

Designing books

practice and theory

Jost Hochuli, Robin Kinross

Designing books

an introduction to book design, in particular
to book typography

When a book is referred to here, what is meant is the book as an object of use, in the codex form now familiar to us. This definition serves to separate off the concept from, on the one hand, content—the message that is communicated through the medium of the book—and also, on the other hand, from the art object in book form.

Even in this limited sense, the term has more than one meaning. The bookseller, librarian, bookbinder and reader will all understand something a little different by it.

In dealings with printers and bookbinders, the book designer does best to stick to the bookbinder's definition. It is in general use in the printing industry and can be put as follows:

A book consists of a 'block' (a set of pages), which is secured with end-papers in a separately produced binding case: equally so, whether the folded pages of the block are empty or printed, and whether the block is secured by glue or by thread. One could add that paperbacks glued into covers without the use of end-papers are also called books. In English, a distinction between a book and a booklet is often made. A booklet has fewer pages than a book, and will probably be paper-covered rather than case-bound. But one cannot prescribe how, in any particular instance, this distinction should be drawn.

Whether book or booklet, in their many possible variants, the manner of binding and the materials used decisively affect those qualities that go to make up the physical presence of the object.

The question of whether the book is case-bound or not has no bearing on the typography of the thing. Whether the publication is sewn or glued or fan-folded is of more importance; that can influence the size of the back margins.

If for reasons of simplicity, in connection with typographic issues, the term book is used here, then booklets are included too. Then we are using the term as it is often used in ordinary life; e.g. for a 'paperback book'.

The work of the book designer

The book designer is concerned with the following particular matters: format, extent, typography (these three partly determine each other); materials (papers, binding materials); reproduction; printing; finishing.

Here we deal primarily with typography and, within this category, with those matters that are part of what one may call macrotypography.

Micro- or detail-typography is concerned with the following: letterforms; letterspace and the word; word-space and the line; space between lines and the column.

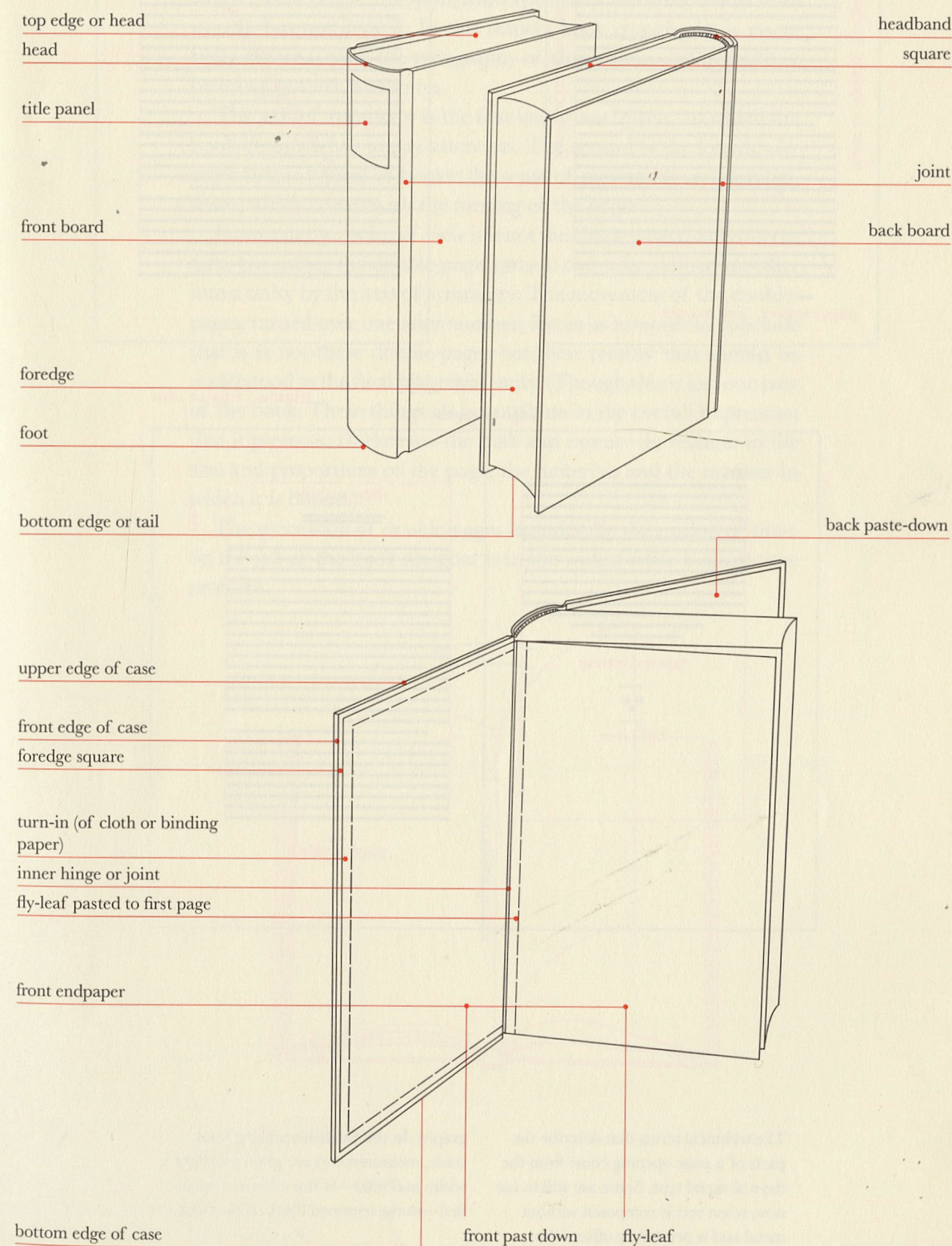
Macrotypography—also called layout—means determining the page format and the size of the text columns and illustrations, also their placing, the organization of the headings and captions, and of all the other typographic elements.

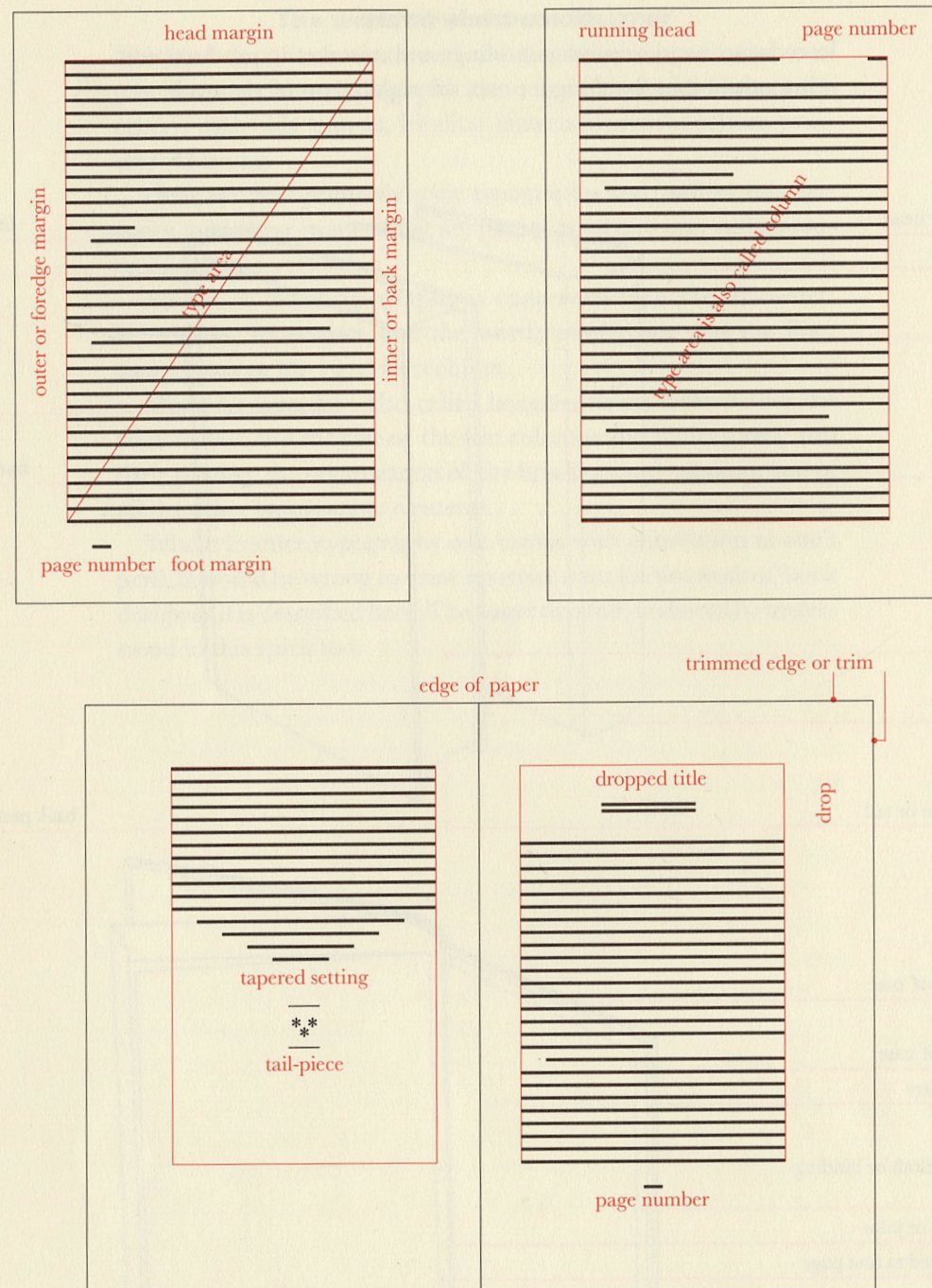
Where in microtypography one breaks with convention at one's peril, it would be wrong to draw up strict rules for the work of book design as it is described here. The pages that follow should be understood in this spirit too.

Micro- or detail-typography. See: Jost Hochuli: Detail in typography.

Some trade terms

In order to avoid misunderstandings and mistakes in production it is important that the designer uses the right terms of the trade.





The technical terms that describe the parts of a page opening come from the days of metal type. Some are still in use now, when text is composed without metal and is printed by offset litho-

graphy. In the English-speaking book trade, measurements are given as height x width and refer—if not otherwise qualified—to the trimmed block of the book.

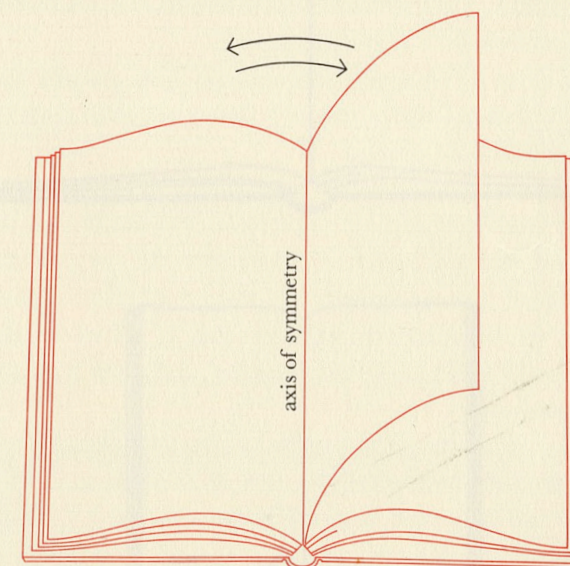
Symmetry, asymmetry and kinetics

When opened, a book shows mirror symmetry. Its axis is the spine, around which the pages are turned. Thus any typographic approach, including an asymmetric one, has always to take account of the symmetry that is inherent in the physical object of a book. The axis of symmetry of the spine is always there; one can certainly work over it, but not deny it. In this respect book typography is essentially different from the typography of single sheets, as in business printing, posters, and so on.

The axis of symmetry is the first important 'given', to which the book designer has to pay attention. The second is the kinetic element that is typical of books: the sense of movement and development, which comes with the turning of the pages.

From a design point of view it is not the single page, that is important, but rather the double-page spread: two pages joined together into a unity by the axis of symmetry. The movement of the double-pages, turned over one after another, forces us however to conclude that it is not these double-pages but their totality that should be understood as the final *typographic* unity. (Though this is just one part of the book. These things also contribute to the overall impression that it presents: thickness—the bulk and extent—in relation to the size and proportions of the page, the materials and the manner in which it is bound.)

The succession of double-pages includes the dimension of time. So the job of the book designer is in the widest sense a space-time problem.

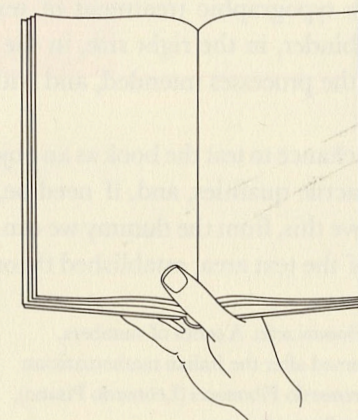
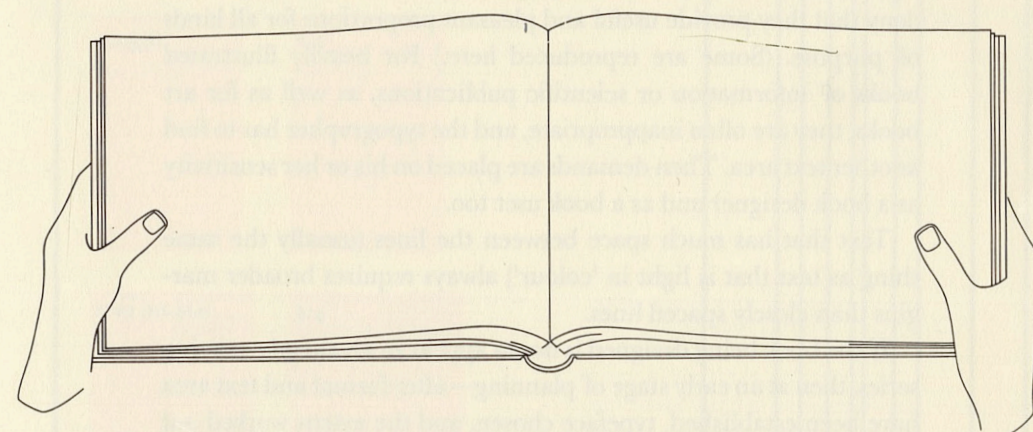
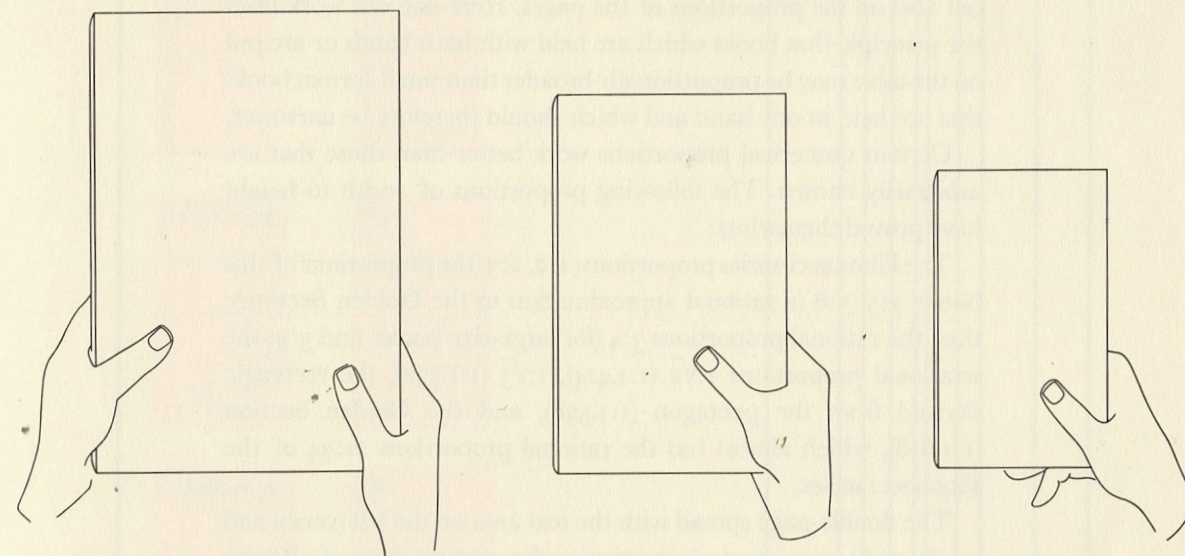


Symmetry. See the explanation in 'Book design as a school of thought', pp. 11 ff.

Format and thickness, hand and eye

The book as a usable object is determined by the human hand and the human eye. This establishes the upper and lower limits with respect to format, thickness (extent) and weight. Within these boundaries the format of a book is determined by its purpose or nature, certain traditions or currents of influence that belong to its time, and not least by paper- and printing-press-formats.

Books of pure text, for extended and continuous reading (generally works of literature), normally pose fewer fundamental problems than do books with illustrations. The first should be slim and light and if possible one should be able to hold them in one hand; the second should show the illustrations at an adequate size, and so require a larger format and other proportions. It is harder to find a reasonable format for those works of science, information and school books, for which verbal and visual information are equally important. Nowadays the illustrations (insofar as they are simply there for reference purposes) often occupy an unnecessary amount of space, at the expense of handleability and readability. Some illustrations do not lose their information value if they are reproduced a bit smaller. This holds true particularly for such things as plans, technical drawings and graphic representations.



Proportions of the book and the double-page spread

Whether a book is felt to be agreeable depends not only on the size, but also on the proportions of the pages. Here one can work from the principle that books which are held with both hands or are put on the table may be proportionally broader than small-format books that are held in one hand and which should therefore be narrower.

Certain numerical proportions work better than those that are arbitrarily chosen. The following proportions of width to height have proved themselves:

The Fibonacci-series proportions: 1:2, 2:3 (the proportions of this book), 3:5, 5:8 (a rational approximation to the Golden Section); then the rational proportions 3:4 (for large-size books) and 5:9; the irrational proportions $1:\sqrt{2}$ (1:1.414), $1:\sqrt{3}$ (1:1.732), the rectangle derived from the pentagon (1:1.538), and the Golden Section (1:1.618), which almost has the rational proportions 21:34 of the Fibonacci series.

The double-page spread with the text area on the left (verso) and on the right (recto) pages is in practice the starting-point of all book typography. The size and placing of the printed areas and the proportions of the margins are important.

The diagrams published by Renner, Rosarivo and Tschichold crop up again and again in the professional literature. One cannot deny that they provide useful and pleasant proportions for all kinds of purpose. (Some are reproduced here.) For heavily illustrated books of information or scientific publications, as well as for art books, they are often inappropriate, and the typographer has to find another text area. Then demands are placed on his or her sensitivity as a book designer and as a book user too.

Text that has much space between the lines (usually the same thing as text that is light in 'colour') always requires broader margins than closely spaced lines.

If the book being designed is not to appear in an already existing series, then at an early stage of planning—after format and text area have been established, typeface chosen, and the extent worked out on the basis of the typographic treatment of text—a dummy is obtained from the binder, in the right size, in the materials envisaged and made by the processes intended, and with the number of pages as calculated.

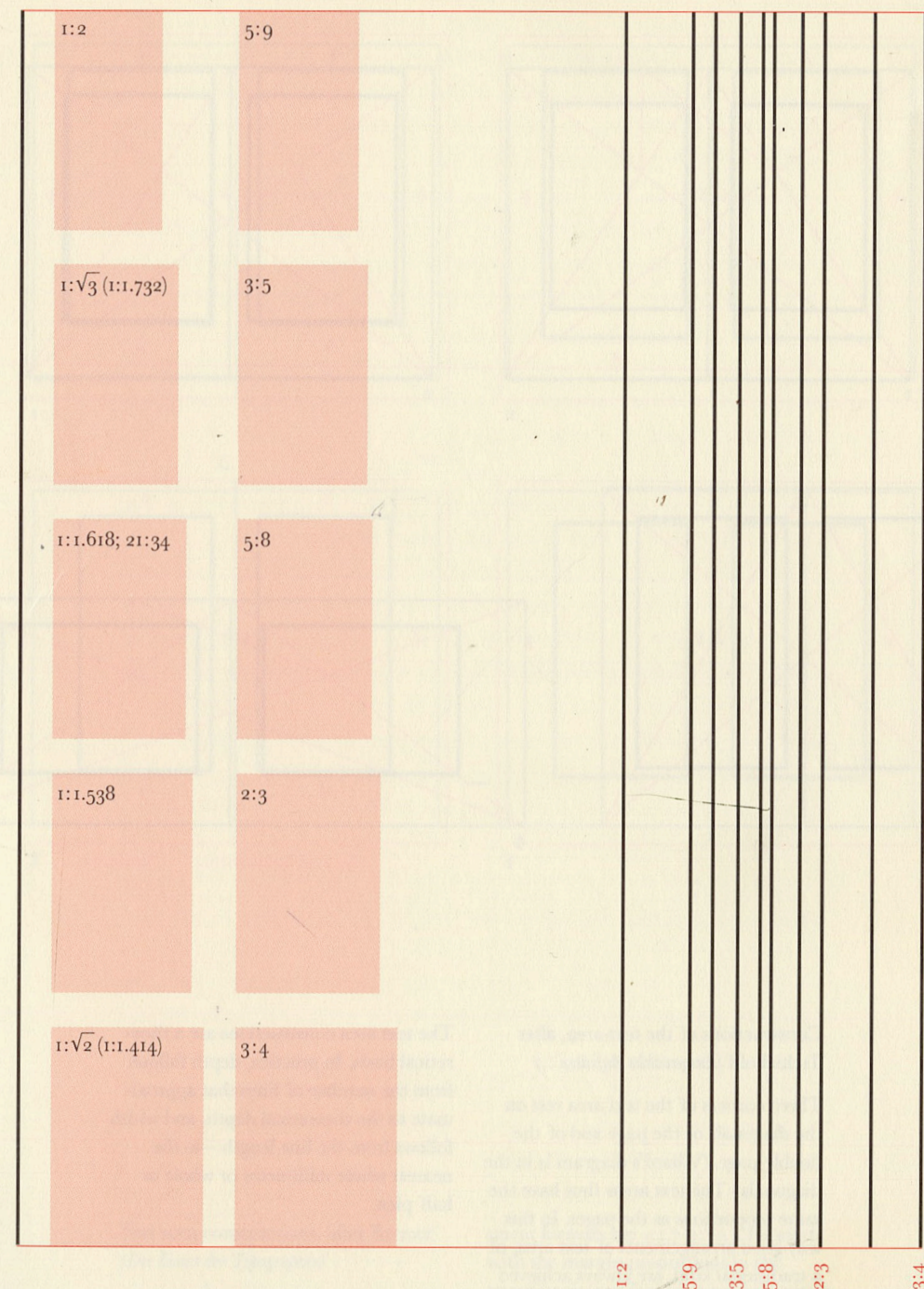
This gives us the chance to test the book as an object, in its dimensions, weight and tactile qualities, and, if need be, to make alterations. Over and above this, from the dummy we can now finally establish the position of the text area, established theoretically on a flat

Fibonacci series. A series of numbers, named after the Italian mathematician Leonardo Fibonacci (Leonardo Pisano), c. 1180 to after 1240.

Renner: *Die Kunst der Typographie*, pp. 45–52.

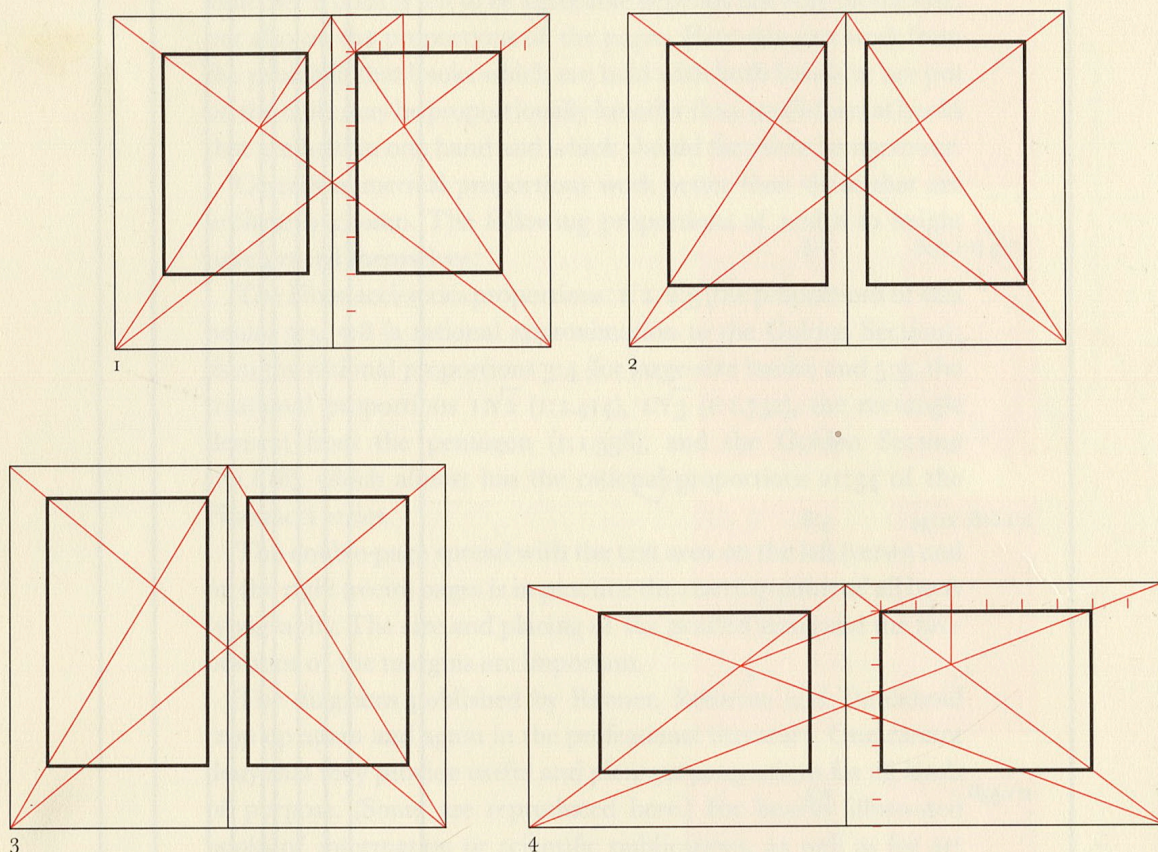
Rosarivo: *Divina proportio typographica*.

Jan Tschichold: *Ausgewählte Aufsätze...*, pp. 45–75.



Tschichold mentions, in addition, the proportion $1:\sqrt{5}$ (*Ausgewählte Aufsätze...*). But he makes no reference to the rational proportion 5:8, which, from the point of view of both practicality and harmony, is more important than the irrational Golden Section. (See the writings of Hans Kayser, for example: *Ein harmonischer Teilungskanon*. Zurich: Occident, 1946. — *Die Harmonie der Welt*. Wien: Lafite, 1968.)

Goldener Schnitt (1:1.618; 21:34)
Rechteck über der Fünfeckseite (1:1.538)



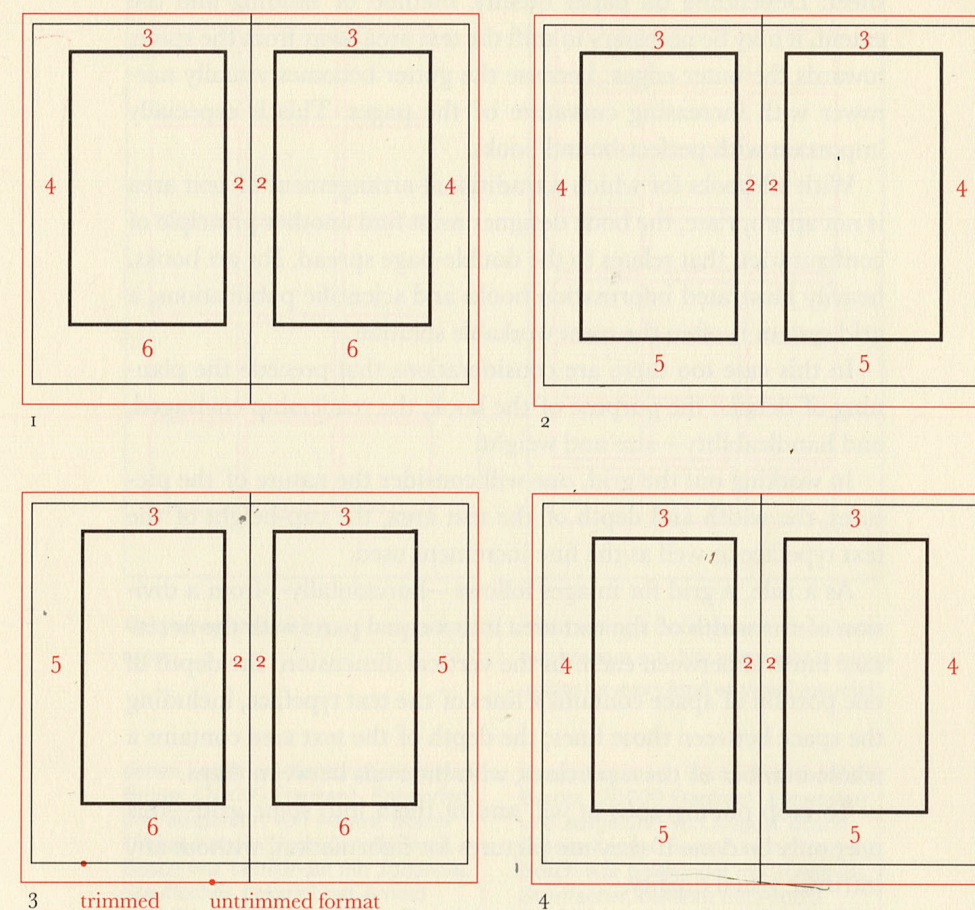
Constructions of the text-area, after Tschichold (*Ausgewählte Aufsätze...*)

Three corners of the text area rest on the diagonals of the page and of the double-page. (Villard's diagram is in the diagonals.) The text areas thus have the same proportions as the pages. In this way good arrangements of text area, of a traditional kind, are always achieved for any given format.

1. Page and text area proportions 2:3. Nine-part division of page depth and width.
2. Same proportions as 1, but tighter margins.
3. Page and text area proportions 2:3, tight margins.
4. The scheme can also be used for landscape formats. Page and text area proportions 4:3, nine-part division of page depth and width.

The text area constructions are a theoretical basis. In practice, depth follows from the number of lines that approximate to the theoretical depth, and width follows from the line length—to the nearest whole millimetre or whole or half pica.

Villard's diagram or Villard's canon, named after the master mason Villard de Honnecourt (active in Picardy around 1230–5), who left the only handbook of architecture to survive from the mediæval period. With Villard's diagram you can, without a measure, divide a distance into as many equal parts as you wish.



Text area constructions, after Renner (*Die Kunst der Typographie*)

1. Margin proportions of the uncut book, 2:3:4:6. Ratio of page area to text area, 8:4:5.
2. Margin proportions 2:3:4:5. Page to text 8:5.
3. Margin proportions 2:3:5:6. Page to text 8:4.
4. Margin proportions 2:3:4:5. Page to text 8:4.

Renner shows four text areas, which are all narrower than the page on which they stand. The page proportions of the

uncut formats are 1:1.7 (1:√3). He starts with the margin proportions in the uncut book, and for the trims he assumes 2–3 mm at the top, 5 mm at each side, and 8 mm at the bottom. The 'normal book' takes the proportions 2:3:4:6, text with generous line-spacing takes 2:3:5:6, and wide formats and text with less line-spacing 2:3:4:5. Renner then considers the back margin to be narrow when the text area occupies five-eighths of the area of a cut book page; normal when it occupies four-and-a-half-eighths; and generous when it occupies four-eighths (half).

sheet. Depending on paper quality, method of binding and the extent, it may be necessary to shift the text area away from the spine, towards the outer edges: because the gutter becomes visually narrower with increasing curvature of the pages. This is especially important with perfect-bound books.

With all books for which a traditional arrangement of text area is not appropriate, the book designer must find another principle of configuration that relates to the double-page spread. For art books, heavily illustrated information books and scientific publications, a grid system is often the most workable solution.

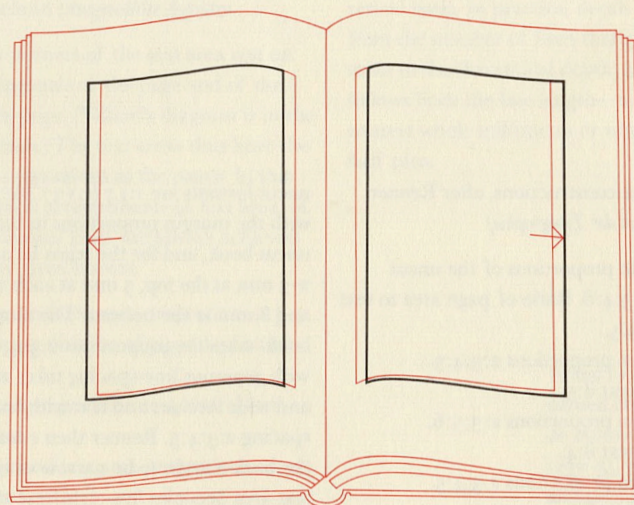
In this case too there are considerations that precede the planning of details: the purpose of the book, the readership envisaged, and handleability—size and weight.

In working out the grid, one will consider the nature of the pictures, the width and depth of the text area, the cap-height of the text typeface as well as the line increment used.

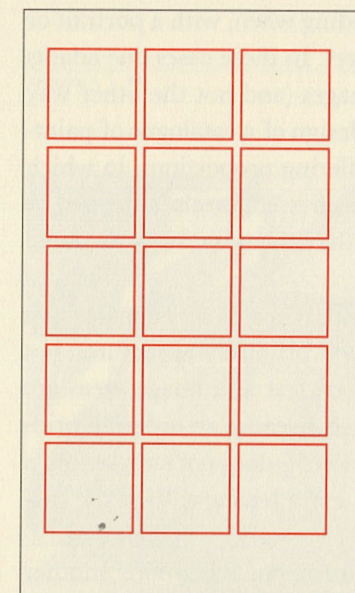
As a rule, a grid for images follows—horizontally—from a division of the width of the text area into x equal parts with the necessary interval between each. In the vertical dimension: the depth of one portion of space contains x lines of the text typeface, including the space between those lines; the depth of the text area contains a whole number of these portions, with intervals between them.

To crop photographs at will and fit them into some grid—this may only be done if they are pictures for information, without any intrinsic visual quality.

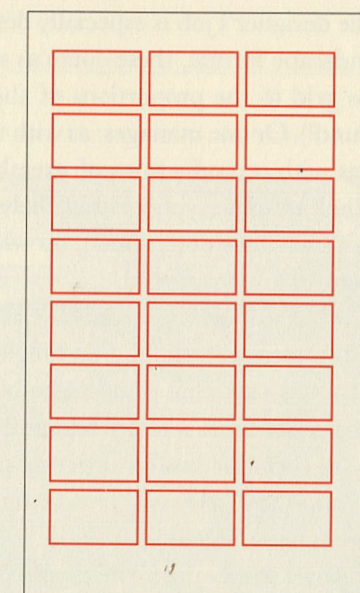
Generally, when a good photographer has taken trouble with the picture, consciously exploiting the format of the negative, and has not cut anything in making the print, then the designer has to respect that. This applies also if the photographer makes prints on standard paper formats, cutting part of the image on the negative.



The placing of the type area, worked out on a flat sheet of paper, is determined finally with the dummy book and with the exact width and depth of the text. With perfect-bound books one should take special care over this.



Grid of squares with 3 x 5 component areas.



Grid with 3 x 8 component areas in the proportions 2:3. Not every grid is appropriate for every kind of visual material!

denen Legat von Kantonsrichter Hans Broder (20 000 Franken). Entworfen und ausgeführt von August Bösch (Ebnat-Kappel/Bern/Zürich/Rom). Bösch war befreundet mit Johannes Stauffacher, bekannt mit Arnold Böcklin und Gottfried Keller. Der Brunnen erzählt von der Freude darüber, daß die Stadt jetzt eigenes und reichlich vorhandenes Wasser besaß. Er ist gespiesen vom Überlauf des eben fertig gewordenen städtischen Wasserwerks am Bodensee. Die auf drei Schilder verteilte Inschrift lautet: «Zur Erinnerung an die Vollendung der Wasserversorgung/Durch Zuführung des Bodenseewassers 1895/Errichtet aus der Broderstiftung und freiwilligen Beiträgen der Bürgerschaft. Alle Figuren haben Beziehung zum Wasser: Zwei Nixen stellen das Bodenseewasser dar, während die dritte, zu den Menschen empor gewendet, das Städtische Trinkwasser symbolisiert. Unten tummeln sich Kinder. «Zwischen den Schalen traktieren Jünglinge Wassertiere, die ihrerseits Wasser ausstrahlen» (Röllin, S. 406). Fisch, Schildkröte und Gans als Reittiere. Alle in Bewegung, alle lebendig. Außerordentlich sorgfältige und von hoher Schönheit zeugende Gestaltung, gegossen in Bronze. Das Ganze ein

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The grid lines align at the top with the ascenders of the text, at the bottom with the descenders.

More satisfying than the arrangement on the left is a grid whose lower borders align with the baseline of the text.