

The typographic grid designed by Hans Rudolf Bosshard for the letterpress-printed student guide *Form und Farbe* (Form and Colour) published in *Typographische Monatsblätter*, 1968.

Bosshard's book *Der Typographische Raster / The Typographic Grid*, 2000 is the most comprehensive book on the subject.

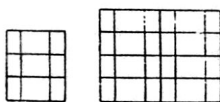
The account opposite, written before the grid had been fetishised by designers, remained unfinished.

THE MODERNIST GRID

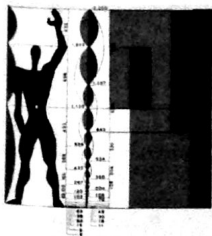
Unpublished, 2004.

Written for

The Designer and the Grid
by Lucienne Roberts and
Julia Thrift



The glazing bars of sliding windows, as drawn by Le Corbusier in 1925. The use of the square as a unit was to recur in the grids devised by Modernist graphic designers. Le Corbusier's Modulor man related dimensions of the human body to the domestic environment and its equipment, so that seat and table heights, for example, were functionally determined. Such a system reduced the choice of possible dimensions, and could have helped rationalise industrial production, with different manufacturers supplying identically sized fittings or equipment.



Printing until the middle of the twentieth century was mainly letterpress, from inked type and photoengravings. The piece of metal which carried the inked letter was rectangular. These rectangles increased in height with the size of the letter in fixed increments, so that moveable, reusable type has been described as a modular, standardised system.

The printing trade had the habit of filling out the lines of type with space between the words so that the reader came to expect a textured, rectangular panel of text on the page. The lines were separated horizontally by fixed amounts, packed out with thin strips of lead – hence leading. The distance between one line and the next appeared as a constant line of white paper. This rectangularity was essential to the mechanical process. (By tightening wedges, the rectangular type and spacing material could be locked in position in a metal frame. This allowed it to be moved from the bench where it was assembled to the bed of a printing press.)

The essential elements of the grid – rectangularity, standardisation and modules, repetition and separation – are all present in pre-Modernist typographic design. The distance between the printed area and the edge of the paper – the margins – were outside this modular system.

In twentieth-century typographic practice, the grid developed as a means of reducing the number of choices that the designer could make about dimensions of columns and illustrations. Instructions to the printer could be simpler by reference to a fixed and limited set of measurements.

'Tell me, are you a Gridnik?' This was the opening question put to me by a distinguished Central European designer. He was inspecting an English art school, and his probing was hostile. The grid was seen as an inhuman weapon used by the young to destroy the graphic whimsy of the old guard.

This was in the early 1960s. Serious young typographers had been taken with the Swiss architect Le Corbusier's Modulor system of proportions. Students were aware of Jan Tschichold's scholarly analyses of page proportions. The Modulor, however, could be applied not only to divisions of the printed sheet, but also to divisions within the print area. This system was one of relationships of size – the determinants of proportion.

The concept of proportion implies aesthetics. In the visual culture of Modernism, aesthetics and function were, ideally, reconciled. The work of stereotype figures of this culture – of the painter Mondrian and the architect Mies – suggests something about the grid. Horizontal and vertical lines divide the painter's canvases and the architect's facades, defining Mondrian's panels of flat colour and Mies' rectangles of glass or cladding. It is an image of rectangularity.

Yet, in relation to the grid in print design, the examples of Mondrian and Mies are deceptive, but at the same time instructive. It is only its rectangularity that connects Mondrian's work with the grid: its relationships, the width of its lines and the areas of its planes are

arrived at intuitively, by experiment. It provided a formal language: its function was purely aesthetic.

Mies' buildings are more relevant to the grid. The design of a modern facade is partly determined by the building's structure. And in addition to their rectangularity, they use repeated dimensions. But the vertical lines that the architect emphasises for aesthetic reasons are a result of structural demands, of making the building stand up. The word 'structure' is often applied loosely in discussing two-dimensional design, when it is referring to solely aesthetic judgements. The structure of a sensible grid is the outcome of the information to be organised within it.

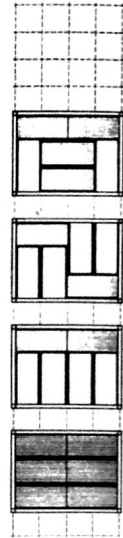
Within the Modern Movement in Europe in the twentieth century, between the two World Wars, progressive architecture and graphic design were closely related. But the concept of standardisation, of the repetition and combination of standard size elements, was a special concern. In building, as in typography, this was a matter of organising machine-produced parts: in architecture of joining those parts, and in printing of fitting them together (individual letters in a word) but more often of separating them (words, lines, columns and pages). In building, there is a structural member or a joint. In print, there is a white space.

Mies was the third director of the Bauhaus. His two predecessors, Walter Gropius and Hannes Meyer, were architects with an interest in industrialised building. Yet the school showed no equivalent concern with the inherent mathematics of typography. And Tschichold, the greatest spokesman and exponent of Modernist typography, in spite of his concern with proportions and type area, seems unaware of horizontal divisions of the type area and indifferent to the problems of organising text and image – apart from posters.

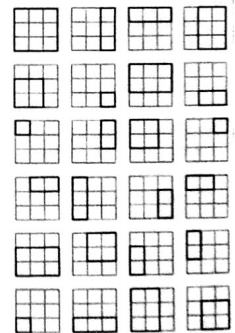
The Bauhaus founder Gropius later demonstrated the principles of the standardisation necessary for prefabricated construction by illustrating the Japanese system of tatami mats – a grid-like system of modular units with a separating space.

The former Bauhaus student and teacher Herbert Bayer produced an early example of the Modernist use of a grid. In a square catalogue, Bayer used two columns and divided the square vertically and horizontally with a space. This already gave the possibilities, sticking strictly to filling the areas provided by a grid, of one, two, three or four square pictures; of one or two horizontal or one or two vertical pictures; and of filling the whole area. Already this gives a decent number of possibilities. Dividing the area twice shows a huge increase in the variety of positions but, because the origin is a square, the proportions of the images are only multiples of squares.

The typographic grid come to be associated with Swiss graphic design. Rightly so. In Switzerland, three influences were at work – influences specifically Swiss. First, three of the most active personalities in design were also 'Concrete' artists, whose work was not only abstract, but had a mathematical and programmatic basis – features it shared with typography. These artist-designers were Max Bill, Richard Paul Lohse and Karl Gerstner.



The possible arrangements of six tatami mats in a Japanese house. Diagram reproduced by Walter Gropius in *Apollo in der Demokratie*, 1967



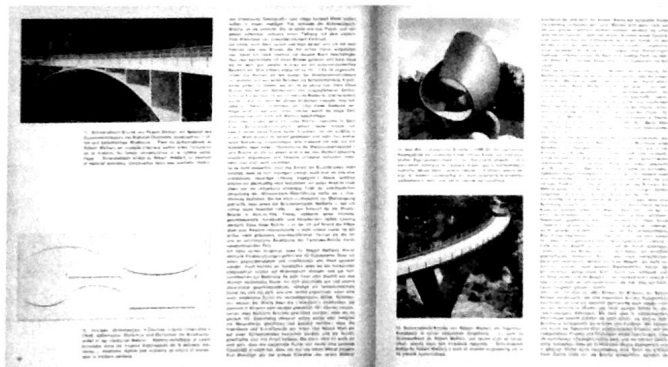
A grid of nine squares forms the basis of various picture sizes, here shown in bold frames. From *Typographie / Typography* by Emil Ruder, 1967

Second, in the Swiss Werkbund, architects were by far the largest professional group. The magazine, *Das Werk*, was the journal not only of the Werkbund, but of the Swiss Architects Association. This contributed to a shared outlook. And Swiss architects had been pressing since the 1920s for the rationalisation and standardisation of the trade catalogues of building components and fittings which formed part of their everyday working lives.

The third factor was the use of three-column text pages, to deal with both Swiss three-language publications (German, French and Italian) and for the documents produced by international organisations with homes in Switzerland (Red Cross, United Nations).

The grid was a concept that emerged only gradually. It seems almost eccentric that Bill, the chief pioneer of the typographical grid, did not realise its value earlier. Bill, as well as being an experienced graphic designer, was an architect and an admirer of Le Corbusier, who had been working on his *Modulor* from 1942 until its publication in 1948. Bill designed several volumes recording Le Corbusier's work. With the first, published in 1939 in a horizontal three-column format, he made no attempt to standardise the sizes of illustration. In the next volume, published in 1946, while there is some consistency in the height of horizontal photographs at the bottom of the page, there is no systematic control. Yet in *The New Architecture*, a book Bill had designed in 1940, the photographs are restricted to the depths and widths prescribed by the grid of 3x3 rectangles. When Bill came to design his own book on the bridge builder Robert Maillart, he reused some of the photoengraved blocks from *The New Architecture*. With a squarer format and a grid of two columns plus a half column, Bill provided himself with an astonishingly flexible system that allowed him to organise photographs in several sizes and proportions with technical drawings, text and captions.

Max Bill wrote and designed *Robert Maillart*, a book on the Swiss bridge designer. This double-page spread shows the two-and-a-half column layout that coped with images of different proportions, 1949.



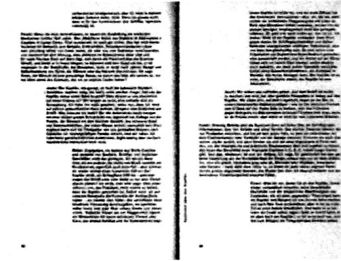
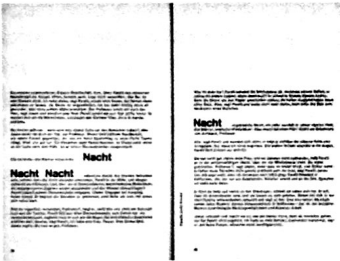
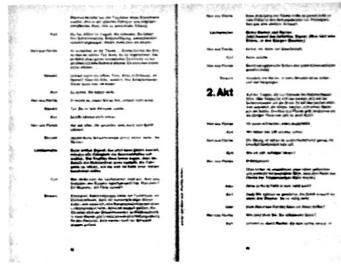
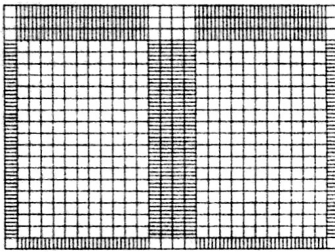
The author of *The New Architecture* was Alfred Roth, editor of *Werk*. In 1955, a young artist-designer working at the Swiss pharmaceutical concern Geigy suggested to Roth that the magazine might publish more on graphic design. The designer was Gerstner, and the result was a special issue that appeared in November 1955. Gerstner reproduced nearly 150 posters, brochures, trademarks, stationery, advertisements and packaging.

It is only when reconstructing the grid, which Gerstner used to cope with the varying proportions of the work reproduced, that its complexity and flexibility can be understood.

A basic grid can give coherence to headlines, text and pictures; it can allow a number of designers to work on the same publication with some freedom, yet with constraints that prevent it from losing its overall graphic identity. Some years after the *Werk* issue, Gerstner produced a famously elaborate grid for the German business magazine *Capital*. But Gerstner's most elaborate use of the grid was for the novel *Schiff nach Europa* (Boat to Europe) in 1959. This demonstrates the origin of the typographical grid in the rectangular modular system of metal type.



A grid to fit captions and images in various proportions: Gerstner's layout of *Werk*, 1955. Below, his grid for the magazine *Capital*, 1962



Pages from *Schiff nach Europa*, a novel by Gerstner's business partner Markus Kutter, 1957. Gerstner designed the book with a grid that allowed for the different forms of writing – tales, dramas, conversations and so on – in the form of an argument that becomes progressively louder, transcribed in Gerstner's typography.