
Modeling isotype after language, Neurath showed how to build compound signs out of elementary units. Neurath's work extended beyond the design of symbols, however, to include the use of icons in statistical charts. His theory of information design included the search for ways to organize information that maximize their visual impact. Collection of Smithsonian Institution Libraries, Cooper-Hewitt, National Design Museum.
Modern Hieroglyphs

and are from the standard symbol set designed by Cook & Shanosky Associates in collaboration with the American Institute of Graphic Arts in 1974. and are endorsed by the U.S. Department of Transportation (D.O.T.). They belong to an international hieroglyphics of public information.* Their ancestors, and , were created by the Viennese philosopher and social scientist Otto Neurath in the 1920s. Neurath and his colleagues constructed a universe of people , places , objects , and actions , , . He called his system Isotype , the International System of Typographic Picture Education.**

Although Neurath advocated the use of in transportation signs, his primary interest was in presenting social statistics in textbooks, posters, and educational museums. In Neurath’s charts, a given symbol, such as , represented a quantity of people or things; a series ( ) of symbols represented a larger number of objects. Thus a visual, perceptual Gestalt replaced abstract numerals in charts. Anticipating Edward Tufte’s later writings on the display of data, Neurath developed practical guides for representing ’s in a visually accessible way.

As a member of the Vienna Circle of philosophers in the 1920s, Otto Neurath was a founder of logical positivism, a theory that brought together two opposing modes of inquiry: rationalism, which studies reality through logic, geometry, and mathematics; and
empiricism (or positivism), which claims that observation is the key to knowledge.

The ♂ and its associated equipment—such as ♦ and ♠—are the primary tools of empirical knowledge. The logical positivists attempted to analyze language into a minimal set of direct experiences, claiming that all languages can be reduced to a core of observations, such as big, small, up, down, red, or black. With ♣, Neurath translated a philosophical theory into a visual practice. The sign ♦ is positive because as a picture, it is based in observation; ♣ is logical because it concentrates the details of experience into a schematic mark. Neurath aimed to combine the mechanical empiricism of photography with the rational structures of mathematics and geometry ●.

Although Neurath believed that pictures are objective and universal, the meanings of international signs are culturally specific. We understand, for example, that ♂ and ♠ represent lavatory for men and lavatory for women. Yet the reference to toilets is left unstated. A functional description, such as ♂ and ♠, might denote the difference between these facilities more directly, but the signs’ conventional meaning still would have to be learned.

We distinguish ♂ as male because he is contrasted against the figure ♠, whose gender is marked by a stylized reference to a garment sometimes worn by Western women. In the D.O.T. system, ♠ refers to “people” in general except where he is contrasted with ♂. Thus ♠ does not mean drinking fountain for men; nor does ♦ mean elevator for men; and nor does the sign ♠ mean waiting room for men—☺ stands in for man generically. The only place ♠ appears in the D.O.T. system besides on lavatory doors is in ♠☺, the sign for ticket sales. Here, where one person is offering a service to another, the designers deemed it appropriate to show ♠ assisting ♠.
The stylistic principles of Neurath’s remain the basis of international pictograms today: reduction and consistency. Many Isotype signs are flat shapes with little or no interior detail, as in and . These flat silhouettes suggest a rationalized theater of shadows, in which signs appear to be the natural imprints of material objects—Plato’s cave renovated into an empiricist laboratory. When depth is expressed in , isometric drawings are used instead of traditional perspective. Parallel lines do not converge, and dimension is fixed from foreground to background.

Consistency governs the stylistic uniformity of a symbol set. The d.o.r. system, for example, is a world of coordinated objects, including , , , , and . The sign system designed for the Munich Olympics in 1972 was the semiotic climax of international pictures: a geometric body alphabet is deployed on a consistent grid: , , , , and .

The reduction and consistency of international pictures heighten their alphabetic quality. Neurath’s and were a critique of writing that resembled writing, a utopian effort to transcend the limitations of letters by exploiting the visual characteristics of typography. Neurath’s preferred typeface was Futura, designed by Paul Renner around 1926-27. Paralleling the machine aesthetic in architecture and industrial design, Futura is stripped of references to handicraft and calligraphy. Neurath conceived of as clean, logical, free of redundancy: writing as a machine for living in.

The current figure might be called Helvetica Man, his style coordinating with the favorite typeface of post-war institutional design culture. A more inclusive pictographic land-
scape might be inhabited by variants of *Helvetica Man* that harmonize with other typefaces, such as Serif Man, *Italic Man* and *Cursive Man*.

and are neither universal, self-evident, nor purely informational—like linguistic signs, they must be learned; like other styles of drawing, they are culturally specific. When we see engraved over an airport door, we know she belongs to the language of public information, not the language of commerce. Thus we do not mistake for, say, *brothel*, where might purchase the services of . The clean, geometric character of and is loaded with cultural associations—“public,” “neutral,” “modern.”

An international picture functions as a memento, a token for memory, a souvenir for words. is *restaurant* as is *Paris*. The very American is hardly the geometric essence of *drinking alcohol in airports*, but like , a cocktail is a useful cliché for storing a range of experiences. Likewise, , , , and , taken from different international picture sets, are helpful tags for remembering objects we tend to forget.

Otto Neurath believed that could transcend national boundaries and unify global social life. By translating a philosophical theory into a popular medium, he fathered a new breed of *ABCs*, whose progeny have populated public spaces across the industrial world. Since the birth of Neurath’s and , designers and critics have framed new questions about visual and verbal writing that acknowledge the cultural basis of images, symbols, and experience. As we rethink the boundaries between words and pictures, Otto Neurath could serve as a model for the graphic designer of the next millennium, the language worker equipped to use design and theory as tools for unearthing new questions and constructing new answers.*****


Attempts to reform the alphabet into a more accurate reflection of speech were documented by Herbert Spencer in The Visible Word (New York: Hastings House, 1968). Herbert Bayer discussed his own writing reform efforts in "Basic Alphabet," Print (May/June 1964): 16-20. Charles Bliss proposed a new hieroglyphic script in which each character would "show the outline of the real thing, directly connected with meaning" in Semantography (Bismarck, South Dakota: Semantography Publications, 1949).