applying to a radical break. For them it had become apparent not only that functionalism was constitutively incapable of attaining the social goals it had set for itself, namely human emancipation through the rational coordination of technology, it was just as clear that in its pursuit of those ends it would inevitably bring about the opposite result, namely the development of capitalism into a world system. Functionalism was, therefore, not only practically frustrated but now impossible in principle. The limiting factors were not the tendencies developing as Moles had suggested but simply the established facts of existing production under conditions that Argan and Perilli did not demure from describing as ‘neo-capitalist’. The moment for the heroic declaration of avant-garde programmes had passed, they agreed, surpassed by the total absorption of design within the process of ‘neo-capitalist’ development.

Pro-Rector of the HfG Claude Schnaidt gave the bleakest but also the most useful assessment of the situation in a lecture delivered at the Academy of Fine Arts in Hamburg in 1967 under the title ‘Architecture and Political Commitment’. His theme was the recuperation of the progressive modernist programme by the process of capitalist development that had resulted in an inversion of the former’s aims – ‘the transformation of a great movement into its opposite’.²⁹ ‘Modern architecture’, he claimed, ‘which wanted to play its part in the liberation of mankind by creating a new environment to live in, was transformed into a gigantic enterprise for the degradation of the human habitat’.³⁰ But crucially, recognising that designers inevitably occupy an ambivalent position between the demands of capital and human needs did not, in Schnaidt’s view, sanction an ambivalent attitude. Schnaidt poured scorn on the earlier modernists, Frank Lloyd Wright, Walter Gropius and Le Corbusier amongst them, who were content to project their social utopianism at the level of formal perfection. The apparent radicalism of these gestures condemned the present by holding it up to an ideal future state, yet provided no concrete account of transition between the two. Hitherto the formal reconciliation of industrial civilization with humanism had merely registered aesthetically what could not be achieved socially. It followed from Schnaidt’s analysis that the solution to the problem, first posed by Maldonado and sharpened by Moles,

²⁸
Ibid.

²⁹
Claude Schnaidt, ‘Architecture and Political Commitment’, re-published in *Ulm 19/20*, Ibid., 26.

³⁰
Ibid.

of how design might perform socially under fundamentally antisocial conditions was not to be evolved out of the practice of design under conditions of 'neo-capitalism'. Indeed, the assumption that design held sufficient resources within itself for the task was itself a hallmark of the idealism that accompanied its persistent failure. Properly construed, the question as to whether the situation lent itself to correction was one of politics, not of design at all.

If modern architecture is at a dead-end, it is not through any abuse of rationalism but through ignorance of genuine scientific thought, not through any abuse of social sense, but rather through a lack of concrete social content.³¹

The 'scientific thought' Schnaidt had in mind was not the positivism of Horst Rittel and co. but historical materialism. It demanded a 'total criticism of neo-capitalism'. Such criticism would be total in the sense that it would take for its object the totality of relations and institutions constitutive of capitalism as a social form. Equally, the form of criticism would itself be total in that it would neither be undertaken theoretically, in abstraction from practice, nor as romantic anti-capitalism predicated on 'timeless' values, but as an action coordinated with that of "the under-privileged classes" and aimed at the total transformation of existing society.³² Schnaidt's concept of total criticism, in other words, is one of revolutionary activity. Industrial design's contribution, whatever that might be, would have to be made on the basis of the self-critical recognition of its own practical insufficiency.

From the model of political pedagogy first defined for the school by Hans Werner Richter there had followed a hesitant series of representations of design in its relation to society. In the end, politics was reinstated on the realisation that design was not, in fact, in a position to nominate its mode of relation to the social world. It was in advance bound up with the processes of development it had believed itself to influence. Although Bill's ideal of the artist-designer shaping society from a position of distance had been thoroughly repudiated, the identification of design's actual integration within destructive social processes forced its return to a similar position of exteriority, albeit one more critical than artistic. This conclusion threw the Ulm Model, the HfG's pioneering pedagogical device of combining instruction with practical work for industrial clientele, into doubt. It now transpired that the apparent radicality of fusing educational with industrial activity merely anticipated the tendency of exchange relations to instrumentalise cultural practices. The ideal of the designer's integration within the production process, the mainstay of the HfG's pedagogy, had gained a bitter professional reality in the submission of the designer to the findings of market research at the level of practice, and the structural integration of design into processes of production and reproduction at the level of its social function. Finally, it had to be admitted that

Although there was an instinctive consciousness at the HfG of the relationship of design to society it was not actually embodied in its curriculum in a pondered form. The socio-political elements of the HfG were relegated in dilution to vague speeches about the cultural responsibility of the designer.³³

³¹
Ibid., 29.

³²
Ibid., 27.

³³
The impending closure of the school was announced in *Ulm 21*, hence this text's already retrospective mode. *Ulm 21: Quarterly bulletin of the Hochschule für Gestaltung*, Gui Bonsiepe ed. (Ulm: April, 1968): 14.

If the relation of design to these socio-political elements were now thought out, a more challenging pedagogic model suggested itself: one that would not merely reflect the existing state of things but would contest it by supplying alternatives to practice. For, as HfG Instructor Gui Bonsiepe observed: 'if training is not to become an insignificant appendage of industry, it must create its own models and patterns so as to give future practice its bearings; otherwise training will be merely duplication'.³⁴ The antagonism between politically committed design and the social world had to be expressed directly in its practical and pedagogic forms. Unfortunately, there was to be no opportunity to develop the insight. For the fact that the HfG was fundamentally at odds with the world was already very well understood by those members of the political class charged with allocating funds to it. From the early 1960s, the HfG had faced mounting debts and an increasing dependency on a conservative political class not inclined to support it. In 1968 funding to the school was cut and the HfG closed.³⁵

³⁴
Ibid., 14.

³⁵
Events surrounding the closure of the HfG are complex and hugely convoluted. For a condensed account see: *Ulm Design: The Morality of Objects*, Herbert Lindinger ed., David Britt trans. (Cambridge MA: MIT Press, 1991), 218-221. Spitz's forensic account is more comprehensive: René Spitz, *The Ulm School of Design: A View Behind the Foreground*, 350-397.



Corporate identity for a pharmaceutical company, Ewald Duffner, fourth-year student, 1964–65

36

The group formed in 1948 by Inge Scholl and Otl Aicher, out of which the HfG later developed, was named 'Studio Null' in punning reference to this term.

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My commentary here, and in much that follows, is deeply indebted to the work of Peter Osborne, particularly his concept of modernity as a temporal category and modernism as an associated form of time consciousness. See his book *The Politics of Time: Modernity and Avant-Garde* (London and New York: Verso, 1995), particularly chapters 1, 2, 5. I must also acknowledge the debt to Osborne in my later interpretation of the temporal structure of HfG systems design, which is greatly informed by his analysis of the structure of the contemporary artwork. See his book *Anywhere or Not at All* (London and New York: Verso, 2013), particularly chapters 1,2,7.

38

Presiding over the closure of the HfG in December 1968, the Premier of Baden-Württemberg Hans Filbinger notoriously announced: "We want to make something new, and for this we need to liquidate the old." The statement sums up the HfG's predicament by 1968. What then appeared to Filbinger as 'old' was precisely the future as the distinct form of historical novelty derived from the HfG's criticism of the present. The HfG had not only fallen out of step with the prevailing market function of industrial design but far more dangerous for an institution so dependent upon external support: it had become *unfashionable*.

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Ulm 2, 47.

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Paul Ricoeur, *Lectures on Ideology and Utopia* (New York: Columbia University Press, 1986), 2.

Positive and Negative Aspects of Utopia

For Germany, the devastation of the war, both architectural and moral, had been so complete that the future could only be thought of as starting from an absolute beginning. An epoch seemed to have commenced marked by its radical discontinuity from the one preceding and, for a time, the future appeared undetermined, an open horizon in which anything at all might be (collectively) established. In Germany this condition was expressed in the term 'Stunde Null', or 'Zero Hour'.³⁶ In the event, the German economy developed with unexpected rapidity, and the expansive zone of possibility was soon blocked in by the individuating distractions of consumerism. The HfG's objection to design as mere product differentiation was rooted in the recognition that novelty, as the unending negation of the previously novel, was fundamentally conservative – a restless variation that resulted in something ultimately unchanging. Against these developing conditions the HfG's initial idealist utopianism, its 'instinctive consciousness' of an ideal future social formation, gained increasing definition as a critique of 'neo-capitalist' social relations. The crisis identified by Moles and Schnaidt as a contradiction between the tenets of functionalism and the requirements of the prevailing system could, then, be presented in terms of incompatible concepts of 'the new' corresponding to contradictory orientations towards the future.³⁷ From the general social conditions of 'neo-capitalism' arises a consciousness of the future as the extension (to infinity) of the present. The HfG, however, anticipated a future qualitatively different from things as they then existed.³⁸ Maldonado observed something similar when he had said of the Bauhaus that it 'moved always in the opposite direction [to the prevailing tendency] because it moved towards the future'.³⁹ Or, to put the same thing negatively, the existing order was fundamentally and problematically non-futural. But, contra Moles, the actual crisis of functionalism did not consist formally in an antimony of irreconcilable but seemingly necessary principles – the logic of the market vs. the rigors of functionalism. It consisted practically in the ambivalence of a utopian project sustained by conditions it did not regard as legitimate.

Utopian thought, in general, tends towards ambivalence in its relation to time. In their positive aspect, utopian representations contradict the existing state of things and propose other arrangements on qualitatively new principles. In this constitutive role, insofar as they provide a focal point for practical activity, utopian representations belong to the conditions of possibility of a future transformation of the social world. On their negative side, utopian representations generate conservative effects. In this aspect, they exist as a form of social dream, an image of a reconciled world 'without concern for the real steps necessary for movement in the direction of a new society'.⁴⁰ In offering consolation they make a truncated and brittle existence tolerable, and in so doing prolong it. There are not good and bad, constitutive and conservative utopias. Utopias exist as unstable formations in the field of tension between these poles. In the case of the HfG's functionalism, this temporal ambivalence arose from a contradiction between purpose and circumstance (the crisis of functionalism) and registered, as we shall see, in the distinctive formal mode of its presentation.

Constitutive Utopianism: Braun SK 4

The Braun SK phonosuper of 1956, a combined record player, radio, amplifier and speaker system, was amongst the first designs undertaken by the HfG for the Braun Company, a commission accepted through the school's 'Institute for the Development of Product Form', which from 1958 onwards would formally house the school's various Development Groups. The design was the result of a collaboration involving, on the side of the HfG, Hans Gugelot and Otl Aicher, and Dieter Rams in his first year of appointment at Braun.⁴¹ Gugelot provided the design for the housing of the device, which broke decisively with established assumptions about the appearance of audio equipment. Industrialised warfare had instilled a deep-seated mistrust of technology, reflected in the design of domestic appliances in a great variety of nostalgic forms. This phenomenon took a peculiar turn in the case of audio equipment, which had been forced to conceal its technical character beneath folds of varnished wood and panels of fabric. Often the device was smuggled into the living room embedded within a drinks cabinet or sideboard. In stark contrast to this, the constructive principle of the SK 4 aimed at a complete disclosure of its industrial origin. The housing was formed from one piece of sheet steel, bent four times on a tight radius along a single axis to preserve its flatness, painted white and enclosed on either end by plain panels of red elm veneer. Square slotted openings that served as ventilation grills, exposed the sheet's gauge. Ornamentation was entirely dispensed with. The minor controls, turning knobs, were surface-mounted, whilst the major controls, square press-switches, projected through a letterbox opening. These were rationally set out in an immediately comprehensible operational hierarchy – major controls aligned on the x-axis, minor on the y-axis. Users, for their part, were addressed not as fearful fantasists but as operators whose needs in relation to the object stemmed from their practical engagement with it. All of this proceeded in accordance with functionalist tenets in a mode of material and constructional literalism that radically avoided either figural reference or the arbitrary imposition of external organisational regimes (for example the classical order of symmetry).

The design may be read as utopian for the most obvious reason that it celebrated technology as a human achievement, and posited the conscious organisation of matter, shaping, bending, placing – *gestalt* – as the self-determination of human beings. But it is important also to note the particular rhetorical register in which these claims were presented. For they were, on the face of it, self-evidently false. The existing state of German society in the mid-1950s did not support the assertion that humanity had broken free from the tyranny of nature and established a world fit for itself to live in – far from it. In this regard, the mood of the SK 4's utopian functionalism is subjunctive and in factual contradiction with the existing state of things, referring not to things as they were but as they might be. As Theodor Adorno observed of functionalist architecture:

*Architecture worthy of human beings thinks better of men than they actually are. It views them in the way they could be according to their own productive energies as embodied in technology.*⁴²

There is, then, a displacement within the literalism of functionalism. It purports to refer to objects as they are, to the field of concrete

uses and needs and their associated facts.⁴³ But this rhetorical subterfuge allows the ultimate referent to be projected beyond the horizon of facts and existing social relations. This establishes the SK 4 as the formal inversion of the nostalgic pieces of so-called 'music furniture' that it challenged. Whereas the latter expressed a longing for a time prior to the development of technological society, the former expressed the anticipation of a state of affairs yet to come, one in which human beings were served by their creations rather than dominated by them – a technological utopia of authentic use.



Detail of Braun SK 4, Hans Gugelot, Instructor, Product Design, Otl Aicher, Instructor, Visual Communication, Wilhelm Wagenfeld, and Dieter Rams, Designer at Braun, 1956

⁴³ This follows the same general pattern of movement from facts as we saw previously in Max Bill's aesthetics, the difference here being that facts are fictionalised, and thereby temporalised. Bill took facts as providing the ontological ground, or fundamentally real basis, for a transition to morality.

⁴⁴ Bill's very fine graphic design exerted a powerful influence upon Aicher. A dramatic change can be seen in the latter's work of the 1940s following his introduction to Bill.

The systematic aspect of the SK 4 design, supplied by Aicher, is instructive as a model for understanding the particular passage that occurred within the utopianism of HfG functionalism, between literalism and a certain figuralism. Aicher had been charged with the design of the tuning scale and the setting out of controls. The principle governing the distribution of these elements in his design derives from the modernist tradition of graphic design imported to the HfG by Max Bill, although by the mid-1950s the so-called 'Swiss Style' or 'International Graphic Style' was widely, if not universally, practiced.⁴⁴ Its organising principle is the grid, whose field is populated by blocks of text and image according to a strict hierarchical analysis of content. However, the art, to use a term to which Bill would not have objected, of the use of the grid system lies in the introduction or omission of elements whereby the regime is not so much violated as 'broken', interrupted in such a way that the rules, whilst undercut, are nevertheless maintained. In the SK 4, this moment occurs in the unexpected void that opens beneath the Braun logotype and controls aligned beneath. Unlike the ordering of elements, such intrusions are not governed by the consistent application of rules but are solely a matter of judgment on the part of the designer. And, if successful, the effect of the intervention is not the negation of order but the production of a further and rather less calculable scheme of relations by which the factors of rule and its opposite are maintained in tension.

⁴¹

Wilhelm Wagenfeld also had a hand, supplying the phono module, although he was not party to the design process.

⁴²

Theodor W. Adorno, 'Functionalism Today', in *Rethinking Architecture: a Reader in Cultural Theory*, Neil Leach, ed. (London: Routledge, 1997), 257.

In this way the relation of coordinated elements to the intruding factor figures the relation of normative rule, or law, to freedom, or to put it slightly differently, the successful design presents an emblem of the social character of freedom in its dependence upon normative constraint.

The designer's compositional facility in achieving a compelling formal result is transferred to the utopian representation in which it appears as an apparent self-ordering of elements according to an internal principle. It is not a coincidence that Aicher's design resembles so strongly certain Constructivist paintings of El Lissitzky and Kazimir Malevich, which give a similarly disembodied aerial viewpoint on the coordination of regular geometric forms (industrial elements) drawn into a unity.⁴⁵ In each, the whole that is formed, or whose impending formation is implied, speculatively asserts the industrial reorganisation of social life on rational principles as the result of an inevitable unfolding. The unity of the 'picture' both in its inner relations and as a self-contained form, as a whole, figures the end of history, not as catastrophe but as the reconciliation of antagonism. The figure is an emblem of fulfilled history. Thus, Ulm systems design, which consists precisely in the rational coordination of elements in the formation of functional wholes, shares a subterranean connection with art through its figural utopian dimension. To be clear, however, this is not a relation to the putatively expressive performance of the individual artist, which as the social limitation of freedom is merely ideological. Rather it is a connection to the form of appearance of modern art as a self-sufficient whole, a characteristic that Constructivist artworks amplified to a high degree.

Conservative Utopianism: Braun SK 4 and the D 55 Exhibition Stand

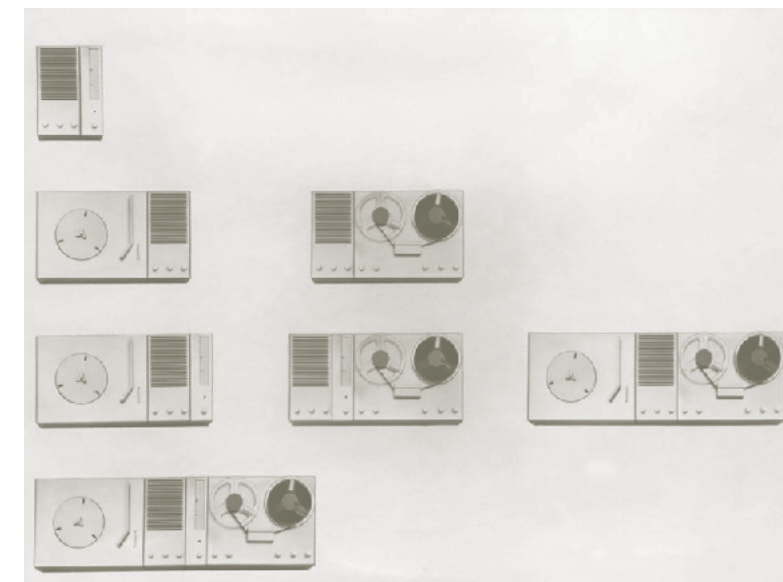
The HfG's utopianism registered contradictions consistent with its entanglement with the social world it sought to correct. This presented itself most immediately in its relation to the market, resulting in the violation of a number of functionalist tenets. Most obvious amongst these was the simple fact that, clarity of operation notwithstanding, the SK 4 design presented no technological advance on its more traditional looking pre-cursor. In other words, it was largely an exercise in modernist styling that located a portion of its significance in a differential relation to other products as a market position. Although the generous scale of the SK 4 was determined in part by the need to allow space within its body for the circulation of air around its valves, it is also possible to detect in the red elm veneered endplates a residual relation to furniture, as though the object were reluctant to step forward as a device on its own account. In this regard, the design's relation to furniture was at odds with its drive towards technological self-evidence. If the SK 4 remained apologetically with one foot in the category of furniture, albeit modernist furniture, it was in part because those that had set the brief doubted consumers' readiness to embrace technology wholeheartedly.⁴⁶

Subsequent research undertaken through Gugelot's Development Group, E 2, for Braun overcame this hesitant relation to technology only to reinstate ambivalence at the higher level of its utopian form. Their work focused on operational metrics, resulting in a complete

⁴⁵ Given space, it would be possible to develop a genealogy linking Aicher's graphic procedures directly to the Constructivist tradition through Bill's connection to the NeuGraphic on the one hand, and his exposure to the influence of Theo Van Doesburg and László Moholy Nagy at the Bauhaus on the other.

⁴⁶ The Braun Company's approach to the HfG in 1954 had been prompted by the findings of a consumer survey published by the Allensbach Institute, which had identified a developing acceptance of the modern style in home furnishings. Braun saw the implications of this finding for the design of domestic audio equipment but could not themselves move beyond the comforting association with furniture.

system of standardised units. Herbert Lindinger, then a student, proposed a system of wall-mountable audio elements consisting of a tuner, amplifier and turntable. 'A manufacture of standardised units of sets for acoustic and visual storage-information transfer in living quarters', he called it.⁴⁷ In certain respects, this system shared a great deal with the SK 4, particularly in the systematic setting out of operational controls, dials and labels and the severely reduced cubic forms of the units themselves. However, Lindinger's programme was less compromising in the expression of its underlying technology and significantly more abstract. For the governing principle of the design was not that of internal formal unity, the gathering up of elements within a whole, but of external functional relation. The units of the system were each nodes within an expandable network of relations. Such a system has no palpable edges. Indeed, it has no form as such. Its principle is the extension of fungible relations, rather than totality. This difference brings to light the phenomenological condition of the constitutive aspect of the SK 4's utopianism. An object may speculatively figure the culmination of history if it appears as a unitary and self-bounded item. In other words, the object should not be too large; it must be fully present, capable of being received as a whole. Lindinger's system suggests something of another order, for its figuration is in principle incomplete. If it figures anything historical, it would be the abstract possibility of infinite extension, a 'bad infinity' to use Hegel's term, of the future rendered in the form of an unending present.



Hi-fi component system, Herbert Lindinger for Braun AG, 1958. Diploma work with the Gugelot Development Group

⁴⁷ This design and the programme it belonged to provided the conceptual blueprint for the heroic modular audio system developed by Braun during the 1960s, following its break with the HfG in 1961.

The indecision within HfG systems design between constitutive and conservative modes of utopianism can be detected even in the inaugural presentation of Braun Design following the modernist revision of the company's visual identity at Ulm. In 1955 a collection of new audio designs were presented at the 1955 Düsseldorf Radio Fair, a trade show housed in a cavernous hall. The Braun exhibition stand, D 55, was designed by Otl Aicher with the assistance of HfG student Hans Conrad. The system consisted in an extensive cellular lattice planned on grid, and responded to the requirements of transportational ease, fast assembly and flexibility, allowing for, in principle, unlimited size and configuration. The interior spaces of the structure, a generically non-specific modern environment,

were sparsely populated with pieces of audio equipment. Considered as a piece of architecture, the D 55 had the appearance of a lightweight pavilion. Considered in its utopian aspect, however, the design reveals a certain tension. As a construction, that is, as an object assembled from parts according to rational plan, the building performs in accordance with the Constructivist aspect of functionalism. This is found in condensed form at the framework's junction points – emphatic emblems of a social unity under industrial conditions. In this aspect, the gridded plan of the interior space of the D 55 defines a region of organisation as a world – completely and internally organised.



Braun D 55, flexible exhibition system, Otl Aicher, Instructor, Visual Communication, assisted by student Hans Conrad, 1955. Photo: Otl Aicher. Courtesy Estate of Otl Aicher.

But the logic of the grid is both intersectional and extensive. Theoretically, the grid spreads out in all directions to infinity; any limitations on its actual extent are contingently imposed. Empirically the difference between the building's presentation as an unending series or as a whole depends on whether one is standing within it or outside. Poignantly, insofar as the D 55 functioned as a trade stand, it was a matter of indifference whether it was received in either of its utopian aspects. Whether infinitely extending or absolutely self-sufficient, the stand's ultimate significance was stamped by its differential relation to the chaotic and rebarbative presentations that otherwise filled the hall, and into which, through this difference, the D 55 was ultimately absorbed. The ambivalence was both contained and determined by its position within capitalist modernity, the cavernous space of the exhibition hall itself, whose vaulted ceiling, in Otl Aicher's documentation of the D 55, can be seen arching above, enclosing all but only partially in view.

Functionalism Today

The practice of functionalism is, of course, no longer possible. As a project it lacked coherence and, in that sense, was always incapable of realising its goals. In the interval separating our present from the febrile atmosphere of the HfG in the 1950s and 60s, conditions have changed sufficiently to render the continuation of even that project impossible. The difficulty identified by Adorno in 1965 as arising from the contradiction between human use and technical instrumentality is no longer a problem for us. Not because it has been resolved but because instrumentality has developed to cover social existence to such an extent that its opposite has dropped from view. The more concrete political expressions of this development can be found in the general absence of critical practices that functionalist design might join to avoid a mere rhetorical posturing. These same conditions find their temporal expression in an inability to think today of a future that is different from the present in any sense other than rather worse. As Frederick Jameson is often quoted as saying, 'It seems easier for us today to imagine the thoroughgoing deterioration of the earth and of nature than the breakdown of late capitalism; and perhaps that is due to some weakness in our imagination'.⁴⁸ Cultural imagination has not found much to sustain it in the events of the last 60 years.⁴⁹ The modernist projects of the earlier part of the century are now commonly presented as a series of stylistic exemplars, stripped of social content. Under such conditions, it would certainly be useful to reach beyond particular authors and their objects to retrieve a more collective and more critical design practice, such as that embarked upon at Ulm. In doing so, however, we should be wary. The 'social daydream' of a nostalgic recollection (and negation) of modernism is only the most obvious risk. For the idea that the HfG should be 'gauged not by what it achieved but what it was prevented from achieving' is also misleading unless the limit of the HfG's social effectiveness is understood to have been self-imposed, and bound up with its own critical operations.⁵⁰ The rehabilitation of modernist projects as resources for the present in general demands critical scrutiny. Out of it might emerge historically reflective practices, quite different in form from those proposed at the HfG, but through which its critical content could still be developed.

Next page:
Touring exhibition about the HfG at the Kornhaus, Ulm, 1963.

48

Frederick Jameson, *The Cultural Turn* (London and New York: Verso, 1998), 50.

49

Amongst the numerous setbacks might be counted the historic failure of communism in Europe and Russia (and its extraordinary development in China), the withdrawal of the postwar settlement, the completion of capitalism as a world system, and accompanying all of this the increasing casualisation and atomisation of labour, its integration with capital through debt, and the accelerated further abstraction of social relation of all kinds through informational technologies, new forms of national introjection and despairing nostalgia.

50

Gui Bonsiepe quoted in *Ulm 21*, 14.



Published on the occasion of the exhibition

The Ulm Model

5 October to 18 December 2016

Curated by Peter Kapos

Peter Kapos wishes to thank those who have shared knowledge and information for the exhibition and this essay; especially [Dr Martin Mäntele](#), Director of HfG-Archiv Ulm, and [Professor René Spitz](#). Thanks are also due to the University of Arts London for its generous and accommodating support.

Publication design: [Cartlidge Levene](#)

Raven Row is: [Alex Sainsbury](#), Director; [Amy Budd](#), Exhibitions Organiser & Deputy Director; [Toby Boundy](#), Head Technician; [Naomi Pearce](#), Gallery Manager; [Elizabeth Stanton](#), Communications and Publications Manager; [Tiia Jaakola](#), Communications Assistant; [Sarah Shattock](#) and [Tim Steer](#), Projects Assistants.

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ISBN 978-0-9930350-3-6

Raven Row
56 Artillery Lane
London E1 7LS
www.ravenrow.org

Raven Row is a registered charity number 1114350 and company limited by guarantee number 5789471

