Bing, Janet. Penguins can't fly and women don't count: Language and thought
Women and Language. Vol. 15 (Fall 1992), 2; pg. 11-14.

Many people object to sexist and racist language partly because they assume that language not only reflects, but somehow affects attitudes. A one-to-one relationship between language and thought seems obvious to those who never question it, but the issue of whether language influences thought and behavior has been a matter of debate in philosophy even before Berkeley and Wittgenstein. Literary critics, particularly those who call themselves deconstructionists, are still debating to what extent language constructs reality.

Linguists and anthropologists refer to the claim that language influences thoughts as the Sapir-Whorf hypothesis or the linguistic relativity hypothesis. The anthropologist Edward Sapir and his student Benjamin Whorf proposed that different languages provide their speakers with habitual grooves of expression which predispose them to perceive and remember reality in particular ways. Some linguists, such as Fodor, Bever and Garrett (1974) and Schneider and Foss (1977), claim that the results of studies designed to test the Sapir-Whorf hypothesis have disproved it. If they are correct, then feminists are wasting their time attempting to reform the language.

The strong version of the Sapir-Whorf hypothesis, the claim that a speaker's language imposes a particular perception of reality and prevents others, has certainly been disproved, particularly with respect to concrete aspects of reality. In the past thirty years there has been extensive experimentation about how speakers of different languages perceive and remember colors, partly because there is a disparity in the complexity of color systems in different languages (Berlin and Kay, 1969), and partly because perception of colors and color memory is relatively easy to test objectively.

The weaker version of the Sapir-Whorf hypothesis, however, suggests that the language an individual speaks facilitates particular ways of thinking and perceiving, but does not absolutely preclude all others. Ironically, part of the problem may be the negative connotations of the term weak version, a term which suggests a less important version. Because this term can be interpreted as pejorative, I will relabel it the moderate version of the Sapir-Whorf hypothesis. Unlike the "extreme" strong version, which is no longer as issue, the moderate version is supported by empirical evidence, and is still seriously debated.

Evidence that language affects though is not difficult to find. In a study about the effect of language on ability to reproduce simple figures, Carmichael, Hogan and Walter (1932) established that, in many cases, a verbal label substantially affects visual memory. For example, subjects' reproductions of stimuli such as those in Figure 1 were sometimes influenced by words presented before the presentation of pictures.

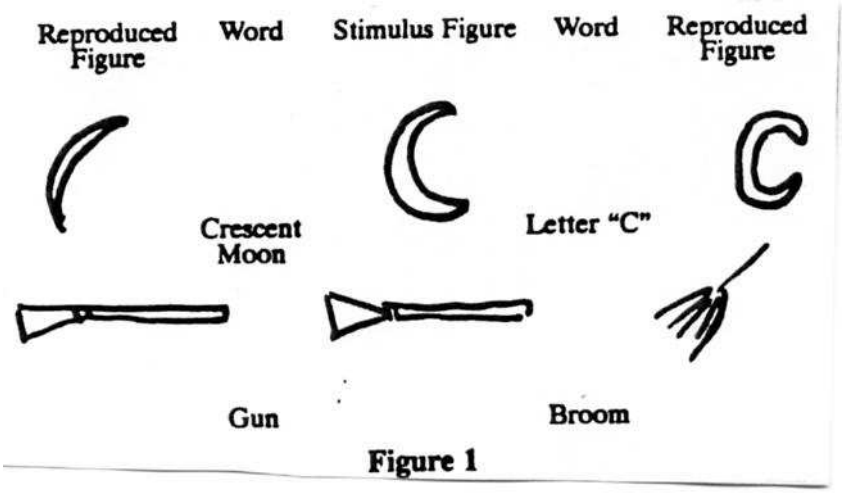

Figure 1

One of the authors' conclusions was, (p. 85) "that in many cases the recall of a visually perceived form is altered by the fact that a particular word is said immediately before the visual presentation of the form."

In another study investigating the cognitive development of children from different cultures and languages, Greenberg and Bruner (1971) ran a series of experiments with monolingual Wolof speakers, monolingual French speakers and bilingual Wolof/French speakers. In one of the experiments, pictures in sets of three were presented to children of different ages. In each set, two pictures were similar in color, two in form, and two in function. For example, one set of pictures contained a yellow banana, a round yellow clock, and an orange. If the children were to group by color, they would group the banana and the clock, if by function, the orange and the banana, and if by shape, the clock and the orange, as illustrated in Figure 2.

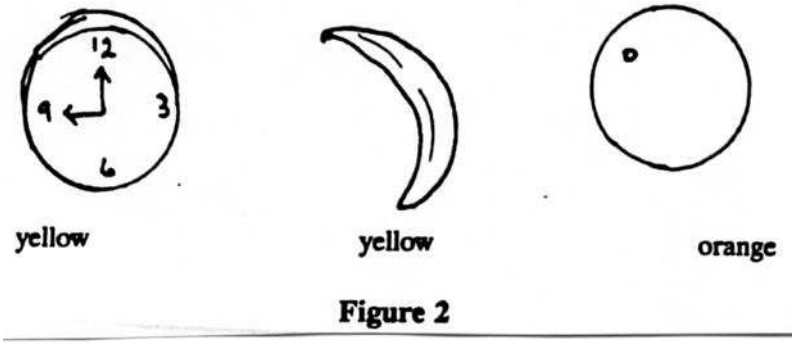

Figure 2

Like most West African languages, Wolof makes no distinctions between certain colors such as orange and yellow. Nevertheless, monolingual Wolof speakers were unable to use anything but color to make the groupings, a result the experimenters hadn't anticipated.

Even more interesting and unexpected was the correlation Greenfield and Bruner found between the linguistic coding of abstractions and other behaviors. Unlike French, Wolof has no general abstract words for either color or shape. In French, as in English, one many think of a color as a concrete attribute such as yellow or as its more abstract superordinate, color. Similar levels of abstraction are also true for shape (round, not round) and function (to eat, to tell time). Speakers who used abstract words such as

shape to explain their groupings of the pictures were usually able to supply more than one kind of attribute, if pressed. Other speakers who explained their choices more concretely with a word such as yellow or round were apparently operating at a lower level of the hierarchy and were less likely to have access to other possible groupings.

This strong correlation between ability to use abstract language and the ability to think of alternative behaviors was one relationship the researchers discovered between language and behavior. Monolingual French children who used "top-of-the-hierarchy" labels such as couleur were almost certain to vary the basis for grouping at least once. Bilingual Wolof children who used an abstract French term were twice as likely to provide a second grouping as those who used a concrete term such as jaune in either French or Wolof, or who simply pointed to the answers. Greenfield and Bruner claim (p.65): In a way quite different from that envisaged by Whorf, we seem to have found an important correspondence between linguistic and conceptual structure. But it relates not to words in isolation but to their depth of hierarchical imbedding both in the language and in thought. This correspondence has to do with the presence or absence of higher-order words that can be used to integrate different domains of words and objects into structures.

Other evidence supporting the moderate version of the Sapir-Whorf hypothesis has come from feminist scholars. Experimenters interested in language and gender have done a number of studies on the interpretation of so-called generic pronouns. Studies reviewed in Martyna (1983) and MacKay (1983) have already established that he and man refer predominately to men. Other studies, such as Bem and Bem (1973), have established the relationship between choice of pronoun and behavior, in this case, responses to job advertisements.

A study by Khosroshahi (1989) establishes a relationship between the use of pronouns and thought. After having been informed that they were participating in a study about mental imagery, its role in the comprehension of abstract sentences, and its relationship to an ability to hold digits in memory, a group of subjects were asked to read paragraphs which concluded in sentences such as "An unhappy person could still have a smile on his face" or "An unhappy person could still have a smile on his or her face." After reading the paragraph, subjects were asked to sketch and name the humans in the paragraphs. Based on the sketches and the names, Khosroshahi was able to determine whether subjects had imagined the human to be male, female or neuter.

Students in these experiments were placed into four groups based on their own use of "traditional" or "reformed" pronouns in their compositions and term papers. Of the 55 students, 25 had previously used "reformed" pronouns such as "he or she" or "s/he" at least once on some composition; of these 25, 13 were women and 12 were men. The "traditional" group of 30 men and women never used these reformed pronouns in their compositions.

Not surprisingly, for all subjects, the fewest number of female images were produced when the pronoun he was used, and the most when he or she was used, as shown in Figure 3.

Figure 3 Reformed and traditional language differences between men and women

Pronoun	Female	Male	Generic
He	0.374	1.331	0.295
He or she	0.683	1.075	0.243
They	0.518	1.266	0.216

Khosroshahi also found differences in the images produced by the four different groups - reformed men, reformed women, traditional men, and traditional women - as shown in the statistics in Figure 4, which are interpreted pictorially in Figure 5.

Figure 4.

Sex	Language	Female	Male	Generic
Women	Reformed (n = 13)	1.000	0.718	0.282
	Traditional (n = 15)	0.689	1.022	0.289
Men	Reformed (n = 12)	0.167	1.556	0.278
	Traditional (n = 15)	0.244	1.600	0.156

FIGURE 5

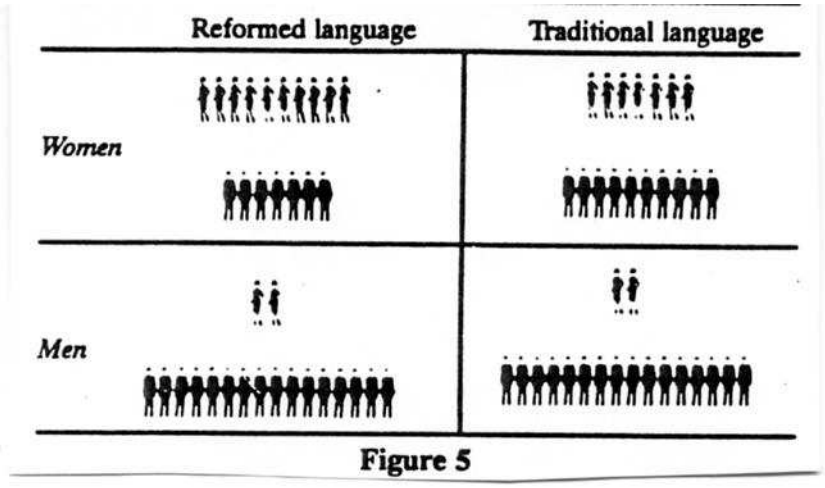

Figure 5

Regardless of whether the paragraph used he, she, he or she, or they, all of the groups proved to be androcentric except for the group of women who had reformed their language. In other words, regardless of the pronoun used, any reference to a human being was interpreted as male unless otherwise specifically noted in the paragraph. As Khosroshahi notes, just as penguins and chickens are on the fringes of the category BIRD, women seem to be marginal members of the PERSON category. The title of the article correctly notes that "penguins don't care, but women do."

As Khosroshahi (1989), Bem and Bem (1973), Martyna (1983), and MacKay (1983) demonstrate, all men and traditional-language women still tend to interpret the pronoun he as psychologically non-generic; generic nouns and pronouns evoke overwhelmingly male images. Only for reformed-language women has a difference been found.

Khosroshahi's data demonstrate that differences in language, in this case using or not using reformed language, relates to differences in thought. However, as indicated in Figures 4 and 5, and changed relationship between language and behavior holds only for some women and not for most men. Khosroshahi concludes that the degree to which new language is associated with new image depends in part on the depth of the underlying change of attitude. She suggests that the reformed pronoun usage of many of the men might have been a fairly superficial change, operative only at the level of a deliberate and public task such as writing a term paper. For such a task, the motivation for men to use reformed pronouns might be related to a concern about the impression such pronouns might make on a female

professor. She suggests that reformed pronoun usage on the part of women may signal a much more significant change of attitude.

The studies by Carmichael, Hogan and Walter (1932), Greenberg and Bruner (1971) and Khosroshahi (1989) fall short of proving the moderate version of Sapir-Whorf, but they certainly show that the Sapir-Whorf hypothesis has not been disproved. The differences in the strong and moderate versions are not contradictions. Afghans, whose language, Dari, has a single word chawki for both bench and chair, are unlikely to confuse the two. However, lacking a term for sexual harassment of feminist, these same Afghans would probably find these concepts difficult to translate, partly because there is no Dari equivalent, and partly because of different cultural assumptions.

Feminist scholars are sometimes accused of having a political agenda, often by those who believe strongly in objective knowledge. These "objectivists" are sometimes those who question the Sapir-Whorf hypothesis. In an introductory textbook in psycholinguistics, Fodor, Bever and Garrett (1974:384-388) review some of the experimental literature relating to the Sapir-Whorf hypothesis and conclude that it has been disproved. However, they cite only evidence against the strong version, as if this evidence also shows that the moderate version is incorrect. They conclude their review of the literature with a revealing statement: If, in short, Whorf's hypothesis were true, it would pose a serious objection to the entire conceptual framework we have assumed in stating the sentence-production problem. The best current evidence suggests, however, that Whorf's hypothesis is probably not true.

Perhaps because the Sapir-Whorf hypothesis presents problems for the theory they argue for, they consider only the evidence against the strong version and fail to mention evidence supporting the moderate version.

Unfortunately, there are others who accept their conclusions. For example, in "Thought, Sex, and Language: the Sapir-Whorf Hypothesis in the American Women's Movement," Schneider and Foss (1977), citing the authority of Fodor, Bever, and Garrett, also conclude that the entire issue of the Sapir-Whorf hypothesis has been settled, with no reference to the moderate version. They contend that feminists who worry about sexist language are misguided and provide little more than a "morale booster." They repeat Robin Lakoff's (1978: 73) earlier argument: Linguistic imbalances . . . are clues that some external situation needs changing rather than items that one should seek to change directly. A competent doctor tries to eliminate the germs that cause measles, rather than trying to bleach the red out with peroxide.

Schneider and Foss believe (p. 3) that "by adhering to the Sapir-Whorf hypothesis, feminists inadvertently have helped to perpetuate and diffuse an outdated, oversimplified and basically inaccurate view of the relationship between thought and language."

Like Schneider and Foss, critics in the popular media such as Stefan Kanfer (1972) accuse feminists of a "touching, almost mystical trust in words." They point to "objective" evidence that language and thought are not related, choosing to cite only that evidence which discredits the strong version.

Not all linguists discount the Sapir-Whorf hypothesis as readily as Fodor, Bever, and Garrett. Lakoff and Johnson (1980) argue that human thought processes depend a great deal on language-based metaphors. They explicitly acknowledge their claims as relevant to the Sapir-Whorf hypothesis, and claim (p.10) that metaphors "structure how we perceive, how we think, and what we do." They contend that perceiving some aspect of reality (such as arguing) in terms of a metaphor (such as fighting a war) tends to encourage people to concentrate on some aspects of experience (such as winning) and ignore others (such as cooperating).

In Women, Fire and Dangerous Things, George Lakoff (1987:xvii) further challenges objectivist views that language merely reflects reality as a "mere mirror of nature or a processor of symbols..." Among other things, Lakoff argues that the categories we choose have a great deal of influence on our understanding of the world. He claims (p.9) "To change the concept of category itself is to change our understanding of the world. At stake is our understanding of everything from what a biological species is... to what a word is..." Drawing heavily upon Elinor Rosch's work in prototypes and categorization, Lakoff's work on metaphor offers a serious challenge to objectivists who would dismiss the influence of language on thought and behavior.

Despite the evidence of Carmichael, Hogan and Walter (1932), Greenfield and Bruner (1971), Martyna (1983), MacKay (1983), Khosroshahi ((1989), Lakoff and Johnson (1980), George Lakoff (1987) and others, most scholars probably still agree that the Sapir-Whorf hypothesis remains just that, a hypothesis. Those who claim it that this hypothesis been disproved generally cite only evidence against the strong version and ignore the considerable evidence supporting a moderate version. Indeed, because of the work of Lakoff and Johnson on conceptual systems, particularly Lakoff (1987, Chapter 18), we now understand that there are many different types of relativism, but most of them are still relatively unexplored. Therefore, until more has been learned about the relationship between language and thought, women and other marginalized groups will do well to pay attention to language and how it is used.

Notes

Figure 1 is based on Chart II, Carmichael, Hogan and Walter (1932:80). Khosroshahi (1989). Reproduced with permission of Cambridge University Press.

Figure 5 from Khosroshahi (1989: 514 and 518). Reproduced with permission of Cambridge University Press.

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