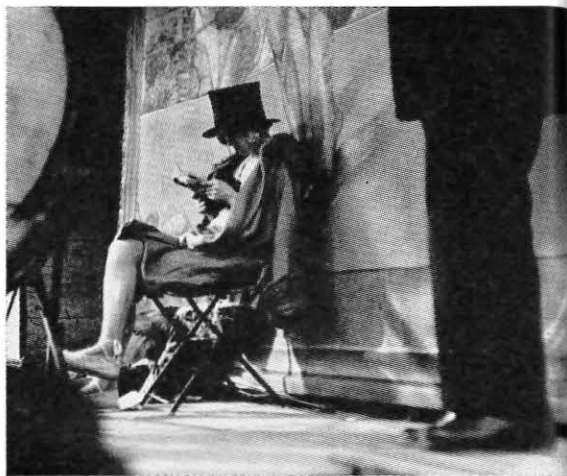




André Kertész' book, *On Reading*, includes 66 illustrations of people reading, taken throughout the world from the 1920s to the present. These four photographs are reproduced from *On Reading* (\$5.95) with the permission of Grossman Publishers, © 1971 by André Kertész.



Design of a New Japanese Typeface: Typos

The Japanese language is a formidable one for those who are concerned with the design and the use of the printed word. Because the Japanese language employs the kanji, the hiragana, and the katakana for writing, the task of designing a new typeface involves the design of over 1,000 characters so that they will blend together when used interchangeably in an almost unlimited number of combinations. The theory and construction methods used to create Typos, a new Japanese typeface, are discussed and illustrated in comparison with existing characters.

Establishment of a System of Letters on a Popular Basis

Among the many questions about Japan that I receive from foreigners, the most difficult to answer concern those on Japanese characters. On most things, I can make quite clear explanations by comparison with similar Western objects. And on such things that are not found in the West—the tea ceremony, the eating of raw fish delicacies, or harakiri—I find it very easy to explain because they do not ask too many questions and frankly accept my explanations. When it comes to Japanese letters, however, they seem to have some preset ideas and ask such pointed questions as “Why do you put up with such a confusing system of letters?” As a result, I have had to tell them about all the arguments on the Japanese writing systems that have been going on in our country since the time of the Emperor Meiji in the latter part of the nineteenth century when Japan first opened her doors to the West. At times I have had to comment on how Japan imported Chinese letters during the Heian Period (800–1200), on the development of the “hiragana” syllabary, on the invention of the “katakana” syllabary, on the use of the “kana” syllabary together with the Chinese characters, etc.¹

In any case, nowhere in the world and at no time in history has there been such a complex and voluminous writing system as in

Editor's note: The various elements of this article have been assembled by the editor from various materials supplied by the Group Typo.

書体のあけぼの
書体のあけぼの
書体のあけぼの

Figure 1. *Left*: In recent years the ordinary pen calligraphic style is the same as the brush style. *Center*: Metal movable type has been used in Japan for less than 100 years. This is Mincho, one of the two most popular contemporary type styles. *Right*: The new Typos face.

あいうえおかきくけ
こさしすせそたちつ
てとなにぬねのはひ

あいうえおかきくけ
こさしすせそたちつ
てとなにぬねのはひ

あいうえおかきくけ
こさしすせそたちつ
てとなにぬねのはひ

Figure 2. Gothic (top) and Mincho (center) have been the only two typefaces in common use in Japan; the new Typos face is at the bottom.

われねすみにむけ
 はなほひとをまた
 せよ

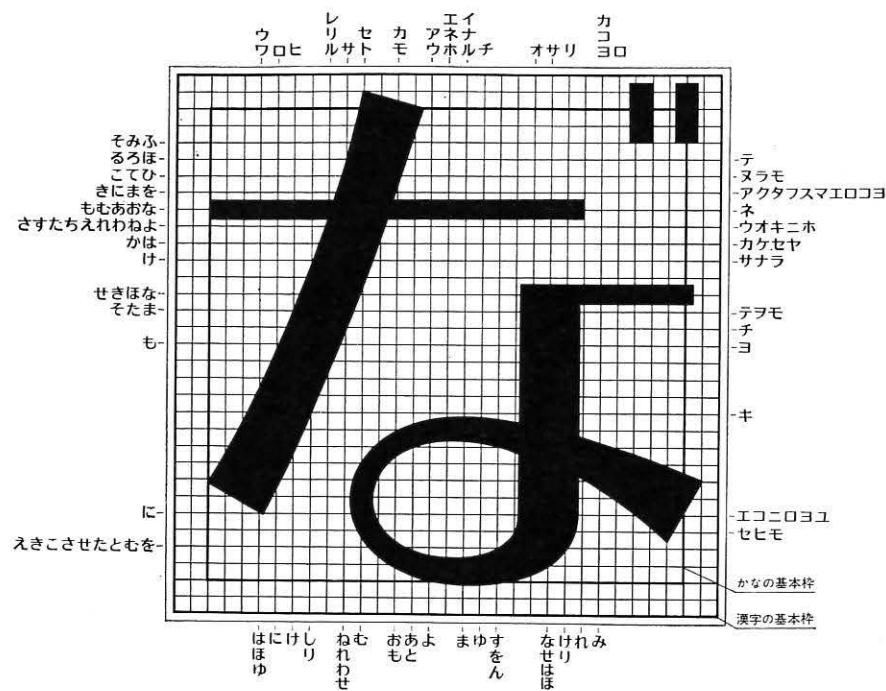


Figure 3. In the initial stages of Typos, triangular serifs were at the ends of lateral lines. This was a mistake because they made the letters resemble the Chinese Kanji characters too closely and were difficult to read.

Japan. As mentioned in the tale of the Tower of Babel, there seemed to have been quite a complicated system of writing in another cultural period, but it was believed to have derived from the very complexity of the language itself. Also, there must have been considerable confusion during the switch over from the Scandinavian rune letters or the German Fraktur letters to the roman letters.

It may be only fitting, therefore, to pay the greatest respect to the advocates of roman letters or kana syllabary who tried to establish a system of phonetic spelling for Japan to replace the Chinese characters. In my younger days I also emulated Dr. Torahiko Terada and wrote my diary in roman letters or wrote short Japanese poems in katakana syllabary. Even today, I believe that a system of writing with the hiragana phonetic syllabary should be taught and enforced in primary and junior high schools and the Chinese characters taught as a special subject in the higher schools of learning. In the same vein, Japanese newspapers should be divided into "soft space" and "hard space" and Chinese characters kept out of the "soft space." The system now in use in Japan of limiting the number of Chinese characters or using only certain designated characters is only a makeshift expediency—a by-product of Japan's postwar quasi-democracy.

I have explained the complexity of Japanese characters at quite some length mainly because I wished to emphasize the complexity and difficulty in Japanese type design, and that this difficulty is the result not of technical or economic factors but of the confusion prevailing in general thinking as to what Japanese characters should be like.

In his congratulatory message on the announcement of Typo, Hiroshi Hara, who is one of my most respected teachers, said, "Even before we take up the problem of style of writing, the problem of Japanese characters stands like a great forbidding wall before us." As

Figure 4. Characters are composed on a module. On a square of 32 vertical and horizontal sections characters are laid out on the module in accordance with the positioning of the elements shown surrounding the graph.



●エレメントによる文字構成

- | | | | |
|-------------|-------------|---------|-----------|
| —+ =エユコヨロキ | —+ +^+L+^=え | —+〇=ひ | +〇+ノ+^+め |
| —+ +^=はほ | —+ +〇+ノ=す | —+し=も | +^+J=ん |
| —+ +^+ノ=み | —+ +〇+^=お | —+ノ+J=力 | ノ+〇=の |
| —+ +^+つ=るね | —+ +J+^=か | +ノ=レ | ノ+^=メソツハク |
| —+ +^+c=をたに | —+し=モ | +〇+ノ=ゆめ | つ+^=う |

Figure 5. Katakana elements and their strokes:

- | | | |
|-------------------|-----------------|--------------|
| Dot | Vertical stroke | |
| Horizontal stroke | Closing stroke | |
| Down stroke | Circular stroke | Turn stroke |
| Up stroke | Downkick stroke | Round stroke |
| Return stroke | Locking stroke | |

a conservative estimate, say we complete the designs for over 1,000 letters, the task of getting the printing companies and type makers to adopt the new letter designs is, as Mr. Hara had pointed out, "hopeless." Nevertheless, I frankly believe that if there had been a little more courage in addition to the wisdom and talents of Mr. Hara, there would undoubtedly have been an improvement in Japanese characters and writing.

In this sense, it is noteworthy that Group Typo was formed by proteges of Mr. Hara and is now making significant progress in reforming Japanese characters—a task that he could not consummate in the old typographical age but which is now favored by the modern advantages of photocomposition. Mr. Hara notes that the "Language Deliberative Council is about to decide on an increase in the number of Chinese characters that are to be used." The point is that any deliberations over characters in our country is meaningless without the participation of type designers. This becomes clear if we consider the emergence of Group Typo alone.

Masaru Katsumi

Good composition in Japanese printing becomes very complicated in working with words composed from three syllabaries which are combined in writing sentences. The variety of these forms and their differences in density require very careful compositors for attractive typographic layouts.

For example, the kanji (pronounced "kan") is composed of 13 dots and lines, while "i" or "n" of kana are composed of only two lines or one dot and one line. Hiragana with its curves and dots, especially the Mincho style, does not always look well with some kanji, and the question of the size and placement of the dots, double dots,

The elements which are appropriate to the image are drawn and then combined into a character; the design of the elements has been kept as simple as possible. Any kana character can be written using appropriate strokes from these 12 elements. In kana the relative frequency of these strokes is as follows: horizontal stroke, 81; vertical stroke, 66 including 24 down strokes; dot, 34; down stroke, 24; up stroke, 7; locking stroke, 6; down kick, 7; circular stroke, 7; round stroke, 2; closing stroke, 9; return stroke, 6 (side returning 3); and turning stroke, 21 (6 left turn and 2 up turn).



Figure 6. Characteristics of Typos. (In each group the first and third lines are Gothic characters; the second and fourth lines are Typos. Light gray areas indicate parts that have been changed.) These unnecessary parts—legacies from the time the letters were written with a brush—have been eliminated and the letters made to look simpler. Variations in the thickness and curve of lines have been reduced as much as possible. Perpendicular bends have been straightened and lateral lines made horizontally straight. The result is more stable, easier-to-read letters. The kana letters have been made larger in comparison with the Chinese characters. As a result, the space between letters as well as to both sides is more uniform. The apostrophe-like mark above the letters have been made straight and perpendicular and placed at a fixed spot in the frame (lower panel of Typos characters).

and the small circular diacritical marks used to achieve the “P” sound seems almost as difficult as the city planning of Metropolitan Tokyo.

Traditionally, Japanese sentences were and to some degree still are, written vertically. In this format the esthetic appearance of the sentence was more pleasing. More Japanese is now being written and printed horizontally. The use of kanji, hiragana, katakana, and occasionally some Western lettering all appearing in the same text in a horizontal format present the typesetter with an extremely complex spacing problem.

Because of the complexity and of the limitations connected with designing typefaces, not many new ones appear. Although there are many designers in Japan who have had a desire to create a typeface of extreme beauty and legibility, many have abandoned the study of this problem. The comparison might be somewhat unfair, in view of the small size of the Western alphabet, but the fact remains that we have not had any typefaces of such renown as Bodoni, Caslon, or Garamond.

Ikko Tanaka

1. The Japanese language makes use of three quite different writing systems. First of all there are some 3,000 separate kanji or characters which were introduced from China. Then there are the two groups of phonetic symbols—hiragana and katakana. Both of these groups contain 48 symbols. Naturally the kanji are the basis of the written language. Up until now there have been only two typefaces in use in Japan. One is the Mincho type (comparable to roman types in Western languages) and the Gothic type (comparable to the sans-serif types). See also the discussion of the writing systems used for the Japanese language in Horie Tomohiko, “Japanese Calligraphy,” *JTR*, I (October 1967), 409-448.