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Language, Thought and Social Attitudes

D. G. MacKay*

Department of Psychology, University of California, Los Angeles 90024, U.S.A.

ABSTRACT

This study examines the effects of prescriptive he on attitudes toward and comprehension of paragraphs. In one experiment, students sympathetic to women's liberation read otherwise identical paragraphs containing either plural they or prescriptive he. Female subjects had lower comprehension and personal relevance scores for the prescriptive he than the plural paragraph, whereas the opposite was true of male subjects. And more females than males judged the prescriptive he paragraph to have a male author. An otherwise identical experiment, using students with less favourable attitudes towards women's liberation, replicated only the judgements concerning the sex of the author. Perceived personal relevance and comprehension scores of females were higher for the prescriptive he than These and other findings suggested that prescriptive he inplural paragraph. fluences attitudes but that its effect depends on the evaluative framework of the Implications of these findings for a general theory of the relation between language and thought were discussed along with several other issues of interest to social psychology.

Key words

Language; sex; male; female; he ; attitudes; descriptive vs evaluative concepts; Whorf-Sapir; feminism

INTRODUCTION

Language can be described as a set of social conventions and it is of considerable interest how these conventions are determined and maintained. The present study examines a convention determined by prescriptive grammarians and maintained for the past 250 years by our schools and publishing establishments. The convention is the use of he to mean 'he or she'.

Prescriptive <u>he</u> carries special interest for social psychologists not just because it involves the regulation of social behaviour but because current attempts to de-

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fend or analyse the prescription incorporate important social and psychological assumptions. The present study examined two of these assumptions, outlined below.

The triviality assumption

MacKay and Fulkerson (1979), Martyna (1978) and Kidd (1971) found that people systematically misinterpret prescriptive he as referring to a male rather than a generic person. But under the triviality assumption, misinterpretation of prescriptive he incurs no serious psychological or social consequences. For example, Lakoff (1973) argued that prescriptive he is a trivial problem which is "less in need of changing" than other aspects of sexist language. Others consider prescriptive he a loaded term with subtle and powerful effects on general attitudes (see Miller and Swift 1976 and Geiwitz 1978) as well as specific behaviours such as applying for jobs (see Bem and Bem 1973) and prescriptive he has too many characteristics in common with highly effective propaganda techniques for this view to be ignored. As a device for shaping attitudes, prescriptive he has the advantage of frequency (over 10° occurrences in the course of a lifetime for educated Americans: see MacKay 1979), early age of acquisition (prescriptive he is learned long before the concept of propaganda itself), covertness (questioning the use of prescriptive he is difficult since it is usually not intended as an open attempt to maintain or alter attitudes), association with high prestige sources (it is especially prevalent in some of society's most prestigious literature such as university textbooks), and indirectness (prescriptive he presents its message indirectly as if it were a matter of common and well-established knowledge).

The language independence assumption

Under the language independence assumption, language and thought involve autonomous and independent processes, so that effects of prescriptive he on our thinking or view of the world are out of the question. This language independence assumption contradicts the Sapir-Whorf hypothesis which many feminists have endorsed but which has never been verified and is meeting with growing scepticism. For unlike the triviality assumption, there exists good but fragmentary evidence in favour of the language independence assumption. For example, Rosch (1973) found that the conceptual coding of colours and forms is similar for speakers of English and Dani, languages that code shapes and colours in dramatically different ways. Moreover, MacKay and Fulkerson (1979) found no effect of prescriptive he on the conceptual representation of the classes prescriptive he refers to since subjects accurately judged the percentages of males and females falling into classes such as doctor, even though they miscomprehended prescriptive he as male in sentences such as "A doctor usually sees his patients in an office".

However, subjective attitudes differ in important respects from objective judgements concerning the nature of colours, forms, and occupational classes. And if prescriptive he operates as an attitude shaping device, then both the triviality and language independence assumptions are incorrect. The present study therefore examined whether prescriptive he influences attitudes towards the content and author of paragraphs. One of the specific issues was whether women unconsciously evaluate paragraphs containing prescriptive he as less relevant to their personal lives than do men.

EXPERIMENT I

METHOD

<u>Materials</u>

Since representativeness is important for prescriptive considerations, the present study used materials characteristic of those encountered in the everyday experience of university students: a paragraph from a UCIA textbook in current use. The original paragraph (see Appendix) contained 20 uses of the pronoun they re-

ferring to persons or individuals, categories which 80 subjects in MacKay and Fulkerson (1979) rated 49% male and 51% female on the average.

Three additional paragraphs were formed by altering the pronouns and their antecedents. The 'prescriptive he' paragraph was formed by changing the theys to he and singularising the antecedents. The 'Mike Scott' paragraph resembled the prescriptive he paragraph except for the antecedent Mike Scott in the first sentence (see Appendix). The 'Mary Scott' paragraph resembled the Mike Scott paragraph except that Mary replaced Mike and she replaced he. A two word title (Self fulfilment) captioned each paragraph.

Since the content of all four paragraphs was identical, differences in attitudes toward the paragraph could only be due to the pronouns (they versus perscriptive he) or the nature of the antecedent (specific versus non-specific). The sex-specific paragraphs determined whether readers find specific individuals more personally relevant than non-specific individuals while the plural paragraph was an uncontestably generic version for comparison with prescriptive he.

Subjects and procedures

A male and a female experimenter administered the experiment to 234 UCLA undergraduates (115 males and 129 females; mean age 20) in groups of 15 to 165 with the four paragraphs assigned at random within each group.

The subjects were instructed as follows: "This is a study of the comprehension and personal relevance of paragraphs. You will have 2 minutes to read a paragraph absorbing as much information as you can. Following a signal to turn the page, you will use the IBM card provided to answer questions concerning your comprehension of the paragraph and its relevance to your personal experience. Are there any questions?"

Subjects had 7 minutes to answer 15 multiple-choice questions (see Appendix) concerning the content of the paragraph, its relevance to their personal lives, their opinion of the author, their awareness of the independent variables, their attitude toward sex roles, their self concept, their sex and other personal data.

RESULTS AND DISCUSSION

The main results appear in Table 1. Comprehension was significantly better for males than females reading the <u>Mike Scott</u> and prescriptive <u>he</u> paragraphs ($X^2 = 1.18$, df = 1, p < .05) but not for the <u>Mary Scott</u> paragraph ($X^2 = 0.07$, df = 1, p < 0.70) and slightly poorer for males than females reading the plural paragraph ($X^2 = 2.88$, df = 1, p < .10). Females comprehended the prescriptive <u>he</u> paragraph worse than any other, whereas males comprehended the prescriptive <u>he</u> and <u>Mike Scott</u> paragraphs better than any other paragraph. Such findings indicate that comprehension of paragraphs with identical content varies jointly with subject sex, paragraph topic and paragraph pronoun.

Comprehension correlated positively with answers to the personal relevance question (r=.16, p<.05), a reasonable outcome which testifies to the validity of answers to the questionnaire. Judged personal relevance was significantly higher for males than females reading the <u>Mike Scott</u> and prescriptive <u>he</u> paragraphs, $(X^2=4.38, df=1, p<.05)$, about equal for males versus females reading the <u>Mary Scott</u> paragraph $(X^2=2.91, df=1, p>.05)$, and slightly lower for males than females reading the plural paragraph $(X^2=1.34, df=1, p>.20)$. Personal relevance was significantly higher for males reading the <u>Mike Scott</u> and prescriptive <u>he</u> paragraphs than for all other paragraphs $(X^2=4.44, df=1, p<.05)$.

TABLE 1. Comprehension errors, Personal Relevance and Assumed Author Male

			Paragraph Conditions					
	Subject Sex	Mike Scott	Prescriptive <u>he</u>	Mary Scott	Plural	Total		
Comprehension errors (%)	Female	16	20	16	16	17		
	Male	9	10	14	25	15		
Personal relevance (% somewhat and highly)	Female	69	8 1	81	88	80		
	Male	93	95	77	78	86		
Author question (% likely/very like male)	Female	71	84	36	61	63		
	Male	86	68	46	57	64		

Results for the author question were similar for males and females reading all but the prescriptive \underline{he} paragraph. Both males and females judged the author to be male more often for the <u>Mike Scott</u> than <u>Mary Scott</u> paragraph (X' = 3.88, df = 1, p < .05), with the plural paragraph falling in between. People apparently associate paragraphs about a female with a female author, paragraphs about a male with a male author, and truly generic paragraphs with either a male or a female author. However, females judged the author of the prescriptive \underline{he} paragraph to be male more often than male subjects (X' = 5.01, df = 1, p < .05) and more often than any other paragraph (X' = 4.97, df = 1, p < .05). These findings are all the more striking since females reading the <u>Mary</u> and <u>Mike Scott</u> paragraphs judged the author to be male <u>less</u> often than did males (see Table 1). Females were apparently sensitive to the use of prescriptive \underline{he} in this experiment and judged such usage as more characteristic of a male than a female author.

Answers to the self-concept questions were unrelated to any of the independent variables, corroborating the contention that short-term events such as reading a paragraph have no effect on self evaluation. Subjects answering the awareness question (see Appendix) mentioned the paragraph topic (self-fulfilment) as a factor which might influence their perceived relevance and comprehension but none mentioned independent variables such as <u>Mike Scott</u>, <u>Mary Scott</u> or prescriptive <u>he</u>.

In summary, the results of Experiment I indicate that prescriptive <u>he</u> influences comprehension, personal relevance and supposed author of a paragraph, but its effects vary with sex: superior comprehension and perceived self relevance for males than females reading paragraphs containing prescriptive <u>he</u> and greater attribution of prescriptive he to a male author by females than by males.

These effects are readily explained under the hypothesis that prescriptive <u>he</u> unconsciously shapes our attitudes toward what we read. Under this hypothesis, females feel excluded from material containing prescriptive <u>he</u> (see Nilsen, 1977) paying less attention to its content and thereby comprehending it with greater difficulty. Males on the other hand readily attend to and comprehend paragraphs containing prescriptive <u>he</u> since they can easily identify with or relate to the material in such paragraphs. Such effects clearly contradict the triviality assumption and support the hypothesis that prescriptive <u>he</u> has serious psychological consequences.

However, we were concerned with the generality of these findings since other investigators have reported comprehension differences between males and females in the opposite direction (see Maccoby and Jacklin 1974). We therefore attempted to replicate and extend the present findings in Experiment II.

EXPERIMENT II: A REPLICATION AND EXTENSION

Students at UCLA generally express overwhelming sympathy for the women's movement. Of a recent sample of UCLA student (N=92) 63% responded supporting or strongly supporting the movement, 5% opposing or strongly opposing the movement and 32% neutral. We therefore wanted to replicate the results of Experiment I with other populations less supportive toward the movement. The population we chose was Los Angeles high school students who Mitchell (1979) described as part of a "selfcentred syndrome", an apathetic group in an age of apathy, a "me generation", trying to get ahead within the system. Consistent with this report, in a sample of 117 high school students 19% responded supporting the women's movement, 15% opposing the movement, and 65% neutral.

METHOD

Materials and procedures resembled those in Experiment I. The experiment was administered to 233 high school students (112 males and 121 females; mean age 16 years) in classrooms of size 30 to 52. More men (74%) than women (64%) felt that men had more opportunity to become self-fulfilled than women in our society but more women (77%) than men (70%) felt they were capable of becoming self-fulfilled. Approximately equal numbers of men (60%) and women (63%) expressed a desire to become self-fulfilled.

RESULTS AND DISCUSSION

None of the subjects answering the awareness question mentioned the independent variables as factors that might influence their comprehension and perceived relevance. The main results appear in Table 2. Comprehension was significantly

TABLE 2: Results for Experiment II (in %)

			Paragraph Conditions				
	Subject Sex	Mike Scott	Prescripti v e <u>he</u>	Mary Scott	Plural	Total	
Comprehension errors (%)	Female	34	20	33	29	29	
	Male	34	35	38	38	36	
Personal relevance	Female	63	70	64	64	65	
(% somewhat and highly)	Male	62	58	69	60	62	
Author question (% likely/very like male)	Female	64	74	51	63	63	
	Male	62	65	77	58	65	

better for females than males reading the prescriptive \underline{he} paragraph ($X^2 = 7.59$, df = 1, p < .01), but not for the remaining paragraphs. This finding contrasts with Experiment I where males comprehended the prescriptive \underline{he} paragraph better than females. Likewise, females in Experiment II comprehended the prescriptive \underline{he} paragraph worse than any other paragraph.

Comprehension correlated positively with answers to the personal relevance question (r = .21, p < .05). Judged personal relevance was significantly higher for females than males reading the prescriptive <u>he</u> paragraph (X = 5.79, df = 1, p < .02), and males found the prescriptive <u>he</u> paragraph less relevant than any other paragraph.

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Females judged the author to be male more often for the <u>Mike Scott</u> than <u>Mary Scott</u> paragraph, with the plural paragraph falling in between. And they judged the author of the prescriptive <u>he</u> paragraph to be male more often than any other paragraph. As in Experiment I, females were apparently sensitive to the use of prescriptive <u>he</u> and judged such usage as more characteristic of a male than a female author.

To summarise, prescriptive <u>he</u> influenced comprehension and attitudes toward the paragraph, but in a manner opposite Experiment I: better comprehension and perceived self relevance for females than males reading paragraphs containing prescriptive <u>he</u>. The only aspect of Experiment I replicated in Experiment II was the greater attribution by females of prescriptive <u>he</u> to a male author.

GENERAL DISCUSSION

This section attempts to reconcile the conflicting results of Experiments I and II and previous studies of language and thought. The reconciliations are of necessity <u>ad hoc</u> in nature but carry interesting implications for future research into relations between language, thought and social attitudes.

Previous studies failed to find a relation between language and thought because they examined the wrong type of thought: descriptive rather than evaluative thought. Descriptive thought involves judgements about observable aspects of the external world. Judgements of the shape or colour of objects as in Rosch (1973) are prime examples of descriptive thought. So are judgements concerning the sex ratio of occupational classes as in MacKay and Fulkerson (1979). People rely on more extensive, more reliable, and more accurate language-independent or perceptually based knowledge for making such judgements concerning the nature of the real world. For example, through extensive real world experience, people come to know that the category <u>person</u> includes females and males in approximately equal proportions and can ignore the language which prescribes <u>he</u> to refer to a person and thereby suggests that this class excludes women.

Prescriptive he may nevertheless influence descriptive thought in the case of children lacking real world or perceptually based information concerning the nature of rarely encountered categories such as technician. But in general, language is much more likely to influence evaluative thought: subjective or personal judgements concerning the value of objects and events, for which good, perceptually based data are out of the question. Indeed, the present data support such a hypothesis since prescriptive he influenced attitudes concerning the personal relevance of the paragraphs. Future research should therefore concentrate on relations between language and evaluative rather than descriptive thought. For example, no further experiments are needed to show that descriptive thinking about snow is identical for speakers of English and Eskimo even though Eskimo has many more words for snow than English. Studies of evaluative effects seem warranted, The many Eskimo words for snow may suggest to members of Eskimo society that fine discriminations among different types of snow are important and personally relevant, for example.

Consider now the conflicting results of Experiments I and II. Taken together, both experiments suggest that prescriptive he unconsciously influences thought but in different ways depending on pre-existing social attitudes of the reader.

Thought is therefore related to language, but only indirectly in somewhat the same way that research conclusions are related to evidence. As Fodor (1975) and Macnamara (1977) point out, thought and interpretation in general resemble a detective's search for clues, guided by a theory of how such and such a murder could occur. The same clue can lead to different conclusions depending on the theory of the murder.

Implications drawn from the clue of prescriptive he differ depending on one's theory or evaluation of the processes underlying the clue. UCLA women were predominantly pro-feminist and undoubtedly resented discrimination against women as well as assignment of peripheral status to women in both the language and society at large. Such resentment could account for their difficulty in comprehending the prescriptive he paragraph. A similar explanation accounts for their perception of the Mary Scott paragraph as more personally relevant than the Mike Scott paragraph, since pro-feminist women tend to identify with other women (Bate 1975).

By comparison, the prevailing attitudes of the high school students could be characterised as pro status quo. For whatever reason, the high school women probably accepted the implication of the language and society at large that women in general are peripheral or unimportant. But since these women felt capable of becoming self-fulfilled even though society provided less opportunity for their self-fulfilment they must have considered themselves an exception to the general rule, each viewing herself as extraordinary and capable of success in a 'man's world'.

This pattern of attitudes could explain why the high school women found the prescriptive he paragraph more personally relevant than the Mary Scott paragraph. 'Establishment messages' signalled by the use of prescriptive he interested the high school women but not messages about another woman, a class they had little desire to identify with.

These contrasting response patterns fit Bate's (1975) description of the <u>Queen Bee</u> and the <u>feminist approach</u> to resolving the cognitive contradiction between being a "generic man" and an "invisible woman". However these response patterns are quite general in nature, representing two of the ways that people handle inconsistencies between different sources of information (see McGuire 1967) and might best be labelled the <u>assimilation approach</u> (where an oppressed group such as women or blacks assume the values of the dominant culture) and the <u>egalitarian approach</u> (where males and females, whites and blacks are viewed as different but equal).

A third possibility described by Bate (1975) is the <u>conformist approach</u>. A woman using this approach can overcome the inconsistency between being a person and being excluded from the category person in paragraphs containing prescriptive <u>he</u> by accepting the connotation that women are inferior and peripheral and by "denying such motives as ambition and adventurousness which fail to fit the category woman". (Bate, p.6). However, it seems unlikely that the conformist pattern played a major role in the present results. Women are more visible than ever before in American society and the ongoing, widespread discussion of women's abilities and opportunities makes it difficult for contemporary women to accept or believe in the peripheral or inferior status required by the conformist approach.

In conclusion, language influences thought but the nature of its effect depends on the interpretive strategy or evaluative framework of the thinker. Since different evaluative frameworks can give completely opposite results, future studies of language and thought must take this factor into consideration and previous studies which overlooked this factor must be re-evaluated.

The present findings also refute the language independence and triviality assumptions on which the defence of prescriptive he has rested for so long. Prescrip-

tive he unconsciously conveys a social message, even though perceivers can localise the message to the sender or class of senders and react to the message in terms of their own framework of thought. A complete evaluation of prescriptive he therefore requires an evaluation of the frameworks for handling it. For example, one must evaluate the desirability of the assimilation or Queen Bee framework which entails a loss of sisterhood among women and condescension towards women in general as well as the conformist approach which entails a diminished self concept for women (see Bate 1975). Determining the full extent of the psychological effects of prescriptive he presents a major challenge for the social psychology of language.

REFERENCES

Bate, B. A. Generic man, invisible woman: language, thought and social change. Michigan Papers in Women's Studies, 1975, 2, 1-13

Bem, S. and Bem, D. Does sex-biased job advertising "aid and abet" sex discrimination? <u>Journal of Applied Social Psychology</u>, 1974, 24, 142-9 Fodor, J. A. <u>The language of thought</u>. New York: Crowell, 1975 Geiwitz, J. Another plea for <u>E</u>. <u>APA Monitor</u>, 1978, August, 3-10

Kidd, V. A study of the images produced through the use of a male pronoun as the generic. Movements: Contemporary Rhetoric and Communication, 1971, 1, 25-30

Lakoff, R. Language and women's place. Language in Society, 1973, 2, 45-80 Maccoby, E. E. and Jacklin, C. N. The psychology of sex differences. Stanford University Press, 1974

MacKay, D. G. and Fulkerson, D. C. On the comprehension and production of pronouns Journal of Verbal Learning and Verbal Behavior, 1979, in press

MacKay, D. G. On the goals, principles and procedures for prescriptive grammar. Submitted for publication, 1979

Macnamara, J. Problems about concepts, in J. Macnamara (Ed.) Language learning and thought. New York: Academic Press, 1977

Martyna, W. What does 'he' mean? <u>Journal of Communication</u>, 1978, <u>238</u>, 131-38 McGuire, W. J. The current status of cognitive consistency theories, in M. Fishbein (Ed.) Readings in attitude theory and measurement. New York: John Wiley and Sons, 1967

Miller, C. and Swift, K. Words and women: new language in new times. City, New Jersey: Doubleday, 1976

Mitchell, J. L. ABCs of the last class of the '70s - from apathy to Appalachia. Los Angeles Times, West Side, June 10, 1979, Part 10, p.1

Nilsen, A. P. Sexism in children's books and elementary classroom materials, in A. P. Nilsen, H. Bosmajian, H. L. Gershuny and J. P. Stanley (Eds.) Sexism and language. Urbana, Ill.: National Council of Teachers of English, 1977 Rosch, E. Natural categories. Cognitive Psychology, 1973, 4, 328-350

APPENDIX (plural version)

Happy, fulfilled individuals display an uncommon absence of approval-seeking. They can function without approval and applause from others. They do not seek out honours as most others do. They are unusually free from the opinion of others almost uncaring about whether someone likes what they have said or done. neither attempt to shock others, nor to gain their approval. They are so internally directed that they are literally unconcerned about others' evaluations of their behaviour. They are not oblivious to applause, they just don't seem to need it. They can be almost blunt in their honesty since they don't couch their messages in carefully worded phrases designed to please. If you want to know what they think, that's exactly what you'll hear. Conversely, if you criticise them they will filter it through their own values and use it for growth. They recognise that they will always incur some disapproval. They are unusual in that they are able to function as they, rather than some external other, dictates.