

COREFERENCE AND SENTENCE STRESS IN ENGLISH AND POLISH

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1. In one of my earlier papers (Szwedek 1974a : 214) I wrote that "there would seem to be in Polish three ways in which coreference is accomplished
 - a) pronouns,
 - b) intonation,
 - c) word order".

At first glance word order seemed to be the most interesting because nothing had been done along these lines before, and besides, the indisputable traditional dogma had always been that the word order of sentence elements in Polish is free. In the course of investigation, however, it was becoming more and more apparent that it is not the word order alone that determines coreferentiality of nouns, but that there is a very close relationship between coreferentiality, word order and the place of the sentence stress.

2. As I have indicated earlier (Szwedek 1974b) sentence stress in Polish may fall on any word, although in some cases it may seem awkward at first glance. As should be expected nothing changes in the coreference if the noun is preceded by a demonstrative pronoun, regardless of the place of the stress. For example, in the sequence sentence (2) of the following pair

- (1) *W parku widziałem chłopca.*
(In park I saw boy)
- (2) *Ten chłopiec czytał książkę.*
(This boy was reading book)

the noun *chłopiec* is coreferential with *chłopiec* in (1), no matter which word bears the sentence stress.

The cases that may be of interest, then, are those in which nouns are not preceded by any coreference marker. In such cases coreference, I claimed, is indicated by word order. Considering (3), (4) and (5), for example,

- (3) Chłopiec czytał książkę.
(Boy was reading book)
(4) Książka miała zieloną okładkę.
(Book had green cover)
(5) Zieloną okładkę miała książka.
(Green cover had book)

we find that only (4) can be a sequence sentence of (3). (5) is wrong if it has the same intonation pattern as (4). This last statement is, I believe, crucial for the following discussion.

Two observations can be made as to a) word order, b) sentence stress with respect to (3), (4) and (5):

- a) the word order in (4) (as a sequence sentence to (3)) signals that the initial noun is coreferential and the final noun is noncoreferential,
b) the sentence stress in (3) and (4) falls on the noun in the final position.
(5) with the same intonation pattern as (4) can not be a sequence sentence of (3).

If, however, the change of the word order is accompanied by a simultaneous change of the place of the sentence stress in such a way that it remains with the same noun, as in (5a)

(5a) Zieloną OKŁADKĘ miała książka.

the sentence becomes a correct sequence sentence of (3).

A simple general conclusion is that it is not the word order alone that determines coreferentiality of nouns, but it is the relation of the segmental structure to the suprasegmental structure that is essential. A particular conclusion is that the noun with the sentence stress has a noncoreferential interpretation and that it most often appears in sentence final position because the normal intonation (as defined negatively by Chomsky (1969) as not having a contrastive or emphatic stress) in Polish has the sentence stress on the last element. It may also be added that it seems natural that the noncoreferential noun (the new piece of information) should bear the sentence stress in sentences with normal intonation.

3. Let us, now, consider briefly the problem in English. Akmajian and Jackendoff (1968) pointed out that stress plays a role in determining how the reference of pronouns is to be interpreted. For example, in sentence (6)

(6) John hit Bill and then George hit him.

him refers to Bill if it is unstressed, but it may refer either to John or to someone other than John or Bill if it is stressed.

With respect to common nouns coreferentiality in such simple sentences as

(7) I bought a book yesterday.

(8) I bought the book yesterday.

is segmentally marked by the articles. And yet, there are also distinct differences as to the place of the sentence stress. In (7) the sentence stress falls

on the indefinite noun *book*, and in (8) on *yesterday*, leaving *book* unstressed. The sentence stress on other words in (7) and (8) seems to be of contrastive type. Thus, the stress on *I* emphasizes the fact that it was not somebody else who bought the book, the stress on *bought* — that I did not steal it, the stress on *yesterday* in (7) that it was not a week ago. Notice also that if the stress on *yesterday* in (8) is to be contrastive it must be much stronger and the whole intonation pattern changes. A change of the word order is not possible in English but we may have sentences in which the initial noun is indefinite:

(9) A man was coming.

(as a sequence to something like *I heard a noise and turned round*)

Again, coreferentiality is indicated by the article but at the same time it is the indefinite noun that bears the sentence stress. What has changed here in comparison with a normal intonation pattern is the place of the sentence stress. With the definite article as in (10)

(10) The man was coming.

(as a sequence to, for example, *I had been waiting for a man. I turned round*) the sentence stress will take its normal position on *coming*.

4. A comparison of the following English and Polish congruent sentences may make the issue clearer.

(11) The man was hitting a woman.

(12) A man was hitting the woman.

(13) A man was hitting a woman.

(14) Mężczyzna bił kobietę.

(15) Kobietę bił mężczyzna.

(16) (Jakiś) mężczyzna bił kobietę.

They may be sequences to, for example, the following:

(17) I saw a man in the street.

(18) I saw a woman in the street.

(19) What happened?

(20) Widziałem na ulicy mężczyznę.

(21) Widziałem na ulicy kobietę.

(22) Co się stało?

In (11) and (12) the sentence stress falls on the indefinite noun, which means that the intonation patterns are different but the word order is the same. In respective Polish sentences (14) and (15) the sentence stress also falls on the indefinite noun, and the same intonation pattern is saved at the cost of word order. On the whole word order shift seems to be preferable to sentence stress shift, as in (23)

(23) MEŻCZYŻNA uderzył kobietę.

which seems to be of contrastive type as regards the initial noun.

In (13) and (16) the nouns are stressed more or less equally, it seems, which only supports the observations stated above.

It would also be interesting to see how the sentence stress is placed when the two nouns are to have definite interpretation, as in (24) and (25):

(24) The man was hitting the woman.

(25) Mężczyzna bił (tę) kobietę.

with, for example, (26) and (27) as opening sentences:

(26) A man and a woman were standing next to me.

(27) Obok mnie stali mężczyzna i kobieta.

From the observations formulated above it would follow that the stress does not fall on either noun. And indeed, in both (24) and (25) we find that the sentence stress falls on the verb.

The phenomenon presents itself more explicitly if the object noun is replaced by a personal pronoun. For example, (15) becomes

(28) Bił ją MEŻCZYŻNA.

if the preceding sentence is (21). It may also appear as

(29) MEŻCZYŻNA ją bił.

with the sentence stress on the same noun.

We do not have anything like (30)

(30) Mężczyzna bił JĄ.

which again supports the conclusion that definite elements are not normally stressed (unless for contrast or emphasis).

We may also have (31)

(31) Mężczyzna BIŁ ją.

which is a natural continuation of (27) and the initial noun must be interpreted coreferentially.

Likewise in English, in (32) and (33)

(32) The man hit her.

(33) A man hit her.

her is never stressed. (32) with the sentence stress on *hit* is a natural response to (26), and (33) with the sentence stress on *man* is a natural response to (18).

Thus, I think, it is correct to formulate the following conclusions:

a. the relation of the place of the sentence stress to coreference is the same in English and in Polish, and in normal intonation the stress falls on the noncoreferential noun. If there is no noncoreferential noun in the sentence the stress falls on the last prominent word (for example I'm COMING, I read it YESTERDAY), but never on the coreferential noun.

b. the shift of the sentence stress is determined by the possibility of word order changes. In English it is the sentence stress that moves; in Polish either the sentence stress or word order may change provided the stress falls on the noncoreferential noun. It has been suggested that word order change seems to be preferable.

I also want to add that Polish linguists, for example Szober (1967), treated

word order change in Polish as something of focus and presupposition problem. The relation between coreference, word order and focus and presupposition is under investigation.

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