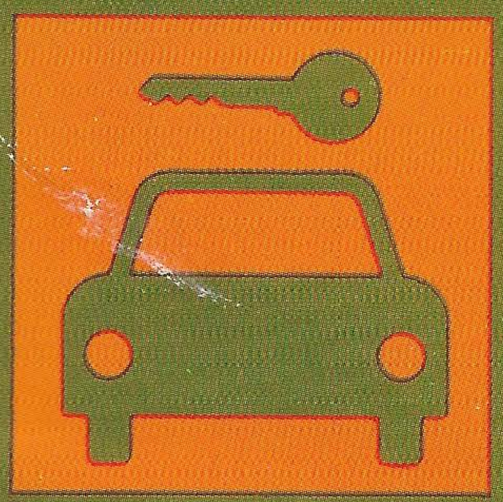
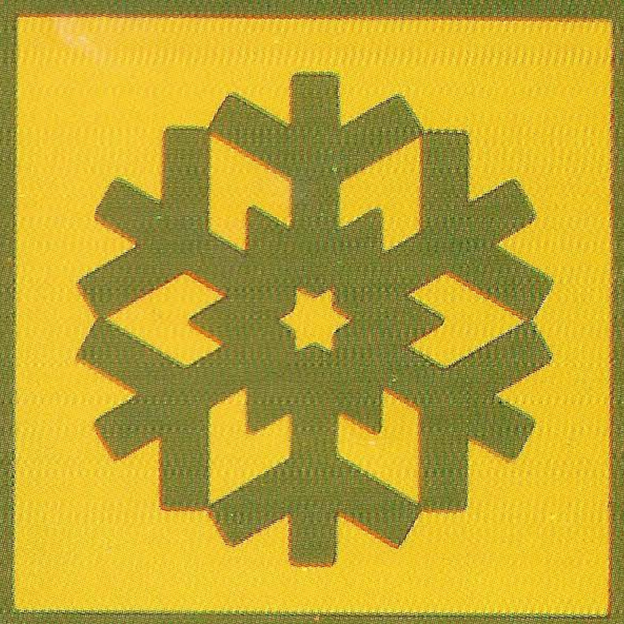
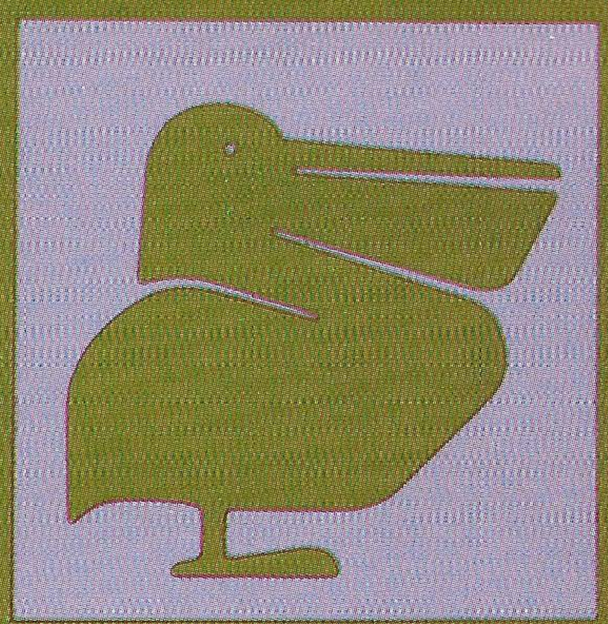




Rudolf Modley
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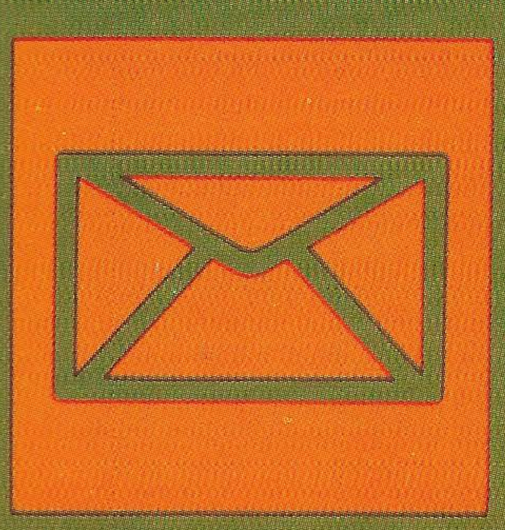
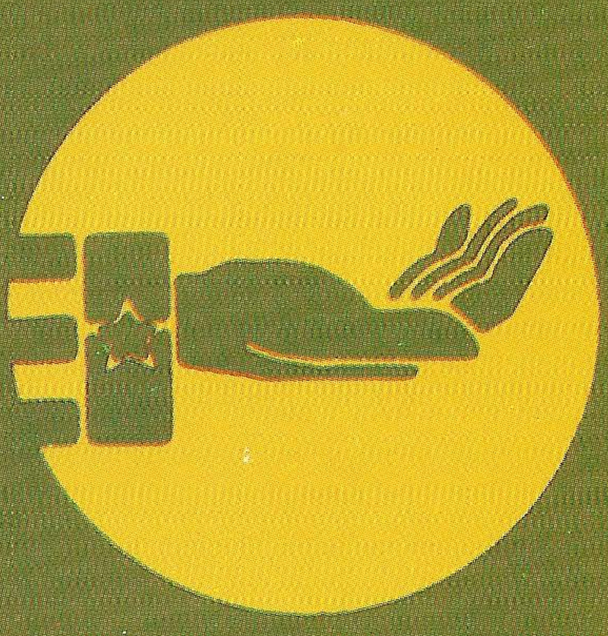
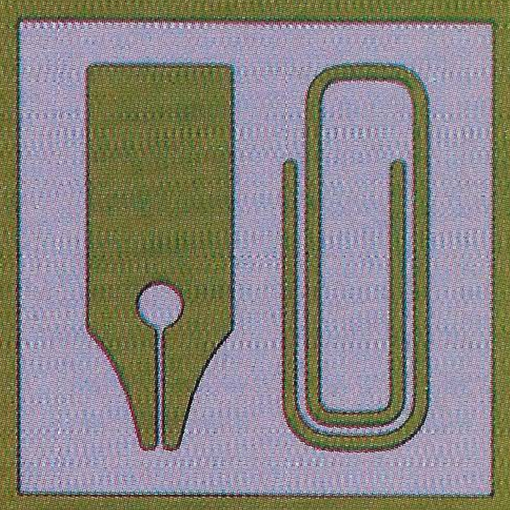
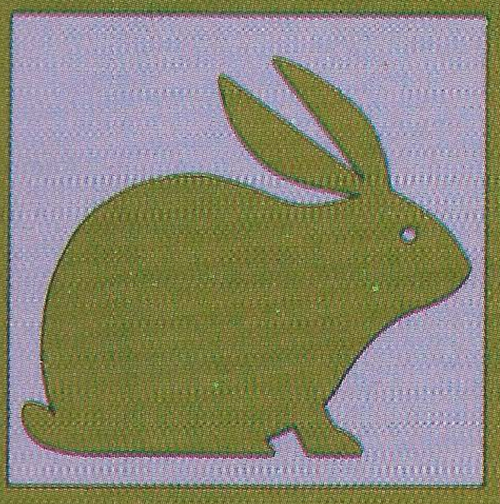
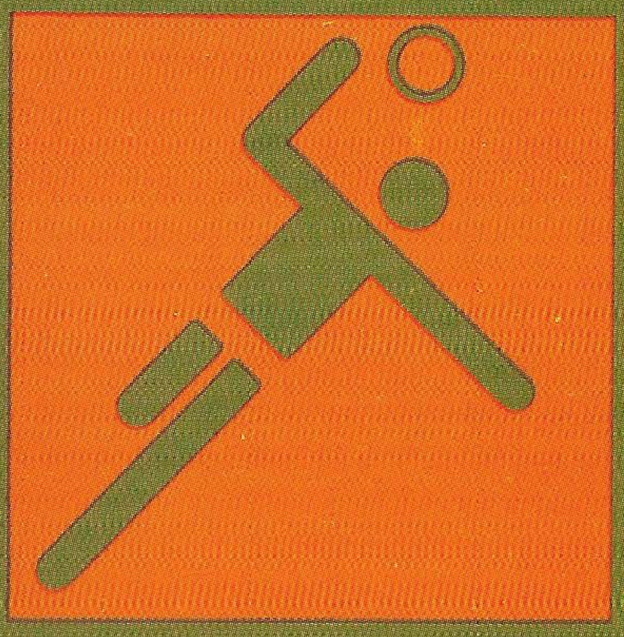
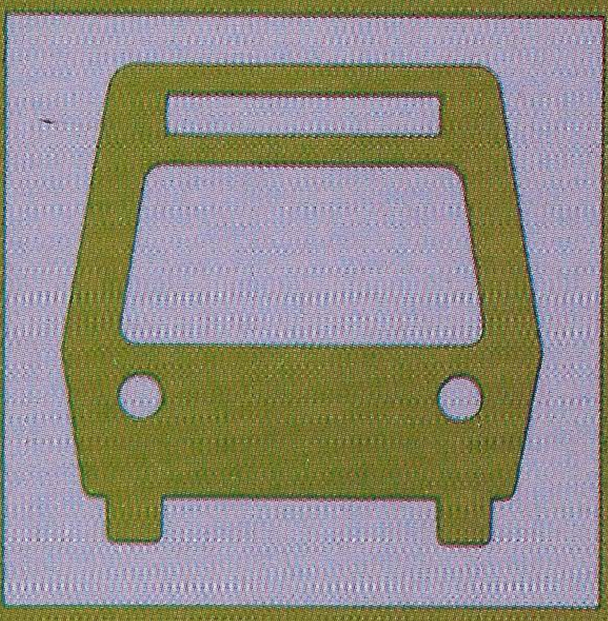
HANDBOOK OF PICTORIAL SYMBOLS

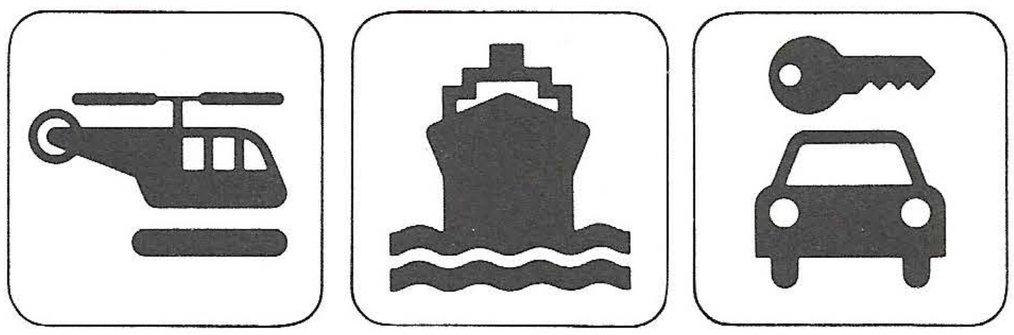
3,250 Examples from International Sources


HANDBOOK OF PICTORIAL SYMBOLS

3,250 EXAMPLES FROM INTERNATIONAL SOURCES



RUDOLF MODLEY

With the assistance of

WILLIAM R. MYERS



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INTRODUCTION TO GRAPHIC SYMBOLS

There are several different kinds of graphic symbols. Many are simple, dramatic, illustrative. Quite often they are pictorial or "iconic," simplified reproductions of objects or concepts (see Figure 1). But graphic symbols do not necessarily have to be pictorial. Some very effective ones can be called "image-related." While somewhat abstract, they retain a certain visual relationship with the object or act which they represent; for instance, double wavy horizontal lines standing

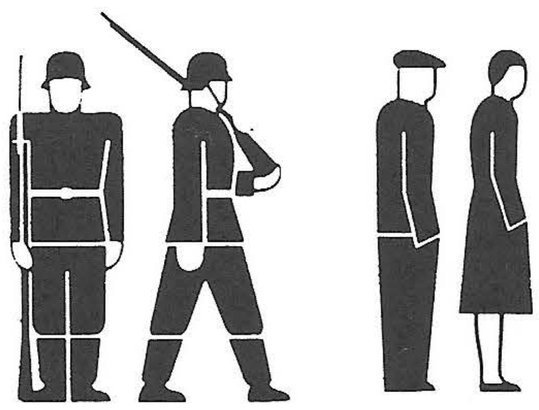

Figure 1. Graphic symbols can be simple and dramatic. (De Delver, Beeldstatistick, *1935, No. 2. Designed by Gerd Arntz.)*

for "water." Finally, there are "abstract" or "arbitrary" symbols, which have no visual relationship to the objects or concepts they represent. To this category belong most of our letters and numerals, the punctuation marks, and mathematical operators, such as the plus and minus signs.

Graphic symbols can do many things for us. Quantitative data can be expressed through the repetition of graphic symbols. Groups of symbols can be arranged to show, for example, simple historical series, somewhat more complicated statistical breakdowns, or the geographical distribution of data (see Figures 2, 3 and 4).

Graphic symbols can also be utilized to show processes. Figures 5 and 6 demonstrate that the pictorial content of such presentations can be minimal—or even completely absent.

The modern techniques of graphic presentation of facts and figures were developed by Otto Neurath in the early 1920's in Vienna. If you learn these techniques, you too can use graphic symbols to set forth complex facts in simplified, more easily understood and more easily remembered form.

In addition to the symbols which can help you *tell your story,* there are others which *talk to you.* Just think what happens when you read these lines. The letters of our alphabet, formed into meaningful words, talk to you. The letters of the alphabet (and the numerals) are so much a part of our daily life that we hardly think of them as graphic symbols. But, of course, they are just that. We do not show them in this volume because they

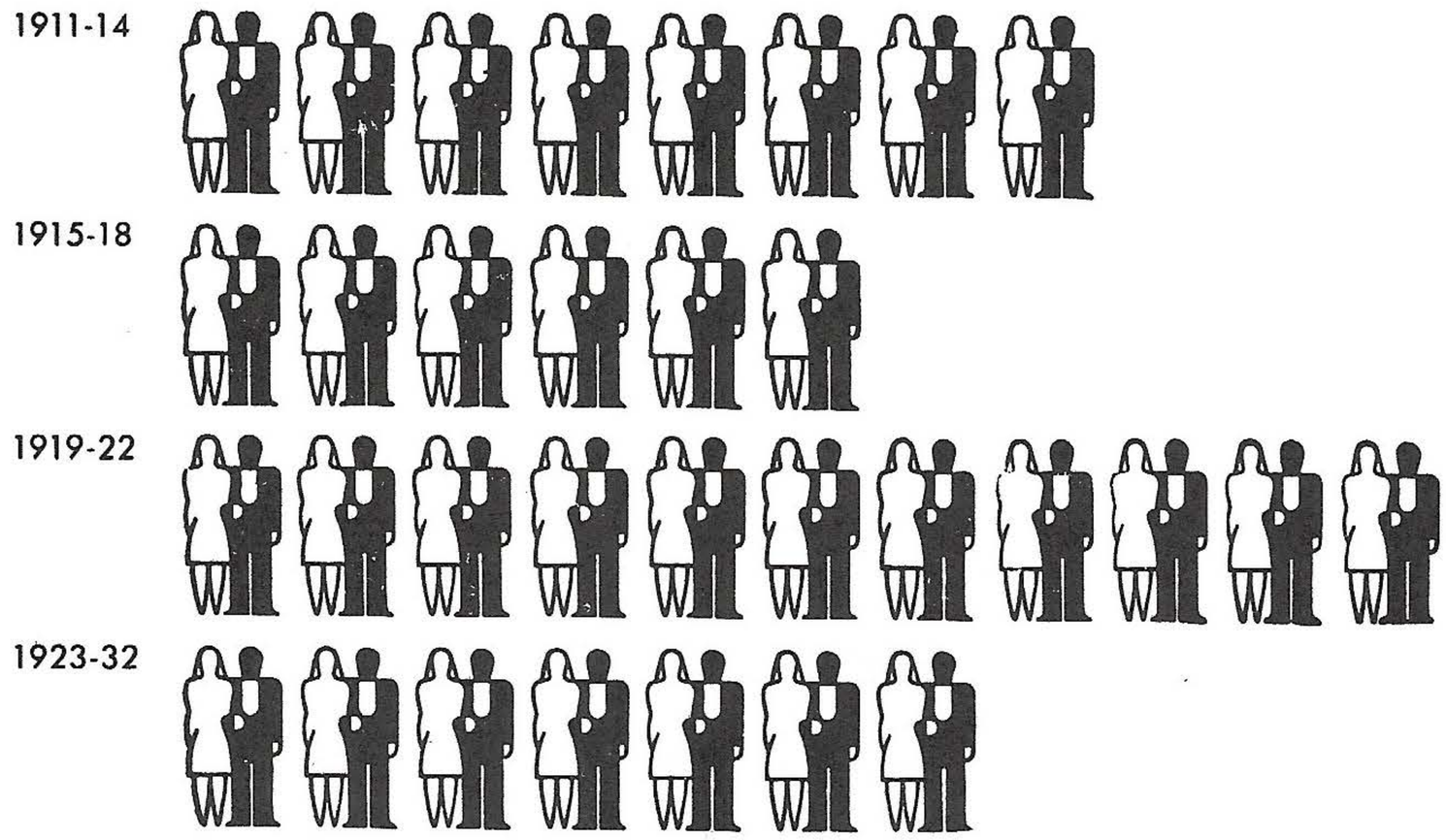

Figure 2. By showing quantities of symbols, statistical facts can be expressed clearly and simply. This chart, in which each symbol represents 2500 marriages, shows the average annual number of marriages in Vienna from 1911 through 1932. (Gesellschafts- und Wirtschaftsmuseum, Vienna. Designed by Gerd Arntz, about 1933.)

are fully accepted and well known to the literate world. But we go into considerable detail about new systems of graphic symbols which are now being developed; some day, we hope, many of these new "public symbols" will be well known to literates and illiterates alike (Figure 7). You have already encountered some of them in your daily life—on highways, at airports, in hospitals, factories, schools and, more and more often, on packages, clothing, appliances, and so forth.

In the largely illiterate pre-modern world, pictorial symbols were the main visual guides for strangers who came into town and needed to find the shops of the baker, the barber, the apothecary—or even the pawnbroker. Today, in spite of increased literacy, many thousands of travelers are, in fact, illiterate in countries whose language they do not know and whose alphabet they may not even be

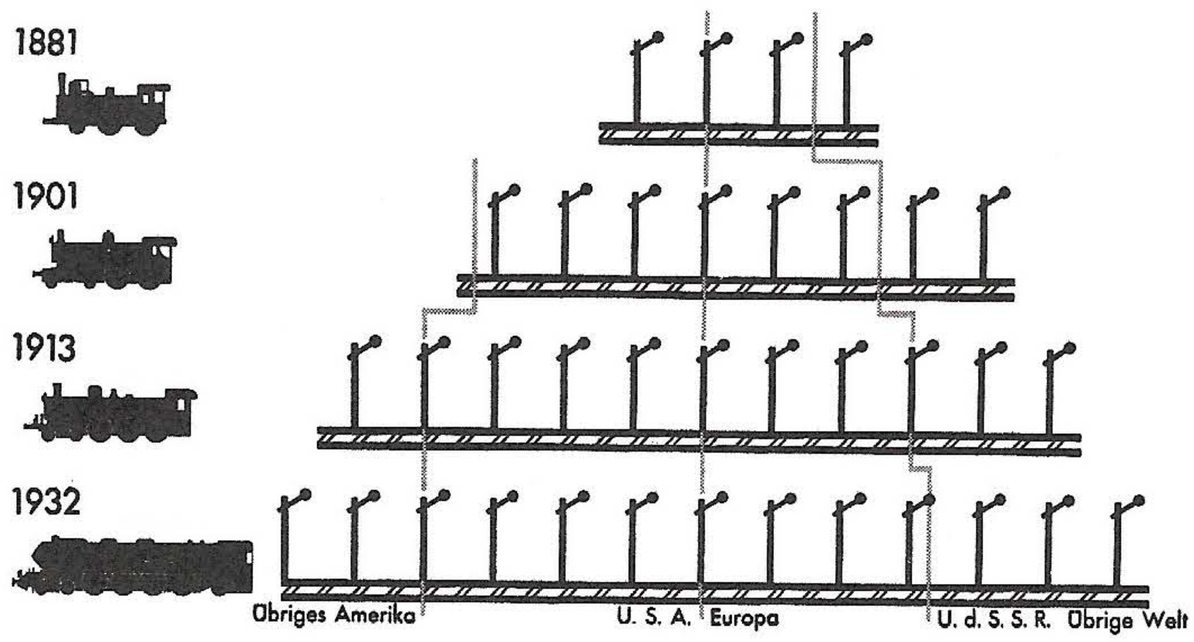

Figure 3. Statistical symbols can be used in combination with "explanatory" graphic symbols. This chart expresses the amount of railroad trackage throughout the world in 1881, 1901, 1913 and 1932. The distance between each "signal" symbol stands for 100,000 kilometers of track. (Gesellschafts- und Wirtschaftsmuseum, Vienna.)

able to decipher. There is, therefore, a need for graphic symbols to lead us to the nearest telephone, to help us claim our baggage or find an elevator.

The number of these public symbols is increasing rapidly. Some are accepted widely, some are not. There are even different symbols representing the same thing, and identical symbols standing for different concepts. Efforts are now underway to standardize the most important symbols into a "new universal language" through international efforts of careful selection, design, testing and education.

THE CONTENT AND ARRANGEMENT OF THIS BOOK

Part One of this volume deals with pictorial symbols, showing over 1300 examples. Part Two (pages 53-137) contains an extensive survey of public symbols.

In Part One you will find symbols representing almost every facet of human existence, from having a baby to committing suicide, and from growing the most nourishing vegetable to perpetrating the most heinous crime. These pictorial symbols have been drawn from two sources. The bulk of them (those on pages 3-45) come from a publication of the Pictograph Corporation of New York, entitled *1000 Pictorial Symbols* (1942, second enlarged edition, 1943). These symbols were designed in the 1930's and early 1940's under the direction of Rudolf Modley by Karl Koehler, Henry Adams Grant, John Carnes and others. In this volume we have followed the arrangement by subject category used in *1000 Pictorial Symbols*. The second source (pages 46-52) is a publication of The Netherlands Foundation for Statistics, entitled *Graphische Voorstellingen* (Graphic Symbols), The Hague, not dated. They constitute a representative selection of the symbols used by the Vienna Social and Economic Museum and its Netherlands successor institutions. Practically all of these symbols were designed under the direction of Otto Neurath by Gerd Arntz. These symbols are randomly arranged, but they are fully indexed.

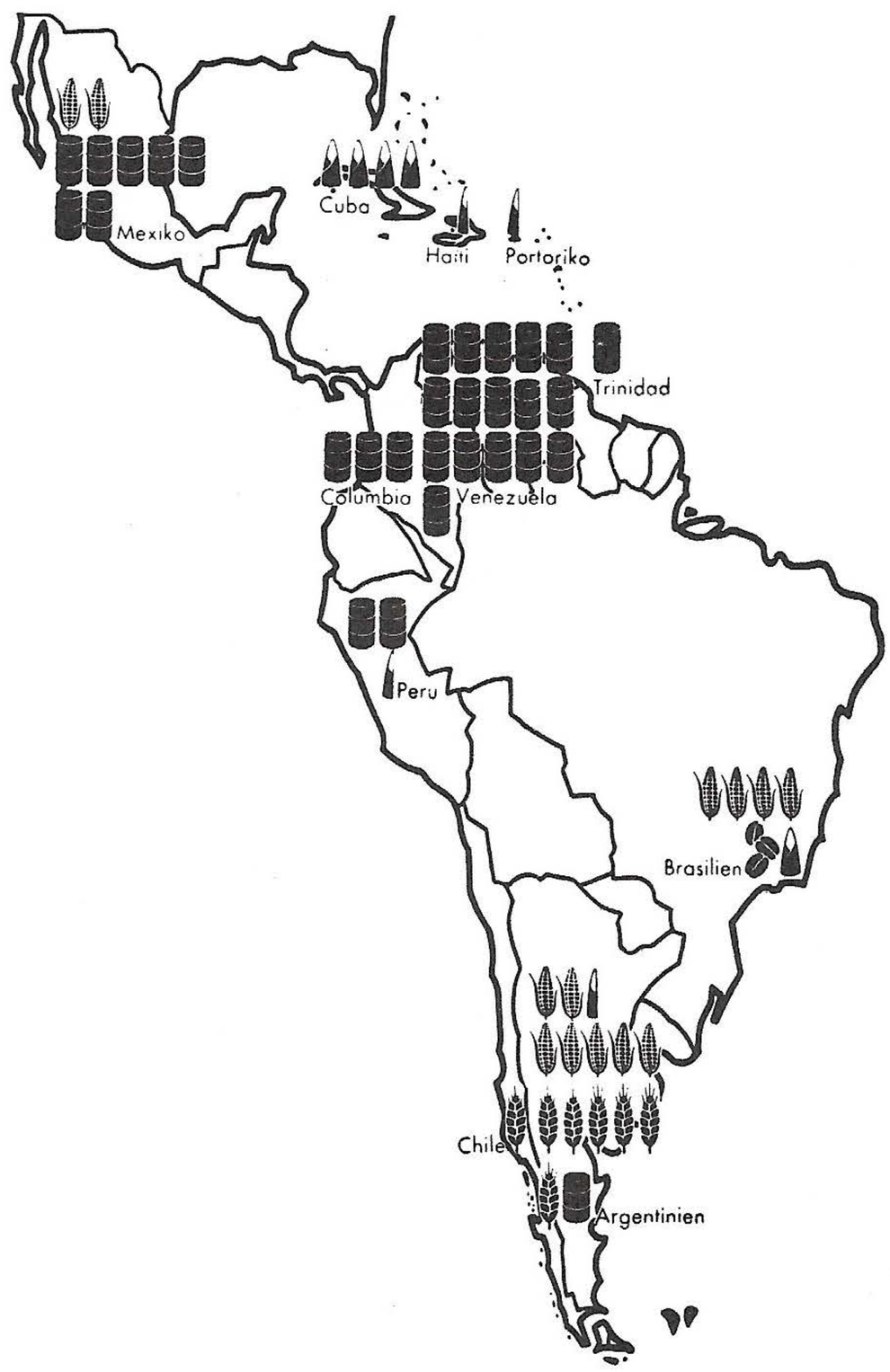

Figure 4. Symbols can be placed on maps to relate quantitative data to appropriate geographical areas. This illustration was prepared to indicate quantities of oil, sugar, grain, corn and coffee exported from various Latin American countries. (De Delver, Beeldstatistick, *1935, No. 2. From an article by Otto Neurath on Isotype.)*

The selection of public symbols in this book (Part Two) comes largely from a 1974 study called *Symbol Signs* prepared by the American Institute of Graphic Arts for the United States Department of Transportation. The first part of this study (reproduced in our Section III, pages 55-74) arranges the symbols according to service or facility: that is, it groups together all the various symbols for telephone, restroom, coffee shop and 32 other basic facilities culled from 25 different symbol systems in use at airports, railroad stations, world's fairs, Olympic games, and so forth.

The second part of the Department of

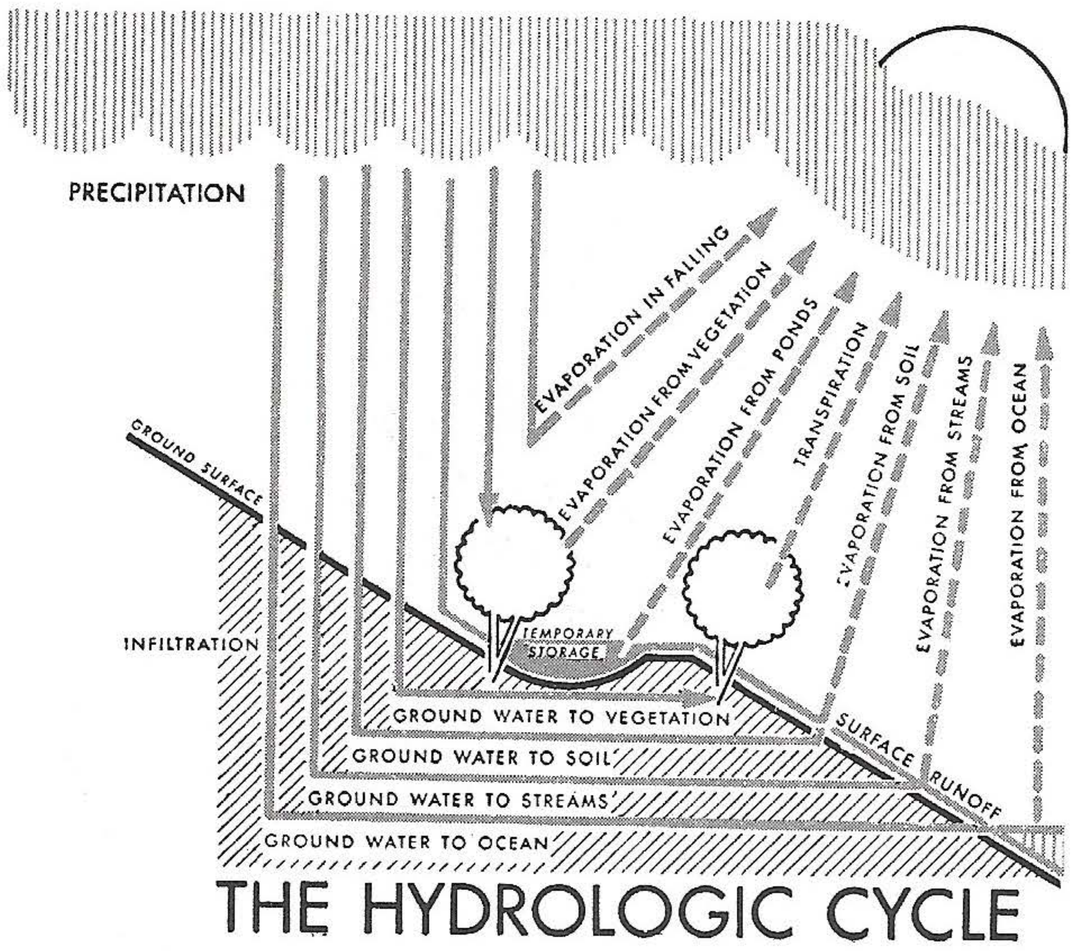

Figure 5. Graphic symbols can also be used to show processes and flows. (From H. S. Person's Little Waters, *U. S. Soil Conservation Service. Government Printing Office, Washington, D.C., 1935-36. Graphics and design by Rudolf Modley and Henry Adams Grant.)*

Transportation study (our Section IV, pages 75-127) displays each of these 25 symbol systems individually. We have been able to supplement this section substantially from additional sources, so that many more than the 35 basic symbols are shown for some of the systems.

Section V of this volume (pages 128-137) contains symbols from four important graphic systems not included in the 1974 Department of Transportation study, plus symbols from two other frequently encountered systems: the Department of Transportation Hazard Labels and the United States Weather Bureau cloud code charts.

Excluded from consideration in this volume are thousands of graphic symbols developed by and designed for specialized and professional groups. Among these are the symbols used by architects, chemists, botanists and other scientific and professional workers. Among them, too, are the symbols of the astrologers and alchemists, the marks used on silver, china and paper, cattle brands, hobo symbols, and so forth. It is common to all these symbols that the circle of their users is limited and that they are, as a rule, arbitrary in their design—that is, that they are often without visual relationship to the objects or concepts which they represent.

Under the leadership of national standards organizations and the International Organization for Standardization in Geneva (ISO), specialized graphic "languages" have been developed for people working in the fields of electrical and electronic engineering, machine tools, plumbing, welding and dozens of other technical fields. The technical organizations themselves publish handbooks of their symbols, and many are also included in *Shepherd's Glossary of Graphic Signs and Symbols* (Dover, 1971). Shepherd excluded from his book the pictographic symbols with which this book is primarily concerned. On the other hand, Henry Dreyfuss, in his *Symbol Sourcebook* (McGraw-Hill, 1972) includes both pictorial and "professional" symbols.

Also outside the scope of this volume are experimental graphic languages, the two best known of which are Blissymbolics (C. K. Bliss, *Semantography,* Sydney, 1965) and LoCos (Yukio Ota, "LoCos," *Graphic Design,* Tokyo, June, 1971), although Jansen's Picto (1958) preceded them. A further, final

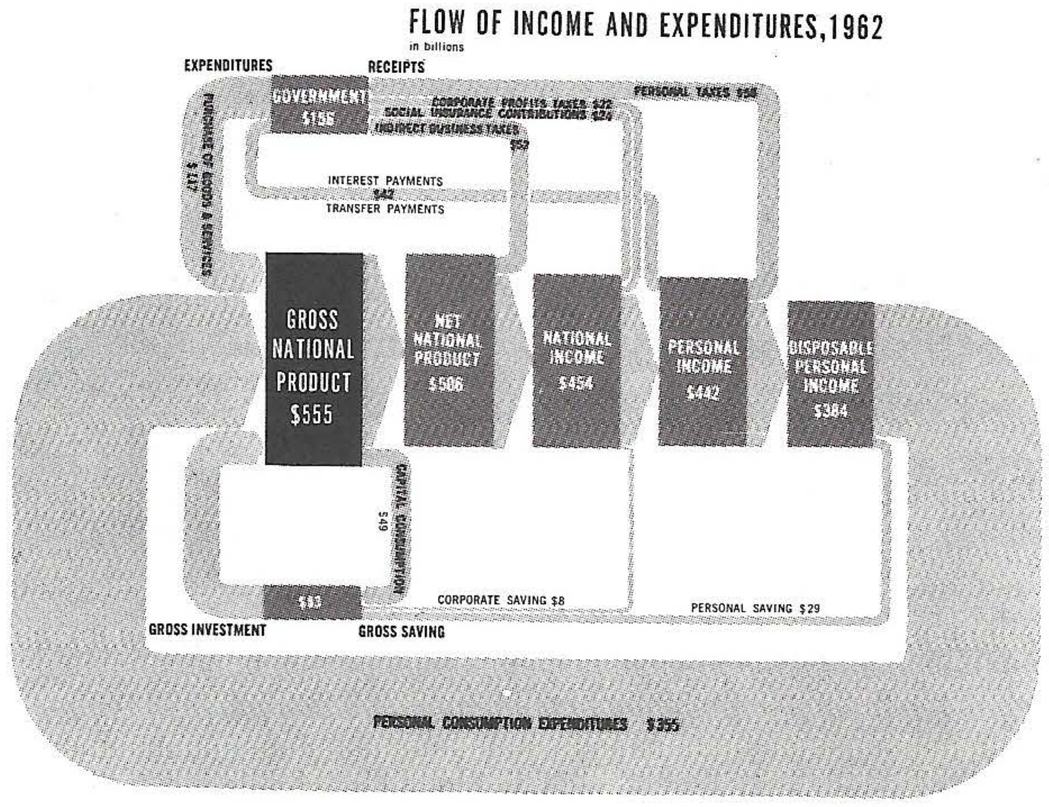

Figure 6. The diagrammatic flow techniques can be applied to simplify complex economic processes. (From U. S. A. and Its Economic Future *by Arnold B. Barach. A Twentieth-Century Fund Survey. Macmillan, New York, 1964. Graphics by Rudolf Modley, design by Stephen Kraft.)*

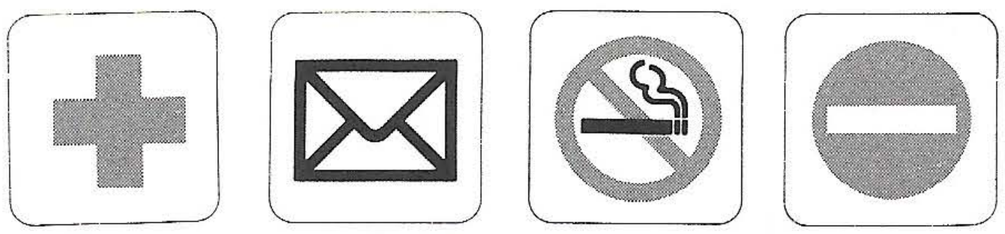

Figure 7. Four symbols that may become part of a new, international picture language, more widely understood and accepted than any alphabet. In this illustration, the gray represents red areas in the actual signs. (From Symbol Signs, *prepared by the American Institute of Graphic Arts for the U. S. Department of Transportation, 1974, under the direction of William R. Myers. Designed by Cook and Shanosky.)*

exclusion is the subject of trademarks, for although they are sometimes based on pictorial symbols, trademarks are private rather than public in their design and application and, moreover, are generally not pictorially usable.

BRIEF HISTORY OF GRAPHIC SYMBOLS

The public symbols in use today have had many forerunners. Examples would be the symbols used along ancient roadways and the rather numerous early railroad traffic-control devices. Of course, the development of the automobile gave rise to many new symbols. One of the first modern-day road sign systems was that devised by the Italian Touring Club in 1895. By 1900 a Congress of the International League of Touring Organizations in Paris was considering proposals for standardization of road signage. In 1909 nine European governments agreed on the use of the four pictorial symbols shown in Figure 8 to indicate "bump," "curve," "intersection," and "grade-level railroad crossing." The intensive work on international road signs that took place between 1926 and 1949 eventually led to the development of the European Road Signs included in this volume (pages 131-134). The United States developed its own road signage system, which was also adopted by several other nations. Recently, however, the United States has begun to introduce the standard pictographic international symbols in general use in Europe.

The two men who have done most for the rebirth of interest in the development of attractive and effective symbols and their logical applications are Otto Neurath, an Austrian, and Katzumie Masaru, a Japanese. Although both pictographs and public symbols have been used since early times, we may well call Otto Neurath the Father of Pictography and Katzumie Masaru the major force behind the development of international pictorial and public symbology.

Neurath developed graphic symbols because of his interest in education and economics. The highlights of his career were the creation of the Social and Economic Museum in Vienna (1924), the publication of *Gesellschaft und Wirtschaft* (Leipzig, 1930) and the creation of the ISOTYPE system. We have already seen some of his work in Figures 1-4. Katzumie, as art director of the Tokyo Olympics, released for use in future Olympic Games the symbols his staff of 30 young designers created in 1960. He has also been an influential advocate of symbols in articles in *Graphic Design* magazine.

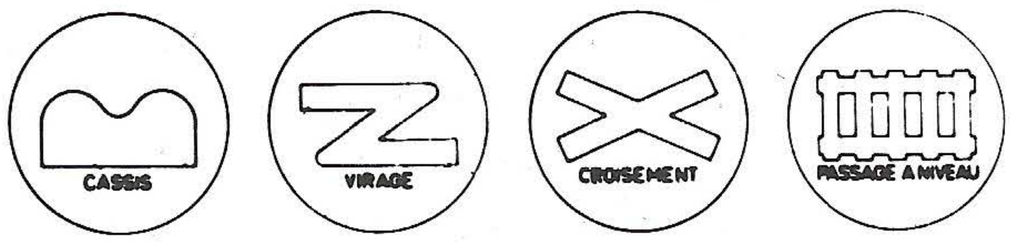

Figure 8. The earliest international road danger signs, adopted in 1909. They indicate "bump," "curve," "intersection" and "grade-level railroad crossing."

ON DEVELOPING NEW PICTOGRAPHS AND PUBLIC SYMBOLS

To would-be pictographers, we repeat the advice we gave readers of the first edition of *1000 Pictorial Symbols* in 1942. Do not think that a set of these symbols and a mass of facts is all you need to make an effective pictograph. It is not. You will have to:

—analyze your facts, pick out the essential ones, drop those which are not needed.

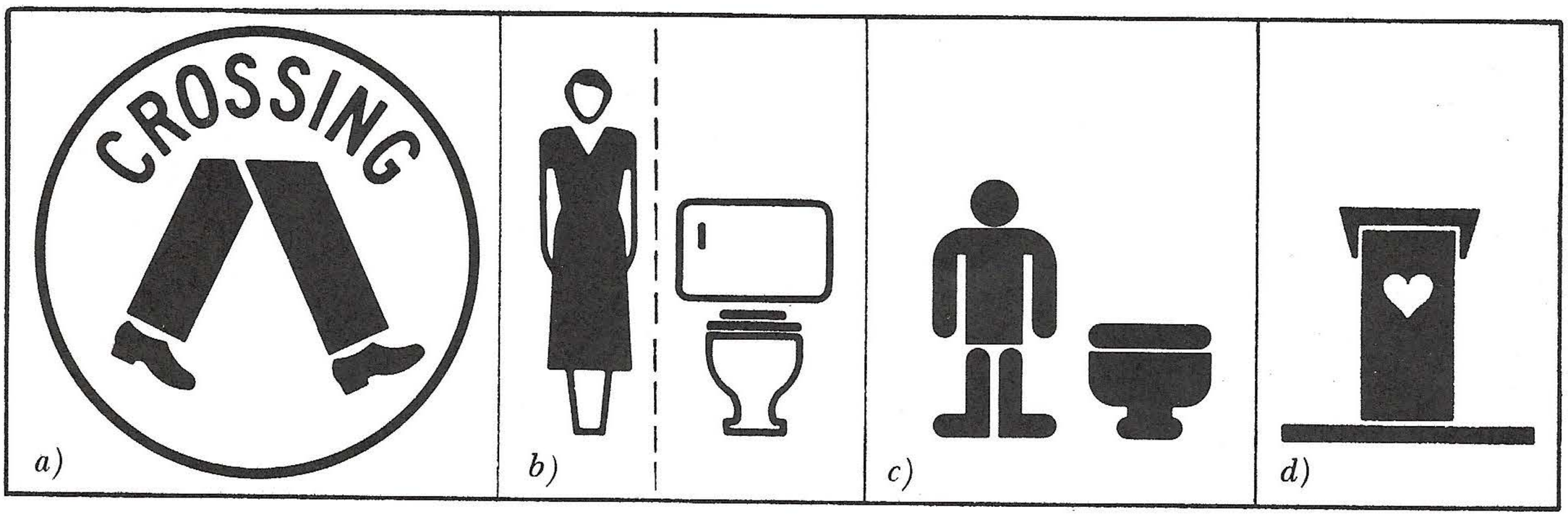

Figure 9. Pictorial symbols which might replace those traditionally used: a) Pedestrian Crossing (Australian Standard AS 1743-1975); b) Flush Toilet for Women, by Rudolf Modley; c) Flush Toilet for Men, by Gerhard Doerrié; d) Non-flush Toilet (Swedish Standard SIS 6131).

—select the one or more symbols that best pictorialize the facts. Avoid symbols that give no—or, worse yet, a false —impression about the object or fact you are trying to characterize.

—develop a layout which gets across the essential points of your story simply and quickly.

The Bibliography in this volume will be of value to all who are interested in studying this challenging field.

Persons who want to make up new public symbols should be aware that the creation of universally acceptable public symbols is an overwhelmingly difficult task. It requires organization, research, development, testing and evaluation, education and application. The inherent difficulties are dramatized by pointing out that many of the symbols included herein are only partially successful. Though widely used, many are still tentative; some have been adopted without benefit of one or more of the research and development steps which we consider essential.

One reason for badly conceived and ineffective public symbols is that administrators like to select symbols that have been used previously by others, and which thus have presumably already been accepted by the public. This has led to the widespread adoption of some illogical or ambiguous symbols, such as the one showing a man and child to indicate "pedestrian crossing" and the use of a pictograph of a man to indicate "men's room" and of a woman to indicate "ladies' room." The "walking legs" Australian standard would appear to be a more logical choice for "pedestrian crossing"; after all, many different combinations of people are crossing roads and streets—and they all have legs to do so. As for toilets, it might help to have different symbols to indicate the specific type of facility—combined, where appropriate, with the symbol for man or woman (Figure 9).

At present a subcommittee of the International Standards Organization is at work on public symbols, and the literature on the subject is growing. It is hoped that the symbols collected in this volume will help pictographers as well as those at work on public symbols in their tasks.

Rudolf Modley
*Co-chairman, Glyphs, Inc.**

*Glyphs, Inc., RR1, Box 161, Kent, Ct. 06757, is a nonprofit organization for the development of universal graphic symbols. It does not design symbols but acts merely in an advisory capacity to others interested in the same objectives. It publishes a quarterly newsletter which is available free upon request. Margaret Mead and Rudolf Modley are co-chairmen of the organization.

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with the assistance of William R. Myers

HANDBOOK OF PICTORIAL SYMBOLS

3,250 Examples from International Sources

Pictorial symbols furnish travelers and motorists with important information at airports and on highways, while more and more we see their use on packages, clothing, and appliances from around the world. The use of these symbols throughout the world is steadily increasing, and this handbook brings together in one place 3,250 examples from numerous international sources.

You will find here symbols that represent children and youths, teachers, family groups, women, men, airplanes, autos and other vehicles, farmers, crime, money and finance, government and politics, clothing, machinery, entertainment, and many other symbolic categories. Then come two sections of public symbols for telephone, restroom, coffee shop and 32 other basic facilities arranged first by service or facility and then by system—Department of Transportation, Netherlands Railroad, Tokyo Olympic Games, Port Authority of New York and New Jersey, Montreal Expo, and 20 others. Also included are symbols from additional systems, such as European Road Signs and U. S. Weather Bureau Cloud Code Charts, and the Netherlands Statistical Foundation Symbols by G. Arntz. A detailed table of contents and index direct you to the kind of symbol you may specifically need.

Unequaled for its breadth and ease of use, this comprehensive sourcebook is a necessity for anyone working in the field of pictography. It is also a primary source for graphic artists who must convey information to an international audience. Anyone interested in the development of universal graphic symbols will find this book a mine of essential material.

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