SKITTISH SKIRTS AND SCANTY SILHOUETTES: THE TRIBULATIONS OF GENDER IN MODERN SIGNAGE

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ABSTRACT Signage, traffic signs and way-finding systems are the focus. Whether the pictograms used in such systems may be said to work through mechanisms of visual metaphor or not is the question addressed here, they certainly use pictures of individual objects to express abstract concepts. This requires learning and context for understanding. Nevertheless pictography seems to have other limitations. When compared to verbal language, a major example of these limitations is the representation of gender. In 2005, a survey of 49 signage systems at the University of Aveiro concluded that the female gender was under represented, and heavily stereotyped. Notwithstanding, the article analyses a few recent attempts to use non-sexist traffic signs and signage, in order to determine whether it is possible to reform or improve pictographic languages.

INTRODUCTION

In the space of the modern city, at theaters, crossroads, shopping malls and airports one is surrounded by a multitude of commercial signs, traffic signs, semaphores and way-finding systems. Inevitable as they are, such systems employ pictograms, that is pictures of individualized objects that are used to express abstract concepts, and require learning and context to be understood. This article intends to reflect upon the way pictography far from being (as it was said to be, during the 70s) a 'universal,' intuitive language,[1] on the contrary seems to have some limitations as a communicational form.

Not only does pictography lacks universal reach—being dependent on specific cultural contexts—but its own universal pretensions, tends to result in the use of caricature and stereotyping when representing gender. In 2005, a survey of 49 signage systems and 767 pictograms undertaken at the University of Aveiro concluded that the female gender was underrepresented and also 'marked' in relation to the generic male form.[2] Thus, this more and more important area of information design, allegedly concerned with the quest for a neutral, universal language has its ideological moment, ineluctable perhaps, but one that is important to understand and document.

Recently, something unexpected happened: Fuenlabrada, a small town at the outskirts of Madrid, decided to use female pictograms in its traffic signs. Hence, some of the silhouettes in the 'pedestrian crossing' signs were given skirts (*figure 1*).[3]

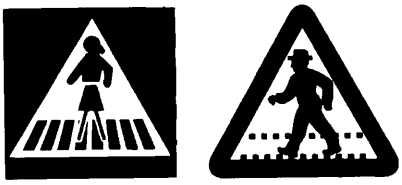


Figure 1 Fuenlabrada new traffic sign for pedestrian crossing (older sign on the right).

Banishing sexism from street signs was only part of a larger and more ambitious equality program by local authorities, and yet their move was received nationwide with mockery and anger. Despite many positive reactions—and general acceptance by local inhabitants—there was condemnation from conservative groups, right-wing opposition and even warnings by the General Director of Traffic, on the grounds it violated the Vienna Convention on Road Signs of 1968. Echoes of the heated debate reached neighboring Portugal.[4]

For some time in fact a few European cities have been using traffic signs and signage systems in order to question gender-based stereotypes. But are these changes a real solution? Is it possible to reform pictographic language?

FROM PICTOGRAPHY TO SIGNAGE

From the beginning of the 20th century, city growth, proliferation of administrative services, international trade and population mobility created situations in which national languages (or rather their correlative typographic characters), were sometimes replaced advantageously by small pictures, i.e., pictograms.

The first serious attempt to create an organized system of similar graphic signs was the work of Viennese sociologist and philosopher Otto Neurath.[5] Earlier in the 1920s, Neurath was convinced it was possible to create an international pictographic idiom,

1—See Krug, K.H. et al. Undated. *Pictogramas. Sinais de Comunicação.* Catalog from Instituto Cultural de Relações Exteriores /ERCO, p. 2; Costa, J. 1998. *La Esquemática: visualizar la información.* Barcelona: Paidós, p.89; Dreyfuss, H. 1984. *Symbol Source Book.* New York: John Wiley & Sons, [1972], pp.16 ff; Aicher, O. and M. Krampen. 1995. *Sistemas de signos en la comunicación visual.* Ciudad del México; Gili, G. 1995. Ciudad del Mexico: G.Gili, pp. 5, 129; Ota, Y. 1993. *Pictogram Design.* Tokyo: Kashiwa Bijutsu Shuppan, p. 18; Horton, W. 1994. *The Icon Book,* New York: John Wiley & Sons, p. 6.

2—Bessa Pedro, P. 2005. Representações do masculino e do feminino na sinalética. University of Aveiro, unpublished PhD dissertation.

3—Faldas para los pasos de cebra. 2006. *El País,* 11/11/2006. Rosalina Guijarro, the town counselor in charge of the project, said her ultimate goal was to have fifty percent of all signs and traffic lights changed.

4—Cidade espanhola adopta figuras femininas nos sinais de trânsito. 2006. *Público,* 12/11/2006.

5—See Lupton, E. 1989. "Reading Isotype." In Margolin, V., editor. 1989. *Design Discourse,* Chicago: University of Chicago Press, pp. 145-156.

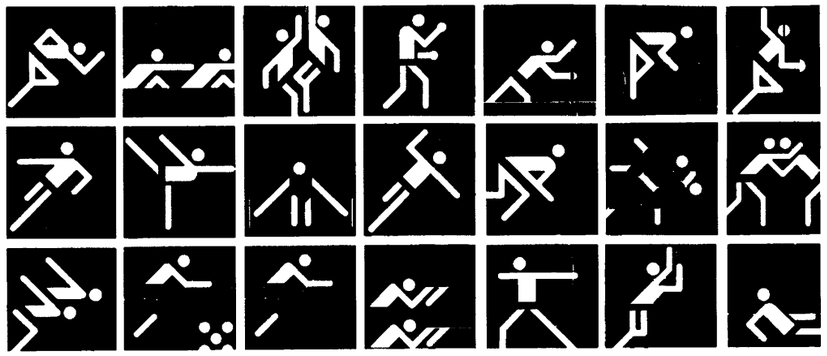


Figure 2 Pictgrams designed by Otl Aicher for the Munich Olypics, 1972.

which he later called Isotype, and was mainly used in books, posters and statistical charts (For Isotype charts, see pages 168-173 in this issue.).

Neurath's project was related to his activity as a philosopher: he was a leading-figure of logical positivism, a philosophical movement which had among its objectives the search for an ideal language, descriptive and logical, thus superior to current language, considered to be full of imprecision and deficiencies.[6] Neurath believed Isotype was such a language, a sort of intemporal, hieroglyphic idiom in which it would be possible to transcribe all the languages of the world. This optimism remains at the very core of present-day pictographic signage and, to a certain degree, continues to inform the practice and teaching of graphic design.

Isotype was contemporary to the first international conventions for the unification of traffic signs and, in the following decades, the use of ambitious, encyclopedic pictographic systems was extended to transportation and to sport events (*figure 2*).

6—Granger, G. 1987. "Circulo de Viena." In Imbert, C. et al. 1987. *Filosofia Analítica*, Lisbon: Gradiva, undated, pp.83-86; Cordon J.M. and T. Martinez 1987. *História da Filosofia*. Lisbon: Ed.s 70, vol.III, pp. 149-59.

IDEOGRAMS, SYMBOLS AND ICONS

Some of the so-called 'pictograms' are actually signs with an extremely conventional or even arbitrary basis, for example, three triangles inside a circle meaning 'nuclear shelter.' But even in the case of more figurative or illustrative-type signs, one is faced with two different situations: the *literal meaning* of the sign and its *derivative meaning*.[7]

Examples of derivative meaning are the pictogram of a coat-hanger meaning 'cloakroom' (and not the coat-hanger itself) or the figure of a fork and a knife meaning 'restaurant.' Some authors prefer to call these figurative signs that express abstract concepts *ideograms*.[8] Most pictograms are in fact ideograms: another well-known case is the use of the pictogram of a man and a woman to denote 'toilets'; as a pictogram it reads 'man and woman,' as an ideogram it reads 'toilets (*figure 3*). One might call this a 'visual metaphor': something that literally denotes one thing is being used figuratively to stand for another. In fact, not only metaphor but metonymy—two rhetorical devices—are at play here.[9]

Neurath's interest in a 'scientific' visual language was common to much modernist art and design research.[10] In the early 1950s, Gestalt psychology dealt with something thought to be independent of cultural conditioning: visual perception. Information theory focused on the efficacy of the communication process: optimization of the channel

7—Or termed *dictionary-type meaning* and *derivative meaning*, from Ota, *Pictogram Design*, p. 118.

8—Frutiger, A. *Signos, Símbolos, Marcas, Señales*. 1999. Barcelona: Gustavo Gili, pp. 81-83;
Lupton, E. and A. Miller. 1999. *Design Writing Research*. London: Phaidon, p. 48.

9—The use of a man-and-woman pictogram for 'public toilet' is a case of *metonymy*; the use of a male pictogram meaning 'people' is a case of *synecdoche*. Synecdoche uses a part of something to mean the whole thing. In metonymy the symbol one employs is linked to the concept one is talking about, but without actually being a part of it. But the difference is not always obvious, so many people use metonymy to mean both devices.

10—Lupton, E. and A. Miller. 1999. *The ABC of triangle, square, circle*. New York: Princeton Architectural Press;
Golec, M. 2002. "A Natural History of a Disembodied Eye: The Structure of Gyorgy Kepes's *Language of Vision*." *Design Issues* 18.2, pp. 3-16.

and reduction of noise. In both cases the message was regarded as nothing more than a neutral element to be transported from point A to point B.[11]

Also influential in graphic design education and practice, semiotics concentrated its attention on the message itself as well as on the receiver. To describe meaning, American philosopher Charles Saunders Peirce used a triangular model in which the sign/signifier, the signified and the referent (i.e. the material object the sign refers to) were at the vertices. Swiss linguist Ferdinand de Saussure, in contrast, postulated a dual structure: signifier and signified, indissolubly joined together. No referent here.[12]

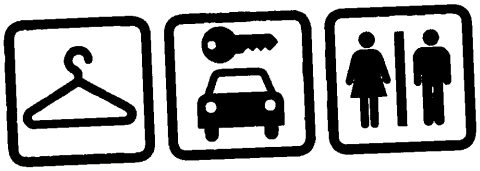


Figure 3 Pictograms of a coat hanger, car and key, man and woman; the same signs read as ideograms: cloakroom, car rental, toilets (DOT system, USA, 1974-1979).

Although Saussure had little interest for the way signs related to readers (apparently unaware different readers will have different readings), he had the advantage of realizing that a sign has meaning only in relation to other signs: signifier and signified are always connected in an arbitrary way. The inclusion of the referent in the process ended up determining the search for a direct relation between words and objects, as in Logical Positivism's theory of language.

A key to this problem is the concept of icon.[13] Referential semiotics considers that a sign can be an index (a sign which has a physical connection to its object, e.g., a footprint), an icon or a symbol. Whereas a *symbol* is a sign whose relation to its object is basically conventional (letters, words), an *icon* 'resembles' or imitates the object it refers to. It was this distinction between icons and symbols that determined future attempts to substitute cultural conventions (letters) for analogical pictures. Isotype and pictographic signage rely on this principle.

Now, what may look like an icon is sometimes a *symbol*. It is the already mentioned case of the traditional pictogram for 'Public toilets.' Only in a very indirect, culture-laden way can that picture of a man and a woman somehow resemble its referent. Several designers and authors have proposed their substitution for more realistic representations, e.g., the inclusion of a toilet or a lavatory in the drawing.[14]

Figure 4 From left to right: urinal and sitting toilet, Munich Olympics, 1972, Otl Aicher; Japan, circa 1993, Yukio Ota; airplane signage, 1970s (from Dreyfuss, Henry. 1972. Symbol Source Book, New York, NY: Watson-Guptill, p.36).

All this contradicts the traditional thesis of pictography being an intuitive universal language, absolutely neutral in terms of the contents and meanings it transmits.

11—Moles, A. 1958. *Théorie de l'information et perception esthétique*. Paris: Flammarion;
Moles, A. 1982. «A Abordagem Informacional.» In Dufrenne, M. et al. 1982. *A Estética e as Ciências da Arte*. Amadora: Bertrand, vol.II, pp. 300-27 ;
Kinross, R. 1989. «The Rhetoric of Neutrality.» In Margolin, *Design Discourse*, pp. 140 ff.

12—Peirce, C.S. 1931-1935. *Collected Papers*. Cambridge, MA.: Harvard University Press ; de Saussure, F. 1915. *Cours de linguistique générale*. Paris: Geneva.
Charles Morris, who worked closely with the neo-positivists of the Vienna Circle, used Peirce's definitions.

13—Eco, U. 1997. *O Signo*. Lisbon: Presença, p. 123. Eco refuses any possibility of a referential semiotics: all signs are conventional though not necessarily arbitrary, p. 153.

14—See Lupton and Miller, *Design Writing Research*, pp. 42, 48, 149;
Modley, R. 1976. *Handbook of Pictorial Symbols*. New York: Dover, p. x;
Ota, Pictogram Design, p. 119;
Frutiger, *Signos, Símbolos, Marcas, Señales*, p. 273. There is an old joke, among graphic designers, about a Scotsman and an Arab standing in line to use the women's bathroom because the only sign in sight is the traditional 'people wearing skirts' pictogram.

VISUAL METAPHORS: AN INADEQUATE TERMINOLOGY?

Metaphora brevior est similituto: a traditional view regarded metaphor as an 'abbreviated similitude,' the contraction of a comparison.[15] A rhetorical device whose broad definition might include many rhetorical figures, such as metonymy, hyperbole, allegory—metaphor was considered something built 'on top' of literal speech. It was at best an ornament to language, a poetic elaboration.

In the late 1970s and 1980s this was to change.[16] Linguists, George Lakoff and Mark Johnson, for instance, claimed metaphor was central to human cognition and everyday language: it allowed "mapping conceptual structures" from one domain to another, helping to understand new phenomena in terms of things one already knew. Then computer science took up the subject and the expression 'visual metaphor' became widely used in software visualization systems and interface utilities. As mentioned, rhetorical devices, e.g., metonymy, seem to be also at work in pictographic signage systems and traffic signs. Should metaphor have as central a role as Gestalt psychology and semiotics in defining a model for design education and methodology?

Essentially, a metaphor establishes an analogy between two concepts, technically called *tenor* and *vehicle*. And yet, this can happen in two ways. Consider two well know metaphors: "Socrates is a midwife," and "Humans are wolves to humans."[17] In the first case, a new idea is created from the merger of the two original concepts (Socrates + midwife = philosophical concept of *maieutike*). Whereas in the second case, one's understanding of the first concept, or tenor (humans), is somewhat transformed by consideration of the vehicle (wolves). The vehicle is introduced to deepen one's perception of an already existing concept rather than create a new one. What happens with poetic metaphors may be easily grasped if, instead of "humans are wolves", one considers a more poetic, though somewhat sexist example: Man Ray's *Violin d'Ingres* (*figure 5*), a case of visual metaphor, which might be translated as "woman is a violin."[18]

In contrast, the role of metaphor in human cognition and science are better described through computer interfaces, where one deals with abstract, sometimes radically new concepts. To a lesser extent the same happens in signage: how to represent the concept of 'car rental' by adding a second object (key) to the car. And in 'cloakroom' by using metonymy, the coat hanger works as a vehicle for something difficult to illustrate.

The parallel with standard metaphor terminology, however, is a bit artificial—one could simply say, for example, the drawing of a coat hanger has a 'double meaning' since it stands both for 'coat hanger' and 'cloakroom.' These literal and metaphorical meanings should then correspond to our *ideogram vs. pictogram* distinction. But a further problem arises when one realizes there may be inadequacy in describing visual images as tropes, and that 'visual metaphor' may not be a very reliable concept at all.

It has been argued that the primary means by which images convey meaning is directly representational and mimetic, rather than metaphoric. Thus, true metaphor is rare in traditional painting or sculpture (a few possible exceptions such as Man Ray's *Violin d'Ingres* and other surrealist imagery have been disputed). And yet others have argued all visual art is metaphorical,[19] and much the same has been said about graphic design and advertisement. Most authors take the expression 'visual metaphor' in a very broad sense; yet others developed a neat taxonomy of types, based on pre-existing categories of literary tropes[20]—a dependence that is in itself open to criticism. To speak of 'visual metaphor' then, means very different things, depending on the way researchers have defined the term. This gives a somewhat ambiguous quality to the concept.

On the other hand, if the presence of metaphor is dubious in visual arts, it is paramount in software visualization systems, given that they deal with highly abstract realities. Computer scientists and interaction designers tend to use analogies to natural

15—Aristotle, *Ars Retorica* 4, 1407a.

16—Black, M. 1962. Models and Metaphors. Ithaca, NY: Cornell University Press; see also "More about metaphor." In Ortony, A., editor. 1979. *Metaphor and Thought*. Cambridge: Cambridge University Press, pp. 19-43;
Lakoff, G. and M. Johnson. 1980. *Metaphors we live by*. Chicago, IL: University of Chicago Press. A discussion on the relative merit of various metaphor theories, from Black's interactive conception, to "structure mapping theory," cognitive linguistics and "categorization theory," falls outside the scope of this article.

17– Socrates as a midwife: Plato, *Theaetetus;* humans as wolves: *homo homini lupus*, a Roman proverb by Plautus (*Asinaria*, 2, 4, 88), later used by Thomas Hobbes in *De cive*, *Epistola dedicatoria*.

18- Serig, D. 2006. "A Conceptual Structure of Visual Metaphor." *Studies in Art Education* 47.3, pp. 229-247.

19– Read, H. 1935. *Icon and Idea*. London: Faber and Faber;
Hausman, C.R. 1989. *Metaphor and Art*, Cambridge: Cambridge University Press.

20– Kennedy, J.M. 1982. "Metaphor in pictures." *Perception* 11.5, pp. 589-605. For a similar approach see Horton, *The Icon Book*, pp. 42-45.

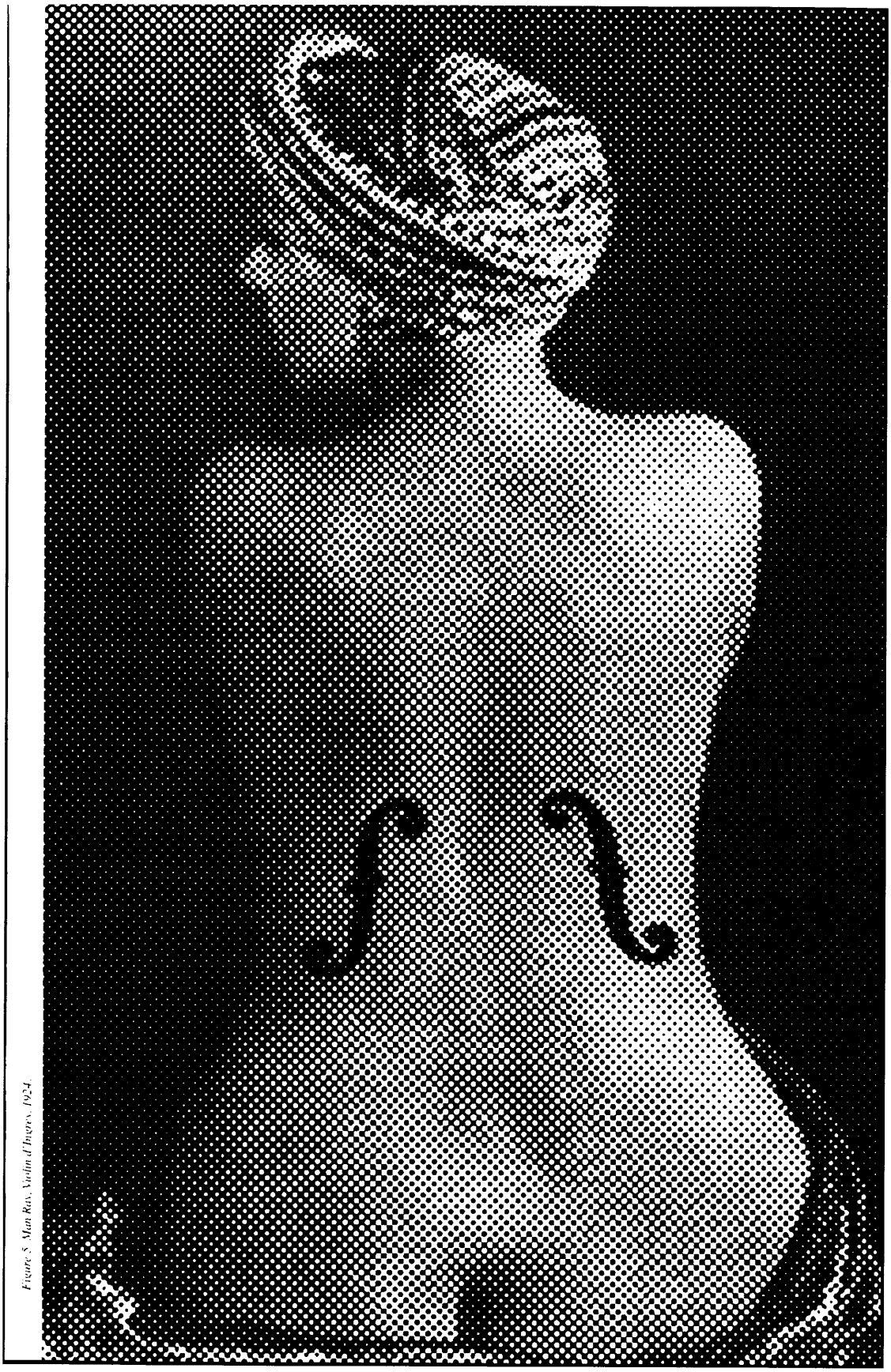


Figure 5. Man Ray, Violin d'Ingres, 1924.

objects and phenomena: they speak of 'utilities,' 'protocols,' 'servers' and 'desktops' and use small graphical devices such as the 'wastebasket.'[21]

Yet, a final argument against using the expression 'visual metaphor,' when dealing with pictograms and other graphic symbols, is that metaphors and symbols evoke different ways of expressing meaning. Semiotic symbols have fixed, though arbitrary meanings; metaphors are open-ended, they permit additional, multiple meanings. Once they are arbitrary, symbols are replaceable; this is not the case with metaphors. In that sense, the 'wastebasket' in a computer desktop is a symbol not a metaphor.[22] 'Litter disposal,' a much less abstract concept in the NRS signage system (*figure 7, second pictogram*) is not understood metaphorically by most people.

21—Copper, A. "The Myth of Metaphor," *Visual Basic Programmer's Journal*, July 1995 has criticized the overuse of visual metaphors in computer interfaces. Although his criticisms may be fair, they sometimes tend to think of metaphor in a traditional way, i.e., as 'parasitic' on literal language.

22—As should be clear by now, in rigorous semiotic terms, the computer 'wastebasket' is not an icon either. Expressions such as 'visual language' or 'computer icon' have very specific meanings in the context of interface utilities. What one calls 'icon' in computers or small instructional buttons is generally called 'pictogram' in signage (although the two words may sometimes be used synonymously, e.g., see Pierce, T. 1996. *The International Pictograms Standard.* Cincinnati, OH: ST Publications.

MASCULINE AND 'FALSE NEUTER'

What we have then is that, on one hand, the alleged 'monosemy' of the pictograms[23] is illusory—how can we tell, in each case, if we are confronting a true pictogram, denoting the physical object thus represented or a more 'metaphorical' depiction, i.e., an ideogram? Only context allows us to decide. On the other hand, even *stricto sensu* pictograms do not seek to evoke a physical, unique object, but the whole group of possible objects belonging to a class. The pictogram of a table does not represent *a table*, but the group of all existent and possibly imaginable tables. But as Plato reminded us, every individualized object is limited towards the concept (*eidos*) it intends to illustrate. If the idea of 'table' is illustrated by means of a four-legged rectangular table, then the one-leg *ouija* table would be excluded; if the concept of 'people' is illustrated (as is common) by an adult male, then children and women would be excluded.

Moreover, the same graphic sign (or extremely similar signs) can, in the same signage system, accommodate different meanings. In each of Figures 6 and 7, the last two pictograms refer to one sex only ('Men's toilet' and 'Women's toilet'); but a male pictogram, depending on context, can also refer to people in general, i.e., both men and women (note especially the 'No entry' sign, *figure 6*). This happens because in verbal language the masculine functions as a sort of *universal signifier*. Using a terminology deemed to be inadequate, one could say the male pictogram is, most of the time, a metonymy for 'human race.' Rather ironically, on other occasions it is a metaphor for 'public toilets.'

23—Massironi, M. 1989. *Ver pelo Desenho.* Lisbon: Ed.s 70, p. 129;
Costa, J. 1989. *Señalética.* Barcelona: Eds. Ceac, p. 141.

Figure 6 Expo 70, Osaka, Japan, 1970, Isozaki Arata and Fukuda Shigeo.

Figure 7 National Recreation Symbols, USA, 1985, P. Singer and P. Reedijk.

Comparing the relation between the two sexes to the one of two electricities, Simone de Beauvoir once said man represented "both the positive pole and the neutral"; to the woman it was left to be the negative, the 'Other' of man. That is why one says 'Man,' or 'men,' meaning the human race.[24] (*Figure 8* shows examples of this practice in pictography). In the 1980s, Portuguese writer Isabel Barreno used the expression 'False Neuter' to condemn this abuse of the male form,[25] a phenomenon that cannot be interpreted in pure linguistic terms, for it embraces a wider discursive practice, in a patriarchal culture that excludes or devalues women depicting them as *deviant* in relation to the masculine norm.[26]

24—de Beauvoir, Simone. 1975. *O Segundo Sexo*. Lisbon: Bertrand, vol.I, pp. 11 f.

25—Barreno, M.I. 1985. *O Falso Neutro*. Lisbon: Edições Rolim. In Portuguese, the word *neutro* can function both as a noun (neuter) and as an adjective (neutral).

26—See Cameron, D. 1985. *Feminism and Linguistic Theory*. London: MacMillan; Spender, D. 1985. *Man Made Language*. London: Routledge and Kegan Paul.

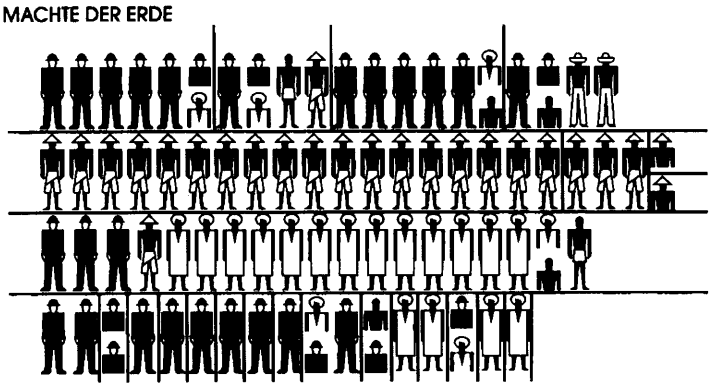


Figure 8 Isotype statistical chart showing the ethnic diversity of European empires; Otto Neurath, Die Bunte Welt, Vienna, 1929.

In the last few years there has been some effort to create alternative forms of speech in verbal/written language. Namely, replacing male expressions by more generic terms, without gender specification, to say for example, 'people' instead of 'men,' 'humankind' instead of 'mankind,' etc.[27] However, in pictography, collective nouns such as "people" are too abstract in the sense that, properly speaking, pictograms of 'people' do not exist; in pictography, all there is are men and women. It must have been this understanding that eventually led Fuenlabrada authorities to redesign their traffic signs.

27—For a moderate, liberal approach see Miller, C. and K. Swift. 1981. *The Handbook of Non-Sexist Writing*. London: The Women's Press; a more developed analysis is in Cameron, D. 1994. *Verbal Hygiene*. London: Routledge.

GENDER MARKING

Men vs. women: binary oppositions enjoy a special status in linguistics and Structuralism. In fact, for some authors, they are "a property of human mind," the one and only way of producing meaning.[28] As binary digits (1 and 0) in computers language, male and female would only make sense contrasted against each other. And yet, associated with binary distinctions, there is a tendency to privilege one member of the opposition over the other. One tends to favor *high* in relation to *low*, *right* to *left*, *happy* to *un-happy*. This is the phenomenon linguists describe as 'marking.' Theoretically, unmarked words should possess a more neutral, universal status than the others.[29]

Thus, *fe*-male should be the marked form of *male* and, in fact, some grammarians[30] even developed a set of semantic categories for English language, which used *plus*-male and *minus*-male to distinguish masculine from feminine: males were supposed to be the standard of comparison for human species. Feminist authors, on the other hand, have frequently claimed the assumption of masculinity is not only the unmarked form, but is

28—See Lévi-Strauss, C. 1964. *Le cru et le cuit*. Paris: Plon; Lacan, J. 1966. « L'instance de la lettre dans l'inconscient.... » In *Écrits I*, Paris: Seuil, pp. 249-289; Leach, E. 1976. *Culture and Communication*. Cambridge: Cambridge University Press; For Cameron (*Feminism and Linguistic Theory*..., p. 58), it all relates to the "more general and conscious patriarchal policy of constructing a sexual dichotomy in every area of human experience."

29—Cameron, *Feminism and Linguistic Theory*..., p. 57-68; Spender, *Man Made Language*, pp. 19-23.

30—Leech, G. 1968. *Towards a Semantic Description of English*. Indiana, IN: Indiana University Press.

"the assumption that the world is male."[31]

As Japanese designer Yukio Ota stated: "Differentiating between men and women is a design problem. Up to now most have used clothing to differentiate. But... there is the flaw of the figure as a whole becoming complicated in order to differentiate between male use and female use."[32]

In other words, the skirt (or the long hair, or breasts and buttocks; *see figures 9 through 11*) represents a kind of suffix or declension which makes the female pictogram marked; hence the difficulty in using it for 'people in general.' Through detail and complexity of drawing, the feminine becomes a particular case of the masculine. That detail is usually the skirt. Its presence is ubiquitous in pictograms, despite the great percentage of women who wear pants.

31—Spender, *Man Made Language*, p. 20. J. Stanley "Gender marking in American English", in Nilsen, A.P. et al. 1977. *Sexism and Language*. Urbana, IL: NCTE, pp. 44-76. Some theorize there is but a "negative semantic space" left for women in language.

32—Ota, *Pictogram Design*, p. 119.

Figure 9 Marking through dress, from let to right: Isotype; ADV German airports, 1969, Krampen and Kapitzki; ERCO, Germany, 1976, Otto Aicher; DOT system, USA 1974-1979.

Figure 10 Marking through skirt and hair, from left to right: Mexico Olympics, 1968, D.L. Whyman and B. Cole; Netherlands trains, undated; IIT Hosp, India, 2002, Ravi Poovaiah.

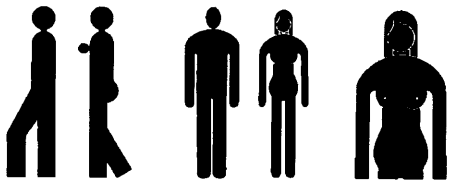
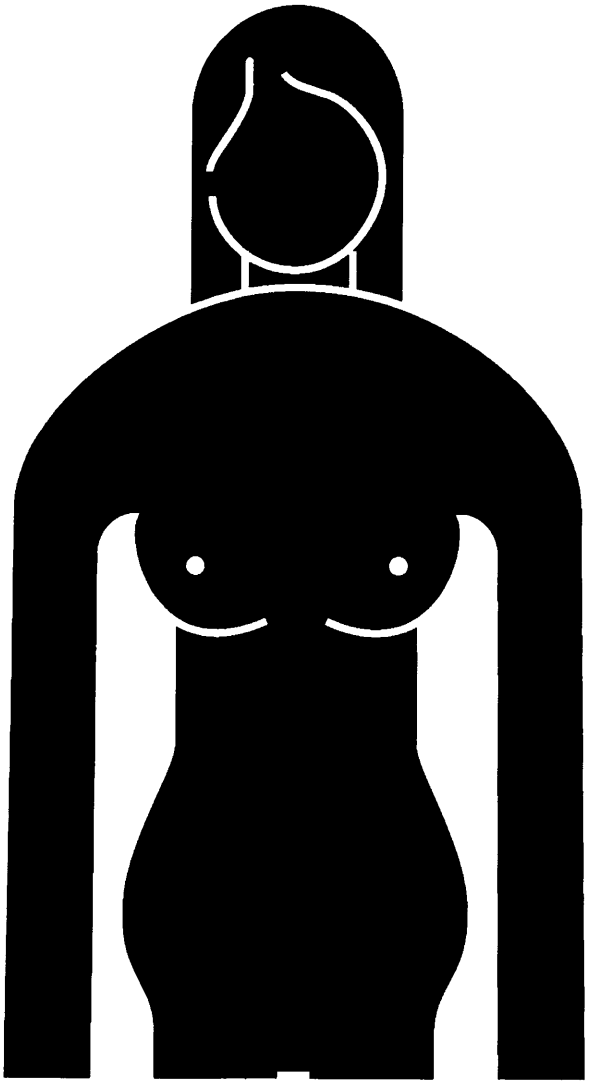
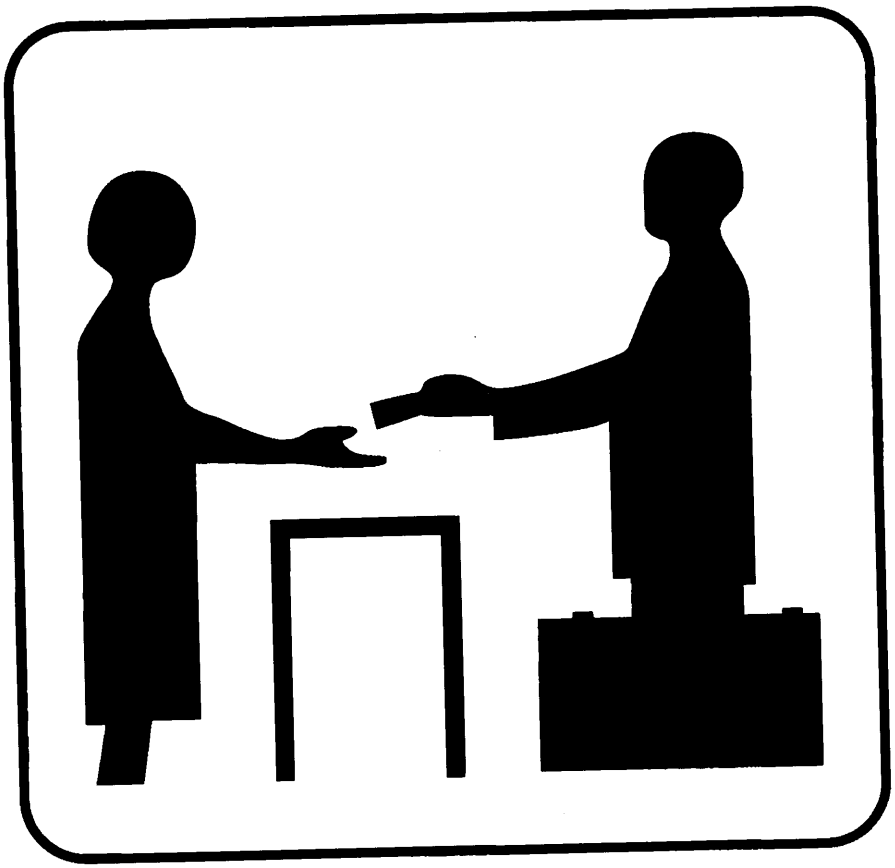


Figure 11 Marking through anatomy, from left to right: Nova Scotia Department of Tourism, Canada, 1970s; Medical Access, USA, 1985,Michael Everitt.

Figure 12 Various pictograms showing adults accompanied by children, from left to right: ADCA, Australia, 1972; Frankfurt Airport, 1970; New York City Hospitals, undated; KFAI, Sweden, undated; USA, circa 1990; GSO, Austria, 1980; Soccer World Cup, Japan, 2002; SN, Sweden, 1972.





But the skirt can also be explained by the intrinsically conservative characteristics of the medium. It is the same approach that dictates the use of obsolete steam trains to denote 'Train passage' along with other visual stereotypes. Ironically, in western countries trousers have been, for centuries, a symbol of male authority (the old expression 'wearing the breeches'), to the point they also became a token of women's emancipation.[33] This detail the design reformers of Fuenlabrada apparently overlooked.

33—Lurie, A. 1994. *El lenguaje de la Moda*. Barcelona: Paidós, p.250; Wilson, E. 1989. *Enfeitada de Sonhos*. Lisbon: Ed.s 70, p. 218.

CONTENT ANALYSIS RESULTS

In 2005, a content analysis of 49 signage systems from various countries, held at the University of Aveiro found a direct relation between the represented gender and its frequency. Table I shows the total number of pictograms depicting adult males and/or females.[34] As can be seen, the percentage for women is substantially lower than men, which results from the ambiguous 'universal' value attributed to the male form. Note the same does not happen, curiously enough, in the case of pictograms representing children (*table II*), where there is a balance between genders.

34—In some cases, a pictogram shows individuals of both genders; in others, it was difficult or even impossible to determine which gender was represented—these were registered as 'unknown.'

ADULTS	
Male	360
Female	87
Both Gender	60
Unknown	215
Total	722

Table I Number of pictograms depicting adults (or adults accompanied by children) in terms of frequency analysis by gender.

CHILDREN	
Male	9
Female	8
Both Gender	9
Unknown	41
Total	67

Table II Number of pictograms depicting exclusively children in terms of frequency analysis by gender.

To reinforce this phenomenon of semi-invisibility, the female gender when represented is always configured in very specific situations.[35] In the analyzed systems, two kinds of stereotyping were found. There is the invariable association of women to children or professions dealing with children. Not only does one find a much higher frequency of females among children than among adults, as mentioned, but also adult women are frequently shown accompanied by babies or toddlers (*see figure 12 and table III*).

35—On women's invisibility see Smith, D. "A peculiar eclipsing...." *Women's Studies International Quarterly* 1, pp. 281-96. At the centre of the female negative semantic space Stanley, ("Gender marking...") placed wife and mother and subordinate roles/ jobs. Lupton and Miller (*Design Writing Research...*, p. 42) refer to a similar situation in the DOT signage system.

ADULTS ACCOMPANIED BY CHILDREN	
Male	4
Female	13
Both Gender	3
Unknown	2
Total	22

Table III Number of pictograms depicting adults accompanied by children in terms of frequency analysis by gender.

Fig 13 From let to right: information services, check in/tickets or sales, hotel and hospital reception; all pictograms show a woman assisting a male customer. German airports, 1969, Martin Krampen and H.W. Kapitzki; ICAO, Candad, 1970 (two pictograms); Dallas-Fort Worth Airport, 1973, Henry Dreyfuss; EUA, 1995, Todd Pierce; Australian Standards, AS 2786, 1985.

Yet, there is also stereotyping in the way workplace gender roles are represented. Besides the already mentioned professions dealing with children, one finds numerous examples of so-called 'female jobs,' involving more or less subordinate tasks: receptionist, flight attendant, secretary, cleaning lady (*table IV*). Positions of leadership and authority are usually restricted to males. The profession of nurse, for example, is a feminine profession, while doctor is almost always represented by a man.[36] The same happens with the kindergarten educator vs. teacher, secretary vs. director, etc. In those cases where the interaction client/employee is represented, it often happens the person who waits, or assists male customers is a woman, whereas the opposite never occurs (*figure 13*).

36—In one case, the hospital signage system (designed by Ravi Poovaiah, Indian Institute of Technology, Bombaim, 2002) did distinguished between 'doctor' (male) and 'female doctor,' but also between male and female patients.

PROFESSION	MALE	FEMALE
Doctor	10	1
Nurse	-	5
Police officer, customs	27	-
Kindergarten personnel	-	6
Information services, check-in	3	8
Cleaning lady	-	3
Manager, director	3	-
Secretary	-	1
Flight attendant	1	2
Flight passenger	25	1

Table IV Main professions depicted in signage systems in terms of frequency analysis by gender.

Figure 14 From left to right: Ampellmann, Amep:fra and traffic signal from Amersfoort, Netherlands.

Our 'mental image' of an object is not, as Neurath believed, the direct result of our perceptive experiences of natural data; it rather implies complex cultural processes that include *clichés* transmitted by the media, education system, family and socio-cultural environment. When one merely sees the *iconicity* of pictograms, their apparent 'naturalness,' this becomes a dangerous obstacle to one's understanding of the world surrounding us. Once a figurative association is used for a long time, it becomes what linguists call a 'dead metaphor,' i.e., a metaphor whose origin one no longer recognizes. Similarly, visual stereotypes have become so overused one may be unable to identify them as such anymore.

Comparison between sign systems of different periods allows us to realize signage pictography is, in essence, conservative. This is partly due to characteristics of the medium itself. By technical necessity (to make the message simpler), pictography is more or less condemned to provide us with a caricature of reality.[37] Abrupt change in the symbol design might also result in confusion (or even danger, as in traffic signs) and loss of trust on the side of the user. Does this mean that all that is left for designers is to carry on their job, playing with stereotypes (that is, 'solid, fixed characters')? Or is it possible to modify this situation?

37—For a positive reference to pictograms designed as caricatures, see Dewar, R. 1999. "Design and evaluation of public information symbols." In Zwaga, H. et al. *Visual Information for Everyday Use*. London: Taylor and Francis, pp. 290, 298; also Costa, *Señalética...*, p. 141.

FIGHTING INVISIBILITY

By the end of last year, the small town of Fuenlabrada, south of Madrid, started the already mentioned campaign to change the traditional all-male pictograms in their traffic signs. This caused a national outrage.

And yet, though pioneering, Fuenlabrada's idea is not entirely new. For some time other European countries have been using gendered traffic signs. In Germany, the semaphore little 'green man,' originally from former GDR but currently extended to other places, is affectionately known as Ampelmann.[38] With his flat-topped hat and enthusiastic walk, this characteristic cartoon-like figure has become a kind of mascot for East Berliners. By November 2004, however, someone decided it was time to use this popular icon as a symbol of gender equality and his female counterpart, the Ampelfrau, was created: a child-like silhouette with braids and short skirt (*figure 14*). She was first introduced in Zwickau, then in Dresden in the next year. Since then, female traffic signal lights have also appeared in neighboring Netherlands, namely in the towns of Amersfoort and Utrecht.[39]

Why such a fuss with Fuenlabrada, then? On one hand, for cultural and even political reasons, it is not by chance that the Fuenlabrada local council is a left-wing coalition of Esquierda Unida and PSOE. More important, Ampelmann had always been regarded as a cute popular figure, with an important role in the East German nostalgia movement reflected by Wolfgang Becker's film, *Good Bye Lenin!* To give him a companion (the same way Mickey Mouse or Donald have their own cartoon-like girlfriends) would seem all too natural. Not so in the case of the politically loaded feminist action in Fuenlabrada.

Nevertheless, on January the 16th, new developments occurred: the Vienna City Council launched another egalitarian pictographic campaign.[40] Despite all the polemics surrounding it, the Fuenlabrada initiative had dealt only with traffic signals; this new project was apparently much more ambitious. *Wien sieht's anders* (Vienna sees it differently) dealt with public information and warning signs in general. It also did not want to simply show more women (to counter women's invisibility), but also to depict new, unusual images of men. The rare and rather stereotyped female pictograms would now have their male equivalents, questioning gender roles. Therefore signs such as 'Nappy-changing facilities' or 'Priority seating' (public transport) now show a father and

38—The Ampelmann (or *Ampelmännchen*, i.e., "traffic lights *little man*") was created in East Berlin in 1961 by Karl Peglau. In 1994, after reunification, it was to be replaced with the standard West German version. This sparked a vigorous campaign to save it. Since then, the figure has been restored at many Berlin crossroads and even extended to other places in Germany.

39—The Amersfoort traffic signal (*figure 14*) was first called to my attention by Piet Westendorp, whom I thank.

40—"*Ein neues Bild von einem Mann.*" *Der Standard*, 17 January 2007. In some aspects Fuenlabrada was more innovative: many of Vienna's pictograms were already known or had previously been tried in other countries.

child instead of a woman.

As in Spain, there were mixed reactions but, not unexpectedly, most of the negative criticisms came from men. There was also bitter reaction from the Austrian conservative parties and an unpleasant incident with some of the signs being removed a few days after because of European Union regulations (e.g., the 'Emergency exit' and the 'Roadwork' signs, *see figure 15*).

The Vienna campaign has undoubtedly very positive aspects—increasing the presence of female pictograms, showing men with children on signs—although one has a feeling that some of the new signs are rather problematic in that stereotyping and marking are paramount.

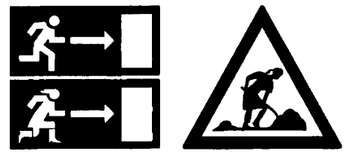


Figure 15 Pictograms for emergency exit and or roadwork, municipality of Vienna, January 2007.

A POSSIBLE CONCLUSION

In the study made at the University of Aveiro, it was possible to find some improvement in pictograms from the 1990s through the early 2000s, both in terms of women's invisibility and gender stereotyping, due to the introduction of innovative solutions. It was our conviction, however, that some of the problems raised by signage and pictographic languages were impossible to solve.

To the handful of non-sexist pictograms that were found, one could now add the new Fuenlabrada and Vienna signs: progress had been made. And yet, even these positive gender-inclusive pictograms are full of contradictions. Comparing, for instance, the old U.S. sign for 'Pediatrics' with a new one (*figure 16*), one might consider the later, unbiased and more 'politically correct.' The weak aspect is that this new pictogram mirrors ideological models of the well-balanced nuclear family. A colleague of mine, who is a single mother, told me she felt uneasy about such changes.

Figure 16 Pictograms for Pediatrics, New York, 1960s (in Dreyfuss, Henry. 1972. Symbol Source Book. New York, NY: Watson-Guptil, p.117) and Danville Regional Medical Center, Virginia, USA, 2002. Gladys Brenner.

The new pictogram for 'strollers,' in Oporto suburban trains may also look unbiased but ended up increasing women's invisibility (*figure 17*). Once again, male pictograms assume a 'universal' value at the expense of female ones, which completely disappear. Another example is the 'priority seating' sign. The new stickers updated the

traditional stereotype of a mother carrying a baby substituting it for a man with baby.[41] In this way, the unbalanced Oporto trains sign system managed to erase all females but the pregnant woman (*figure 18*).

41—In Vienna the stickers also depict men with babies, but to counterbalance this, the other two figures were equally changed. New stickers feature elderly women and disabled women, instead of men.

Figure 17 The new all-man pictograms of Oporto suburban trains (2003), pictograms for wheelchairs, strollers and extra size objects (with detail).

Figure 18 The old and new stickers for priority seating in Oporto trains.

Similar problems surround the Fuenlabrada and Vienna projects. In both cases, a recurrent criticism was the new pictograms were stereotyped and sexist since they continued to represent women from the point of view of men: longhaired, stylish women, in high heel boots and dress. The skirt in the 'Roadwork' sign, for example, looks more like a sexist bad taste prank, than a serious attempt to raise awareness for gender inequality (*figure 15*).

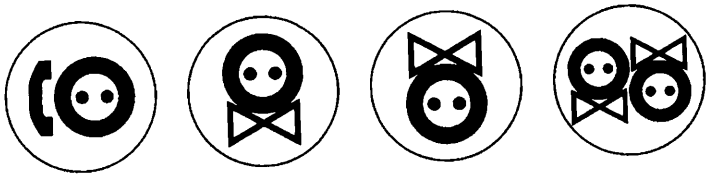


Figure 19 Pictograms for telephone, Gentlemen's toilet, ladies' toilet and toilet (in general). Expo 98, Lisbon.

The new pictograms are also gender 'marked' and, in fact, there seems to be no way to avoid using ponytails and/or skirts when depicting the female sex. Oversimplification and stereotyping, as we have seen, are to some degree intrinsic to picture language. To the point that it has been suggested that to install genuine gender neutrality, it would be necessary to restore some of the old 'marked' features of male pictograms: to make them wear the old-fashioned hats again; to give them bow-ties, baseball caps and male suits. This eliminates the old argument that the stick figures are not necessarily male ("they are too abstract," "they could be women in trousers"). An interesting example of such a strategy is the signage system designed by Shigeo Fukuda for Expo 98 in Lisbon (*figure 19*).

Figure 20 No admittance, Soccer World Cup, Japan, 2002, Kenzo Nakagawa and a hypothetical female version.

The fact remains that language is not 'neutral.' As someone observed, "...while it may reflect reality in the sense that it reflects how we are organized in society, for the same reason, it does not reflect equality."[42] Society is still based on discrimination and unequal opportunities; thus 'political correctness' and feminist language reform is a way to change gender power relations. Until recently, shifts in pictographic signage remain a great deal behind the times. This is not due to ineptitude or design incompetence, but as was mentioned, to the characteristics of the medium itself.

There is little chance that, in the near future, every 'generic' pictogram can be changed into a female one. It is not easy, for example, to modify the 'No entry' sign (*figure 20*). If one intended to challenge the pseudo-generic male signifier, the resulting sign is somewhat ambiguous, introducing a restrictive meaning that the original did not have. It will very probably be interpreted as prohibiting the entrance, not to people, but *exclusively to women*. As mentioned, a male pictogram may refer to men or people, depending on the context (*see figure 6*). A female pictogram, however, will always be read primarily as meaning 'women.'

As Deborah Cameron said regarding the current discursive practice, "man can efface their masculinity but femininity can never be effaced."[43] And yet, language both encodes and constructs social reality. By constructing alternative, if provisional, discourses one is contributing to undermine those linguistic structures and processes that play such a central role in the maintenance of gender inequality.

Perhaps as important as mainstream projects, with their inevitable long-term shortcomings of passive acceptance and indifference,[44] are the apparently minor gestures of obscure global-resistance groups to reclaim public space. Thus the recent trend by anti-globalization activists and feminist groups is not to simply deface or vandalize sexist commercial ads, but to intelligently subvert them. The same strategy has been applied to signage. A recent example was the campaign of a Portuguese feminist group involving the addition of yellow skirt-stickers to the all-male traffic signals and information signs.[45] Confronting people with unexpected re-gendered figures, which collide with their visual habits, may be highly effective in terms of changing perceptions (*figure 21*).

42—Goddard, A. and L. Patterson. 2000. *Language and Gender*. London: Routledge, p. 73.

43—Cameron, *Feminism and Linguistic Theory...*, p. 69.

44—Last March, after new controversy, the municipality of Fuenlabrada finally managed to change its signs. According to *El Pais* ("Hay una mujer dentro del semáforo", 2/3/2007) many inhabitants did not notice the changes.

45—Colectivo Feminista, September 2006, http://colectivofeminista.blogspot.com/2006/09/nova-coleco-outono-inverno-2006.html

Figure 21 Street action by Colectivo Feminista, September 2006.

To conclude, pictography has obvious limitations (as well as advantages) when compared to verbal languages. A major example of these limitations and difficulties is the representation of gender. Awareness of this fact is important as it allows resistance to idealizing visual languages and metaphors as if they were a magical solution to the

problem. Needless to say, however, these communication forms are indispensable in our modern world and are here to stay.

AUTHOR NOTE

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