This issue of the journal includes these papers on contrastive linguistics: "Some Problems of YES-NO Answers" (Aleksander Szwedek); "Danish versus Russian. A Short Analysis of the Verb" (Christian Hougaard); "Polish SIE Constructions and Their English Counterparts" (Wojciech Kubinski); "More on the Time Reference and the Analysis of Tense" (Michael Sharwood Smith); "On Performatives" (Zenon Jaranowski); "Problems of Raised Constructions in English and Polish" (Alina Boniewicz); "Subject- and Topic-Prominence in Polish and English" (Wlodzimierz Rybarkiewicz); "Some Remarks on Multiple Negation in English and Polish" (Anna Charezinska); and "The Perception and Imitation of the British English [Phonemes—'TH'] by Polish Speakers" (Danuta Wolfran-Romanowska). A bibliography of English-Polish contrastive studies in Poland (Barbara Plocinska) is appended. (MSE)
THE POLISH-ENGLISH CONTRASTIVE PROJECT

PAPERS AND STUDIES
IN CONTRASTIVE LINGUISTICS

VOLUME FIFTEEN

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BEST COPY AVAILABLE
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aleksander Szewodzki (Bydgoszcz): Some problems of YES–NO answers</td>
<td>5</td>
</tr>
<tr>
<td>Christian Hougaard (Copenhagen): Danish versus Russian. A short analysis of the verb</td>
<td>13</td>
</tr>
<tr>
<td>Wojciech Kubiński (Gdańsk): Polish SIE constructions and their English counterparts</td>
<td>55</td>
</tr>
<tr>
<td>Michael Sharwood Smith (Utrecht): More on the time reference and the analysis of tense</td>
<td>67</td>
</tr>
<tr>
<td>Zenon Jaranczowski (Łódź): On performatives</td>
<td>81</td>
</tr>
<tr>
<td>Alina Boniewicz (Poznań): Problems of raised constructions in English and Polish</td>
<td>95</td>
</tr>
<tr>
<td>Włodzimierz Rybarkiewicz (Łódź): Subject- and topic—prominence in Polish and English</td>
<td>111</td>
</tr>
<tr>
<td>Anna Chareźnińska (Lublin): Some remarks on multiple negation in English and Polish</td>
<td>121</td>
</tr>
<tr>
<td>Danuta Wolfram-Romanowska (Poznań): The perception and imitation of the British English /θ/ and /ð/ by Polish speakers</td>
<td>137</td>
</tr>
<tr>
<td><strong>BIBLIOGRAPHY</strong></td>
<td></td>
</tr>
<tr>
<td>Barbara Plocińska (Poznań): Bibliography of English-Polish contrastive studies in Poland</td>
<td>163</td>
</tr>
</tbody>
</table>
SOME PROBLEMS OF YES – NO ANSWERS

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The literature on Yes-No questions is quite abundant. Yes-No answers and the problems connected with them have not been discussed very often. The present paper offers some observations on the responses the addressee may utter and their relevance in discourse analysis.

From the point of view of the addressee and the responses he can provide, Yes-No questions and statements seem to bring about similar answers. In Yes-No questions the speaker asks whether what he is saying is acceptable to the addressee as true; in statements he proposes the addressee to believe that what he is saying is true. In both cases the addressee may agree or disagree with what the speaker suggests to accept as true, and syntactically he can do it by uttering positive or negative sentences, as illustrated by the following examples:

(1) Has he written a book?
   (2a) Yes, he has.
   (2b) No, he hasn't.
(3) He has written a book.
   (4a) Yes, he has.
   (4b) No, he hasn't.

Similarly in Polish:
(5) Czy on napisał książkę?
   (6a) Tak, napisal.
   (6b) Nie, nie napisał.

1 See E. Pope (1972) for more details on question-answer system along somewhat different lines.

2 Polish does not use auxiliaries and do, so the lexical verb has to be repeated or left out. It seems that sometimes the answer is correct or sounds better with the verb repeated and sometimes without it. I have not investigated the reasons of this phenomenon.
However, the same system does not work with negative questions and statements, as illustrated by the examples below:

(9) Hasn’t he written a book?
   (10a) Yes, he has.
   (10b) No, he hasn’t.

but (11) He hasn’t written a book.
   (12a) Yes, he has.
   (12b) No, he hasn’t.
   (12c) Yes, he hasn’t.
   (12d) No, he has.

And similarly in Polish:

(13) Czy on nie napisał książki?
   (14a) Tak, napisał.
   (14b) Nie, nie napisał.

(15) On nie napisał książki.
   (16a) Tak, napisał.
   (16b) Nie, nie napisał.
   (16c) Tak, nie napisał.
   (16d) Nie, napisał.

Let us first examine the statement-response situation. It is necessary to keep in mind here that (11) may have a number of interpretations depending on the place of the sentence stress. I will not go into details here, as the phenomenon of negation association with focus has been discussed among others by Jackendoff (1972) and Szwedek (1976). It appears that the texts under analysis can be grouped in two ways:

(17) a. the traditional, question vs answer distinction,
   b. two answers vs four answers distinction, i.e., on the stimulus side:
      positive questions
      negative questions vs negative statements.
      positive statements

The structure of the responses, particularly to negative statements, indicates that the addressee feels there are two components he can agree or disagree with, i.e.,

(18) a. Speaker’s claim about a proposition X,
   b. Proposition X itself.
In some cases this double structure is signalled by a pause between, for example, No and he has in (12d), which shows that No and he has refer to two different elements. As indicated above, with such a complex structure the addressee has a choice of negating or confirming two elements as specified in (18). If we use T (truth, the attitude of the speaker to his proposition) for (18a) and S (sentence) for (18b), we may show the interaction between the speaker and the addressee in the following diagrammatic way:

(19) Agreement:
   a. Positive:
      Speaker          Addressee
      T                T
      ↓                ↓
      S₁               S₂

Explanation:
   Speaker utters S₁ as true. Addressee shares T with the speaker, so he utters S₂.

Examples (3)—(4a)
   b. Negative:
      Speaker          Addressee
      T                T
      ↓                ↓
      Neg S₁          Neg S₂

Explanation:
   Speaker utters Neg S₁ as true. Addressee agrees, so he utters Neg S₂.

According to this formula the response should be (12c), where Yes would refer to Addressee’s T (addressee agrees), and he hasn’t to the proposition S₁. And that indeed is one of the possibilities. The other possible response (12b) is most probably a simple extension of Neg from S₁ to the left.

(20) Disagreement:
   a. Positive-negative:
      Speaker          Addressee
      T                Neg T
      ↓                ↓
      S₁               Neg S₂

---
1 This is in agreement with sincerity condition.
2 We will assume throughout the paper that S₁ and S₂ refer to the same proposition.
3 Cf. perhaps better: Right, he hasn’t or So he hasn’t.
4 This is by no means exceptional or unique; cf. I think he is not coming vs I don’t think he is coming.
Explanation:
Speaker utters \( S_1 \) as true. Addressee disagrees that \( S_1 \) is true, and he utters \( \neg S_2 \).

Example (3)—(4b)

b. Negative-positive:

\[
\begin{array}{c|c}
\text{Speaker} & \text{Addressee} \\
\hline
T & \neg T \\
\downarrow & \downarrow \\
\neg S_1 & S_2
\end{array}
\]

Explanation:
Speaker utters \( \neg S_1 \) as true. Addressee disagrees that \( \neg S_1 \) is true, so he utters \( S_2 \).

Again according to this formula the response should be (12d), where \( \neg S \) would refer to \( T \) (Addressee disagrees) and \( \neg T \) has to \( S \). The other possibility, (12a), is again most probably an extension of the positive proposition \( \neg T \) has.

At this point it is probably in order to mention that any situation of the type

(21) Speaker
\[
\begin{array}{c}
\neg T \\
\downarrow \\
S
\end{array}
\]

is, of course, impossible from the point of view of the addresssee. That means that even if the speaker knows that what he is saying is not true, what he is in fact communicating is 'I want you—the addresssee to believe that what I am saying is true'.

Concerning the four situations described above as (19) and (20), the two that have a possibility of two answers ((19b) and (20b)) are naturally those in which the addresssee has a four way choice:

\[
\begin{array}{c|c}
\text{Speaker} & \text{Addressee} \\
\hline
T & T \\
\downarrow & \neg T \\
\neg S & S \\
\downarrow & \neg S
\end{array}
\]

i.e., the addresssee may choose to utter one of the following combinations:

\[
\begin{align*}
T & \quad \text{Yes, he has.} \\
\neg T & \quad \text{No, he has.}
\end{align*}
\]
YES—NO answers

T (Neg S) Yes, he hasn't.
(Neg T) (Neg S) No, he hasn't.

Such a choice is not available for positive statements, as it is not possible for the addressee to agree with the speaker and deny the truth of his statement, or disagree with him and confirm the truth of his statement at the same time, i.e., the following situations are impossible:

(22) Speaker
      a. T
         \[ S_1 \]
      b. T
         \[ S_1 \]
      c. T
         \[ Neg S_1 \]
      d. T
         \[ Neg S_1 \]

Addressee
      T
      \[ Neg S_2 \]
      \[ S_2 \]
      \[ Neg S_2 \]

If we assumed that the four-answer effect is due to negation, we would expect negative questions to be followed by four answers as well. However, as (9)—(10) above show, only two answers are permitted. Answers like (12c) and (12d) are clearly incorrect.

It has been suggested (Quirk et al. 1972; Bhatia 1974) that negative questions like (9) have positive presuppositions. Thus (23) and (24)

(23) Weren't you going to India?
(24) Czy ty nie miałeś jechać do Indii?

mean that "the speaker presumes that "X was going to India". And at the time of the speech act he expected X to have left for India. Contrary to the speaker's expectation the listener has not left for India (Quirk et al. (1972:54—55)). Also (9)

(9) Hasn't John written a book?

presupposes that John was expected to write a book. Thus for the speaker it was true that John had written a book until he had grounds to think otherwise. This positive aspect seems to be dominating in bringing out the addressee's

---

answers. What exactly the underlying structure of negative questions like (23) is, is still a matter of dispute.

In the light of the positive meaning of negative questions it seems that different deep structures have to be postulated for negative questions and negative portion of Yes—No questions (if we accept the view that Yes—No questions are of alternative nature).

The interaction between the speaker and the addressee (or some third party) is also reflected in certain phenomena in embedded structures like (25) and (26):

(25) I know whether Peter will come.
(26) Wiem czy Piotr przyjdzie.

Since part of the meaning of a question is "the speaker doesn’t know", (25) and (26) cannot be interpreted as directly embedded questions like (27) and (28):

(27) I asked whether Peter would come?
(28) Zapytalem czy Piotr przyjedzie?

because that would mean that the speaker of (25) and (26) says at the same time I know x and I don’t know x. However, (25) and (26) are acceptable under the interpretation (29) (Polish (30)):

(29) I know the answer to the question whether Peter will come.
(30) Znam odpowiedź na pytanie czy Piotr przyjdzie.

where question (pytanie) is to be derived from X asks a question, where X ≠ I. The same relations would hold for sentences like (31), (32) and (33), (34).

(31)*I am angry that the mail isn’t sorted yet but I don’t know that Futzie sorted it.
(32)*Jestem zły, że korespondencja nie jest jeszcze posortowana, ale nie wiem, że Futzie ją posortował.

Thom seems to be a positive parallel to the structure like (9), for example Was I surprised? except that the intonation is quite different and the interpretation is slightly different too. What the two structures have in common is the presence of an element of a positive statement.

For example, Stockwell et al. (1973) write that such questions resemble more statements with negative tags. On the other hand, Pope (1972) argues that they cannot be derived from tagged statements. It is worth mentioning here that sentences of the type illustrated by (33) are correct not only when different persons are involved, but also with one person, provided the times of ‘knowing that x’ and ‘knowing that not-x’ are different, as in:

I was angry that the mail wasn’t sorted but I didn’t know that Futzie had sorted it.

which means that at time t-x the speaker didn’t know that the mail was sorted, but he knows it now.
where the speaker claims at the same time it is true that the mail is not sorted yet and it is true that Futzie sorted it, thus the same person is involved in claiming that two opposite facts are true at the same time (I do not here consider the interpretation under which Futzie is known to be sorting things and yet not to have sorted). However, similar sentences (33) and (34) are correct:

(33) John is angry that the mail isn’t sorted yet, but he doesn’t know that Futzie sorted it.
(34) Janek jest zły, że korespondencja nie jest jeszcze posortowana, ale nie wie, że Futzie już ją posortował.

Here the speaker says that John thinks (assumes as true) that the mail isn’t sorted yet, but he (the speaker) knows that Futzie did sort it. Thus two different persons are involved in knowing two opposite facts as true.

The above discussion shows that there is no parallel between positive or negative statements and positive or negative questions. In fact, the data described above seem to indicate that there is nothing like negative questions comparable to what we called positive questions. The positive meaning of the negative questions may be a result of interaction between focus, negation and question (see Jackendoff 1972 and Szwedek 1976 for negation and question association with focus). This, however, is a problem for further research.

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DANISH VERSUS RUSSIAN
A SHORT CONTRASTIVE ANALYSIS OF THE VERB

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Introduction

This treatise contrasts the Danish and Russian languages with a primary emphasis on the verb and an occasional reference to other parts of speech.

The Russian verb in a context (not when detached from a context) is determined by aspect and diathesis; here diathesis is understood as the relationship of active and passive voice. These categories will be discussed more closely. The category of person occupies us less; the verb has characteristic conjugational endings. The category of tense can be viewed in the same way; a remarkable aspect here is the inflection for grammatical gender in the past tense forms: (ona) govorila, ‘she spoke’ compared with the masculine verb form govoril, ‘he spoke’; plural is marked as govorili, ‘they spoke’.

With regard to the future tense both languages allow the use of present tense for future; Danish expresses future by means of vil; Russian forms the future tense by means of budi + infinitive for imperfective verbs and uses “present tense” for perfective verbs. The perfective verb can roughly be characterized as follows: it expresses a “delimited” action; you cannot experience such an action in the present tense, and the present form has adopted the sense of future. The two types of future are not identical.

As for the category of mode, both languages express the subjunctive mood through periphrase, not intraverbally: Russian by means of the particle by, Danish employing skulle, måtte etc.

Defining the perfective aspect of Russian is a problem of considerable complexity. Traditionally, perfective has been interpreted as expressing that the action was accomplished (or is seen as an action that was accomplished), cf. the explanation given by the Russian dictionary of linguistic terms: perfective (completive, telic) aspect.
Modern conceptions attach importance to the action being "closed" (delimited, not to be understood as finished) and being an entity. The consequence of the discovery of aspect was that grammarians for a long time were convinced that a verb necessarily must have a counterpart in the opposite aspect (the pair-conception), which is a view totally foreign to the Danish language. According to that view, a prefix could function solely as an indicator of perfectivity (das “leere Präfix”, the “empty preverb”, “pustaja pristavka”), most often illustrated by pisat'/napisat' ‘write’. The current rejection of this view is of great importance to the contrastive analysis — the aspect is no longer an impediment to our investigation: simplex is a verb of one aspect (with few exceptions it is an imperfective verb), a verb without a counterpart.

The pair-relationship is a reality when the prefixed verb develops a secondary imperfective (abbr. sec. ip) as perepisat'/perepisayvat’. This is a specific Russian (and Slavic) feature, an innovation on Slavic soil. It does not hamper the investigation; this feature should just be recorded once and for all.

The change of aspect thus becomes a minor matter; a prefix makes the verb perfective, and the prefixale (a term sometimes used for the prefixed verb) that appears can develop an imperfective side-form, the secondary imperfective (this has the same meaning as the perfective prefixed form, a lexeme is created in the same way as in Danish when the verb is prefixed), or it can omit doing so; in the latter case the prefix (grossomodo) indicates Aktionsart (abbr. AA). The essential matter is that a verb differing from the simplex has been created.

Danish does not show any aspect, but sometimes an iterative and an inchoative conception can be expressed. And numerous adverbs and other indications of time can signal aspect. The difference is that the Russian verb must specify aspect, which it does intraverbally. Danish expresses aspect occasionally, by means of a periphrase or the surrounding text, not the intraverbal way of Russian (han skrev bogen ‘he wrote books’; mens han skrev bogen ‘while he was writing the book’; så snart han fik skrevet bogen ‘before he had finished the book’ illustrate this). The prefix in Russian can, as previously mentioned, indicate AA (plakat’ ‘weep’, zaplakat’ ‘burst into tears’, ingressive notion; pokastlivat’ ‘cough (to a small degree) with interruptions’, the action being interrupted and attenuative; this example gives just two of a multitude of types). Information on the phase, the quantity, etc. of the action is given by intraverbal means. Danish, too, has possibilities of indicating the nature of the action (Aktionsart). This is done by numerous modulations. For example, in a clause like han skulde hellere ta’og holde botte ‘he had better shut his mouth’ the verb of AA has a different shape than in Russian.

A common feature is that the AA-verb (mostly) belongs to the so-called popular language. In the opinion of the author of this article a phenomenon corresponding to the Russian one may occur in a verb form like overforenkle
‘over-simplify’, in which intraverbal information tells us something about the nature of the action (the usual meaning—‘excessively’).

Danish utilizes the principle of prefixation to a great extent but has no secondary imperfective or anything corresponding to that. The prefixed verb in Russian is a verb of one aspect (pf without ip counterpart, or ip without pf counterpart), or it is a full-aspect verb (perepisat’/perepisyvat’). To the Dane the full-aspect verb occurs as “foreign”, although it most properly corresponds to Danish. The prefix has delivered us a verb with a new meaning. But it is, in fact, the first relationship (the Aktionsart) that is inconceivable to us. Apparently we ought to say that the “innermost secrecy” of the Russian verb is precisely attached to the AA. An example is Russian on pozaper okna compared to Danish ‘han fik lukket vinduerne et efter et’, ‘he shut the windows one by one’. Danish employs a multitude of modulations, but such modulations in these situations (in addition to the AA-method) are not foreign to Russian.

The intraverbal technique, it seems, reduces the text-volume of Russian; the fact that this language has no definite and indefinite article by the noun (unlike Danish) apparently also contributes to that.

2. Diathesis

With good reason Karcevski (1927) says that diathesis is the most intricate problem in Russian. The Russian Academical grammar places the relationship active/passive voice under the notion of zalóg as well as the relationships of transitivity and reflexivity.

By diathesis, we have in mind here the relationship of active/passive. Russian, too, operates with this relationship, perhaps denoting it by the relationship of passive/not-passive. Earlier three genera were set up, with a “medium” also being taken into consideration.

By passive, we mean the structure in which the subject is the object of an action, and what was subject in the active phrase, before the phrase was “turned”, now becomes part of a prepositional phrase (in Danish containing af or ved, perhaps gennem), whereas in Russian it is put into the case called instrumentalis; the transformed agens, however, does not necessarily appear.

The Danish verb, it seems, can without serious restrictions be made passive by adding -s (another method will be mentioned below), but you cannot “turn” every Russian phrase. It must be remembered that the means of making a verb passive in Danish is -s and in Russian is -sja (another method see below). While Danish -s is, largely, interpretable in one way (serving to form the passive voice and, to a modest extent, reciprocal verbs), the Russian -sja has functions beyond these two (also building reflexive verbs — a small number of true reflexive
verbs—and, what is decisive, serving word formation. Thus, the phrase
lían elsker føderlandet ‘he loves his country’ cannot be “turned”: ljubí
(elše) ‘love’ is not given any passive meaning by the addition of -sja, and
ljubítsja, in the 3. person ljúbitsoja, proves to mean der er lyst, evne, tilstede
til elskov ‘desire, ability, of making love, is present’.

The passive voice is expressed in two ways in Russian: by means of -sja
and by means of byt’ plus part. pret. pass. (abbr. ppp), Danish has likewise
two methods: -s and være, blive plus ppp.

But for the passive formed through the addition of -sja Russian has strict
rules, which we shall not explain and motivate here: the verb must be im-
perfective, it must be in the 3. person, the subject must be inanimatum.
As a result, an ip verb in -sja outside the 3. person is an active verb (this does
not imply that it is passive if 3. person occurs), and, what is often overlooked,
the perfective prefixed verb with -sja is an active verb.

In a strange way, active and passive meaning can be united in one verb
(in the same way as reciprocal and passive meaning can be found in one and
the same verb in Danish. cf. de famines i elskov, hornene famines of de par starke
moderne. in English ‘they embrace each other in love, two strong mother
arms embrace the children’).

We can depict the prefixed verb by means of an oval O : if now a
sec. ip is formed (this applies to Russian), a natural picture is ∞ i.e.
a perfective prefixale and its imperfective counterpart, the sec. ip; in this
situation it can be practical and useful to talk about “left” and “right”
member. The secondary imperfective cannot be passive, since passivity is
not tolerated in the left member, which can be only active; but nothing
prevents the right member from expressing passive (the drawing is then
cancelled). passive appears from -sja being added to an ip prefixed verb.
The remarkable thing is, then, that an active ip prefixale with -sja can have
a quite normal pair relationship to a pf prefixale in -sja (which is likewise
active), and, in addition, it can be the passive form of the verb appearing
when -sja is cut off (these forms can properly be spoken of as homonyms).
An example is perepisyvatsja. In the first place, it is paired with the verb
perepisatsja ‘indskrive sig et nyt sted, fx ved et nyt regiment’, ‘enter one’s
name, register, at a new place, for instance a new military regiment’ (active);
in the second place it is the passive form of perepisyvat’, which is paired with
the verb perepisat’ with broad semantics, including ‘omskrive, renskrive
corrigerende, indfore (alle/mange) pa liste’, ‘rewrite, correcting, make a fair
copy of, enter (all/many) in a list’ (passive).

The detached verb perepisyvatsja presents a chaotic picture, and just
in the case of this verb an extra complication arises since the verb (active)
is also used in the sense 'udveksle korrespondance', 'exchange correspondance with', or in popular Danish 'skrive sammen med, skrive med', 'correspond with somebody'. We can briefly note that pisat' has at its side pisat'sja as passive (but not passive solely). Among the prefixed verbs we find e.g. vypisat', but vypisat'sja is not passive.

These facts will be important in certain parts of the discussion that follows. There is no doubt that here we face great discrepancies between Danish and Russian; simultaneously we ascertain the similarity between the two languages in principle. The passive voice is formed in two ways; the difference depends as it were on the particle -sja, but we shall later on find a striking similarity here (Danish sig/Russian -sja).

As far as the formation of passive by means of byt' + ppp is concerned, a marked similarity to Nordic -sages can be seen. The suffix -n- and -t- is used for ppp. Russian ppp is formed (preferably) from a pf verb (the sec.ip does not form any ppp), hence the adjectivized ppp frequently adopts a prefixal word beginning as in poddelannyj 'falsified'; a surprising similarity with Danish will be pointed out later.

Transitivity means that the action is "transferred" to the object, but recent conceptions claim that in the place of the accusative object may stand an indirect object or a prepositional phrase. In Russian, considering the simplex, there is an equal distribution of transitive and intransitive verbs, but in prefixed verbs transitivity is prevalent. Transitivization is a pronounced feature of prefixation in both languages, as will be explained later. At the same time, in Danish, as in Russian, intransitive verbs are less inclined to take prefixes. The apparent grammatical impoverishment due to intransitivity is, with respect to verbs in -sja and Danish sig, compensated for through the acquisition of a new sochetaeomost' (combinability). Both languages exhibit partial transitivity, cf. vejret skifter, jeg skifter skjorte 'the weather changes, I change my shirt', but jeg udskifter (bil) 'I exchange (my car)', with full transitivity (this feature proves to be extremely important). Both languages can "forcibly" use an intransitive verb as a transitive, cf. Russian uli ministra, literally 'de "gik" ministeren', and Danish Regeringen blev gdet, literally 'the government has "been gone"'.

3. Simplex

By simplex verb or simplex (plural simplicia or simplexes) we mean a verb without a prefix, e.g. pisat' (but not the verb that results from an imaginary cutting off of the prefix of a sec.ip; perepisyvat' belongs to perepisat' and is created through suffixation); nor do we have in mind the primary verb in relation to the derived verb.

The number of simplicia is high. At first, their semantics (if all simplicia
could be added) appear to be so comprehensive that any semantic need would be covered, but, as is well known, this does not prove to be the case. The semantics of a simplex move in all directions, cf. Danish *holde, holde noget i sin hånd* 'keep something in one’s hand’, *holde til store prøvelser* 'stand heavy trials’, *holde avis, holde sit ord, holde kærestes* 'a newspaper, one’s word, sweethearts’ etc., some of the different meanings of *holde* (English ‘keep, hold’ and other verbs, German *halten*). The semantics of a simplex are “ungovernable”, and our endeavours to group them most often fail. The characteristic quality of a simplex is its diffuseness — this quality is eliminated by prefixation.

Derivation of verb forms may be denominal as in Danish *huse, made* 'to give shelter to somebody, to feed somebody’ from *hus, mad*, and as Russian *mjit’* from *mijlo* ‘soap’, or it may be non-denominal as, presumably, *tale, sige* ‘speak, say’, and Russian *znat’*; but in both languages the distinction between the source and the derived form frequently is uncertain.

An interesting parallel is seen in the type *stivne, mörkne* ‘stiffen, harden, get dark’ vs Russian *sóxnut’* '(get) dry’. The number of verbs of this type is relatively small. Some of them have an old-fashioned character in Danish, and the Russian type is dying as far as certain of these verbs are concerned. They are being liquidated, and verbs from the productive classes are becoming the preferred forms.

The paradigm can be defective (something not confined to simplex). In Danish we have *ikke til at lide på* ‘not to be trusted’, but *lide på* (infinitive) can only with difficulty be used as a finite verb. In some cases the Russian dictionary states that with respect to the verb in question certain grammatical persons (most often 2. and 3. person) are “unfit for use”, and some simplicia know only one tense, thus *stížíval* ‘he used to sit’ is hardly ever found in the present tense.

With regard to the structure, the Russian simplex most often contains two syllables (a handful of monosyllabic verbs occur), but since prefixed verbs dominate, three syllables will be characteristic (in the infinitive). Prefixation asserts itself less strongly in Danish, and two syllables are presumably the typical length of the verb.

A common feature is the capacity of the simplex to take prefixes, and, as far as Russian is concerned, only a few verbs reject prefixes. In both languages the prefixation serves the expansion of the stock of words through the formation of lexemes. However, in Russian the prefixation furthermore serves to create verbs of Aktionsart (AA); they express a modification with regard to phase and quantity of the action.

Simplex and prefixal, seen by the scholar, stand on one line, but in reality simplex is, naturally, “forgotten” when a prefixed verb is used. This verb carries a new meaning, and as a rule we had better push the simplex into
the background. In fact, in numerous cases simplex is "absent", cf. obnovit' 'forny', 'renew' without any *novit', and looking at Danish forny we find no *ny (no verb *ny). A characteristic case is orogovet' 'blive hornagtiq, forhorne', 'to get horned, acquire the quality of being horned', without any *rogovet', but derived from the adjective rogovoj 'horn-'. In such cases, however, it will be possible for a secondarily derived simplex (rogovet') to emerge. In certain cases a nucleus is non-existent; this is obviously the case in uredit' 'found, establish, institute', and in Danish you have forbause 'astonish' without any *bavs, and a *bavs seems to be doubtful.

A verb without a simplex form and a verb derived in the natural way through prefixation stand on an equal footing in the language, in Russian as in Danish (from forny a noun fornyelse 'renewal' is derived etc.; in Russian a secondary imperfective will be formed in accordance with normal rules).

Prefixation implies radical changes, which obey the same laws in both languages.

4. Prefixation

For the contrastive analysis being undertaken it is important to notice that the principle of prefixation occurs in both languages, thus Russian perepisat' and Danish omskrive. It should, of course, be remembered that a verb beginning with a prefix can depend on circumfixation as in uglubit', based on glub(ok) 'deep' and the suffix -i- followed by the mark of the infinitive, or as in Danish uddybe 'go deeply into (a question)' without any *dybe but based on the adjective dyb, to which is added ud- and -e. Verbal prefixation is not a feature common to all languages—in English and French this phenomenon occurs rarely. Moreover, if we pursue, for instance, the English verbs with out-, a peculiarity appears not known from Danish and Russian. The out-verbs are apparently characterized by one semantic concept (doing what is said in the simplex longer, in a higher degree). English he came in is the normal sequence; there is no *in-came.

Prefixation creates a new verb. But in Russian the verb follows two paths. It remains close in meaning to the simplex in a AA-relationship, or a new meaning appears (new in the proper meaning of the word) marked by the development of a secondary imperfective, thus perepisat'/perepisyvat', but napisat' without any sec.ip.

Simplicia are very numerous, and since simplex is usually combined with prefixes, fluctuating from one or a few up to twenty, the number of prefixed verbs is in all texts very high. This is especially characteristic of Russian (see remarks above on the specific phenomenon of AA verbs); in Danish the heterosyntagmatic position seems to have a balancing effect on that difference (afdrage, but drage af 'pay by installments' and 'take off (one's boots)'; after-
stræbc, but stræbc efter ‘persecute, plot against somebody’s life’ vs ‘strive for, aim at, endeavour to’. Considering the expansion of the word stock, one should remember the circumfixation utilized by both languages. Furthermore, the expansion is promoted by the particle -sja in Russian and in Danish sig.

The word prefixale is often used for the combination of prefix and simplex. This usage appears somewhat illogical, since in many cases nothing has been placed “in front of” the simplex. A possible solution would be to refer to such a form as a prefix-carrying verb. Bearing in mind this reservation, the use of the word prefixale can be defended.

In an earlier section we depicted the prefixale by means of an oval after which a double oval is applicable for the pf prefixale developing a see.ip. This figure can then be cut into two parts and used to express one-aspectedness: and (and it would be possible to use the symbol for the principle (the principle in itself) of one-aspectedness).

For the sake of clarity we grossomodo ignore the latter of the two-part pair, i.e. It has already been pointed out that the full-aspect verb, the figure of two ovals, occurs to the Dane as incomprehensible, although it is the comprehensible one, because the figures resulting from the intersection and have no counterpart in Danish.

The composition of prefix and verb can be depicted in two ways (square and rectangle being used):

![Diagram](image)

(the prefix is “wedged” into simplex)  

(the prefix is “hooked” onto simplex)

By way of illustration, we can cite indgå (ægteskab) ‘marry’, or Russian otstojdt ‘defend (against the enemy)’. The notion of gå ‘go, walk’ in the Danish word is not retained and neither is stojat ‘stand’ in the Russian verb. The prefix in both cases is “wedged” into the simplex. But the figure on the right concerns only Russian. In this situation the prefix is “hooked” onto the simplex (and as a rule it might be removed without complete loss of meaning), and the prefix serves to add something about phase or quantity of action (this presentation is simplified): ona posidela ’she sat for a while’, but ona
obsidela divan ‘sitting on the chair she made it comfortable’ contains an indispensable prefix ob-.

Simplex verbs typically represent diffuse concepts. The most characteristic effect of prefixation is one of specialization; a narrowing of the concept occurs with the prefix extracting a segment of the simplex (not to be taken, literally), cf Danish holde ‘keep, hold’, but anholde ‘arrest’, udholde ‘bear, endure, stand’. Russian examples have just been given: sidet ‘sit’, but obsidet’ transitive, is ‘make a piece of furniture comfortable by sitting on it’. This segment proves to be capable, even though a semantic narrowing has taken place, of holding a compressed semantics, cf. Danish tage, in many cases covered by English ‘take’, antage, where the latter means ‘acceptere, tage i sin tjeneste, formode’ or ‘accept, take in one’s service, suppose etc.’. We use the word “semantic fan” for the meaning and sub-significations of the verb. The subsequent effects of prefixation will be described more closely in the pages to follow. As we look at Russian obsidet’ (see above), obmērīt’ ‘cheat in measuring, give false measure’, and Danish underholde, underrette, underwise, roughly translated ‘entertain, inform, teach’, we see that the investigation of the so-called “meaning” of the prefix concerns homogeneous problems (see section about Semantics).

5. Past participle passive

We can separately discuss the use of ppp (part. pret. pass.) together with byt’ for forming passive voice. A Danish example is gjort, blev gjort ‘made, was made’. In Russian the rule is as follows: ppp is formed (preferably) from perfective verbs (it should be remembered that in the case of imperfective verbs -sja forms the passive). Let us look at this matter from the point of view of prefixation: why must the verb be perfective? (It should perhaps be repeated here that the secondary imperfective (in Russian) does not form a ppp; ‘repeated’ (adj.) is povtorennyj when we look at the adjectivised form; while the sec.ip povtorjat’ is excluded, a present participle occurs: povtorjaemyj ‘which is repeated’).

The simplex pisat’ forms, admittedly, a ppp pisannyj ‘written’ (cf. Danish brevet er skrevet, et skrevet brev ‘the letter is written’, ‘a “written” letter’), but the natural ppp of pisat’ is napisannyj. Here we shall only briefly hint at the fact that Russian contains both pisannyj ‘written’ and furthermore, spelled differently, pisanyj, which is often translated ‘written in hand, ornament with a pattern, sometimes understood as beautiful like a painting’; the Russian-English dictionary gives the example pisamaja krasavica ‘picture of beauty’. We acquiesce on the short remark that in some cases we do meet ppp formed from simplex like xvalēnnyj from xvalit’ ‘praise’, but more frequently pairs of the type of plesť and zapletēnnyj occur: ‘braid, plait, weave’.

In Danish we say without hesitation drengen blev rost, den roste dreng
the boy was praised, the "praised" boy, but this principle (ppp is adjective-ized) is not practiced consistently. This makes a Danish/Russian similarity appear as explained below. Use of the passive construction usually means that the verb is active and transitive. Zaplakannyaj and forgriet (which happen to mean the same: "tear-stained") do not derive from any finite verb (there is no han havde *for- griedt; zaplakat' is 'burst into tears', and the verb is intransitive). In this case, we shall talk about a quasi-ppp. En forstyrret person ('a crazy person') and en forstyrret middagslur ('an afterdinner nap that was disturbed, interrupted') show quasi-ppp and true-ppp in the same word. (Such a phenomenon is hardly known in English where they discussed the problem occurs, but not the *discussed problem). In Russian and in Danish we meet, evidently 1) a ppp which is not adjective-ized, 2) a ppp which is an adjective too, 3) a quasi-ppp, not a ppp. Forbandet ‘damned’ illustrates point (2) from the above list: Bedstefar havde forbandet sønnen ‘grandfather had cursed his son’, en forbandet søn ‘a cursed son’; in et forbandet spørgsmål ‘an accursed or damned question’ the semantics change. The word is used adverbially in forbandet uheldigt ‘damned unlucky’. The Russian prokljdtyj ‘forbandet’ by and large illustrates the same thing. What we notice is that Russian requires a perfective verb, but now, considering that this largely means a prefixed verb, new light is cast upon the matter. Occasionally Danish requires a prefixed verb. De delte gaver (i.e. gifts that had been shared) is not a fully clear sequence (and a phrase like delte meninger om sagen corresponding to ‘different opinions on the matter’ interferes in a disturbing way). We confine ourselves to referring to Aage Hansen’s words (1967:135) to the effect that the language (Danish) avoids the sequence de rogede cigatter, literally ‘the *smoked cigarettes’, but does not hesitate to accept en tilrøge pibe with a prefixed verb (from tilryge or ryge til ‘smoking a pipe, thereby making it fit for smoking, or to season a pipe’). In De brugte metoder var ufine ‘the methods applied were unfair’ and De brugte mobler indbragte hundrede kroner ‘the second hand furniture gave me a profit of one hundred Crowns’, the two uses of brugte are not identical. In the second case it is understood as “old, worn out”. In the view of the author of this treatise a parallel may be drawn: brøgt/brugt (two meanings) and Russian pisannyj/pisanyj (two meanings, orthographically separated). Both languages exploit the double use of the ppp, which serves to expand the word stock. A case like Danish sallade/nedsallade (which has to do with pickling, corning...herring, cucumber) probably belongs to that group. As hinted at in the preceding lines (with reference to Aage Hansens book on modern Danish) Danish avoids den *budte vin for ‘the wine that was offered’, and de skrevne bogstaver assumes a special meaning — not “the letters that
have been written”, but “the letters as they appear when written in hand” in contrast to printed letters. But if composed (prefixed), the ppp is not a problem. Among Aage Hansen’s examples is oppebåren gage for “wages which you receive”. In den børne modgang, presuming that this sequence is accepted and recognised as genuine Danish, børne indicates more than the ppp as such. It would involve a notion of an adversity which you have endured bravely.

An adjective derived from the participle (the ppp being under discussion) favours a prefixal word beginning in both languages. De børne kasser which would be literally “the *carried boxes” is semantically less precise (and perhaps not absolutely acceptable) than de nedbørne kasser ‘the boxes that had been carried down’ (which is an irreproachable Danish sequence), whereas de børne kasser might suggest a contrast to those transported by car.

The reason for the requirement of a prefix is, in the author’s view, the specialization. The contents of the diffuse simplex are too comprehensive to indicate precisely what the speaker wants to express by the ppp. A noun has been added, a noun which carries its own significance and possesses its own grammatical “rights”, and the adjective whose function is to define the noun cannot allow the full range of the meaning of the simplex to apply. A semantic contraction is necessary, which is the main function of the prefixation.

Danish En studerei viand Ca man who has studied some subject’ or ‘a learned man’) has hardly any Russian counterpart. Russian has an active participle in past time.

6. Potency of prefixation

The capacity to take prefixes in both languages varies from verb to verb. Let us call it potency of prefixation. A total absence of prefixale is rare (this is true of Russian); some few or relatively many or a high number of prefixations may occur with various verbs, with a maximum of about twenty.

This potency of prefixation should be separated from the stock of meanings (sub-meanings) of the individual prefixale. “the semantic fan”.

In Danish, the potency of prefixation is generally lower, because prefixes with a grammatical effect do not occur (unlike the Russian AA-verbs; it is in dispute whether a grammatical effect can be maintained, and it is safer to speak about an intermediate state between lexical and grammatical effect). Factors that to a certain degree can be attributed with a balancing effect will be discussed in the section on heterosyntagmatic position in Danish, e.g. afdragel drage af.

Potency is unpredictable. It can be seen immediately that phonetic principles are not relevant. And the “meaning” does not lead to homogeneous or comparable potency in the two languages (dansk råne ‘rotten’ with few, Russian gnit’ with many compositions; a look at elske ‘love’, Russian Ijubit’, shows the same state of affairs.
Low potency in Russian can be illustrated by a verb chosen at random, torżestvovat' 'celebrate', with one prefixation vostorżestvovat'. It is worth noting that certain classes of verbs are largely intransitive, hence the poverty with respect to prefixation. With regard to low potency in Danish, it should be noted that numerous verbs obviously reject prefixation. Few prefixes are added, for example, to hæbe, briste, ske, miste 'hope, burst, happen, lose'. Intransitivity does not fully explain this.

High potency in Russian is illustrated by xodit which takes almost all prefixes. An explanation that "elementary" conceptions should somehow be the basis for many prefixations is not reliable, and it is in any case difficult to define the notion "elementary". Certain verbs are "apt" to express AA (Aktionssart); in other words they are accessible to several modifications (but the single AA-verb will show poor semantics). The causes of high potency have not been clarified. It would be reasonable to presume that verbs expressing a notion of "moving" must demonstrate numerous prefixations, and experience shows that verbs of speech and sound are connected with many prefixes.

To illustrate high potency in Danish we mention stå 'stand': tilstå 'confess', afstå 'give up (one's seat to somebody)', forstå 'understand', undstå 'endure, go through', oversstå 'get over, pass an examination' etc., and fore: anfore 'command, lead, state', offore 'divest oneself of', forfore 'seduce', indfore 'introduce', udfore 'carry out, export', overfore 'transfer', as well as vise, lægge, siette, rette, gore and so on, roughly translated 'show, put, direct or correct, do or make'.

A treatment of potency should also consider verbs that depend on -sja and Danish sig, when prefix+that particle create new words, thus obkroit'sja 'make an error when tailoring, cut...in the wrong way', Danish understå sig i 'dare' (as in "don't you dare to touch me") without any *understå.

High potency as Russian pit' 'drink' with numerous prefixations does not mean that the derived forms necessarily have a broad semantic fan — certainly great nominal richness, but not automatically any great semantic abundance.

The reasons for low and high potency are not discovered in any simple way. A main reason of low potency is apparently absence of simplex (derivation accounting for the phenomenon). It might seem that only one prefixale could arise here, but in fact this is not the case: osvòit' 'master, assimilate, cope with; open up or develop new lands' and prisvoit' 'appropriate; confer an award, confer the rank of' without any *avoit (the motivating word be...ig svoj), Danish uddybe, fordybe sig 'go deeper into' without any *dybe.

Simplex from a noun (again derivation used by way of explanation), as Danish made from mad 'food' might seem to indicate a weak capacity of prefixation. Yet Russian nglit' from mylo 'soap' indicates the opposite with an abundant prefixation possible for nglit'.

A manifest cause of low potency is intransitivity. Simplex as it were
Danish versus Russian: the verb

“opposes” prefixation since prefixation conveys a pronounced capacity for transitivization, cf. bledně‘ turn pale’, Danish susе ‘whistle, sing, rush’, svømmе ‘swim’, kirre ‘rattle, clank’. The notion “intransitive by nature” suggests itself with verbs for possession of some quality of character. It is difficult for such verbs to take a prefix. And yet we can find Russian полнобопытствовал ‘he revealed curiosity (for a while)’. Verbs denoting a deeply rooted quality (sometimes called “verbs of tendency”) are for natural reasons excluded from prefixation. Examples include собақа кусаеть ‘the dog bites’, i.e. ‘is snappish’, and Danish brandenbolden brander ‘the stinging nettle stings’.

One could ask whether the simplex can be “self-sufficient”, in other words make prefixation superfluous or impossible. The opposition then would be a “pale, insipid, futile” simplex (but simplex has precisely the characteristic property of diffusity). However, the expectation of an insipid simplex conveying any high potency proves to be a failure. “Precise” or “unprecise” meaning does not settle the matter.

The fact that simplex is rare (of low frequency) does not presage low potency. Danish lokke ‘lure, entice, tempt’ is connected with six prefixes, and Russian манит’, meaning the same, occurs with some ten prefixes. Something from the territory of semantics may, of course, limit the possibilities of prefixation. Danish synke and sænke, ‘sink’ and ‘sink, let down, lower’, will exclude op-, ud- and frem- (denoting a direction up, out and forward), yet we notice here the contradictory nedstige (‘rise, mount, ascend downwards’, cf. English ‘descend’) for Danish nedstige). It seems worth considering whether verbs with some “outsider” appearance (which cannot be clearly defined) might be less inclined to undergo prefixation. An example may be Danish sjanghajc (en somand ‘a sailor’) ‘press, force a sailor to join the crew’. Words of foreign origin often prove to be less open to prefixation, yet Danish has adkommandt re ‘call out (a force of police)’ etc., in Russian often recognizable by the ending -oval’. Danish so-called s-verbs like længes, synes, tækkеs ‘long for, think, please somebody’ and a small number of others of that type hardly take any prefix. A Russian prefixed verb expressing Aktionsart is not augmented by a new prefix. And if the prefixed verb forms a lexeme (that is to say not any A.A.) a restriction is seen. It is usually supposed that only po-, na- and пе- may function here (see section on polyprefixation).

7. The prefixes

Prefixes are in our language – Russian or Danish – from our first steps. The child uses, within its sphere, prefixed verbs like adults. It is not a verb that enters the language at a certain stage of development. However, a difference is seen when we talk about using the prefix with virtuosity, in the mouth.
of the simplest peasant and in the refined art of writing — this is true of Russian, but hardly found in Danish. But it goes without saying that we meet no arbitrary juggling with the prefix. The flexibility appears in the AA-verbs. The prefix can say "to a small degree", "for a limited time", an in-pressive conception and several other things.

The prefix is predominantly monosyllabic, and some twenty prefixes enter into the stock. We are talking here about productive prefixes, not about those which are no longer used, not about "false" prefixes or such as form composita. In Russian they are v-, vy-, vz-, za-, iz-, na-, nad-, o-, ob-, ol-, per-, po-, pod-, pri-, pro-, raz-, s-, and u-. In some cases a so-called vocalization is observed as i zo- for iz- and so on, depending on the beginning of the simplex.

As far as Danish prefixes are concerned, a request for exact information should be directed to the philologists of Danish, and the following enumeration is only approximate: af-, efter-, forud-, frem-, gennem-, hen-, ind-, med-, mod-, ned-, om-, op-, over-, på-, til-, ud-, under-, ved-, and a few others. The number is evidently higher than in Russian. Several prefixes occur as prepositions. In Russian vz-, vy-, per-, and raz- do not serve in that function. In Danish ned, frem, hen, ind (but ind i, inde i, are different), op, ud, sam, are not prepositions. Some of the prefixes are, in Danish, inseparable from the verb, such as er, gen-, und- and others. An adverbial function seemingly appears in sammen, tilbage and others.

The Russian prefixes are stable. For centuries they preserve their appearance as raz, za-, vy- and so an. We have not in mind changes of meaning, addition of new prefixes or their departure from the language, nor questions of their frequency. English prefixes are not stable, cf. answer from and 'against' and swean 'speak', answer is disintegrated only on the basis of etymology. From prepositional meaning no conclusion can be drawn with respect to prefixal meaning. cf. Danish undersøge en sag 'investigate a matter' without connection to under (preposition) taken in its spatial meaning. Prefix vs. preposition will be discussed later.

8. Polyprefixation

Double prefixation is often the name given to the phenomenon in which Russian verbs show 2, perhaps 3, prefixes, and sometimes this has been regarded as a feature peculiar to Russian. Investigations of such cases, however, demonstrate in a rather convincing way that the prefixes have not been added in one operation. A simultaneous augmentation must necessarily create a conflict. Illustrative is razleć 'amuse, divert somebody', and porazleć 'amuse etc. a little'. The applicability of prefixes for polyprefixation is subject to severe restrictions. Let us call the prefix nearest to the verb "inner prefix", and the prefix that was added "outer prefix" (in rare cases you will find a prefix
Danish versus Russian: the verb

"between" them. Here it seems that only three prefixes are able to stand as an outer-prefix. An AA-verb (Aktionsart) with a prefix is not augmented by a new prefix. A verb with a prefix, forming a lexeme, can add a prefix with severe restrictions, and the result normally is an AA-verb.

The Russian obez- (which is evaluated in various ways by Russian grammarians) is kept outside our problematics. The best explanation of obez- is the following. o- is added to an adjective beginning with bez- (it is true that an adjective of that kind sometimes is not documented by texts and has to be constructed theoretically) and a verbalization takes place. A double prefixation cannot be proposed.

Danish fort«l- is viewed as one prefix (the for- has not been placed before a verb beginning with ud-). In overanstrenge `overwork', overbelyde `over-burden', overfortulke `interprete (something more than permissible)' and some others, the over- has been put before a prefixed verb, and this over- shows a "stiff", "rigid" semantics. The action has been performed in an above standard way. Here we also find genfrembringe, genopdagte (action performed the second time, action repeated) 'reproduce' and 're-discover'.

A structural similarity between Russian and Danish can be claimed to exist, with caution: the prefix added has a "rigid" semantics, and restrictions are attached to its role as an outer-prefix. (In Danish obviously only certain prefixes can be placed in that position, and as far as we can judge over-, gen- and om- are the essential prefixes here.)

9. Heterosyntagmatic position (of Danish verbs)

For various reasons (the role of the AA-verbs), prefixation has larger proportions in Russian than in Danish, but a kind of balancing is achieved by the specifically Danish phenomenon of heterosyntagmatic position. We refer here to forms of the typo afdrage with drage af beside it (as in afdrage sin gæld/drage sine sko af 'pay one's debts by installments/take off one's shoes (a biblical expression)'. A further refinement is that Danish can create new words by moving the stress, cf. medgå differing from gå med 'join' together with gå med 'accompany a girl regularly'. Russian naemotret', a verb that is seldom used and may be translated 'discern, discover, catch sight of', is not equal to smotret' na, which is simply 'look at'. Russian has, indeed, brat' pod zalititu 'take under one's protection', but it has nothing to do with podobrat'.

Not every Danish verb can be "separated" (as described). The verb has not necessarily those two shapes, and verbs in er-, be-, sam-, und- and others are beforehand outside the group, since these prefixes are not separable. (English continually "separates" the verb, or, to put it properly, seldom uses the verb "unseparated", so that he came in occurs, but there is no when he *in-came.) In German composed and separated verbs are normally placed side by side.
according to the rules of this language, the principle being only outlined by these words, cf. vorschlagen, ich schlage vor etc.

We can mark the normal prefixation PX (a signal which is merely meant to signal the process) and thereupon introduce an ad hoc terminus XP saying. the "prefix" is separated from the verb (again this is simply a symbol since no prefixation or dissolved prefixation is present). By means of the symbol PXXP we can then indicate that both configurations are present (PX and XP within a given verb). Various cases could be symbolized then as follows:

PX//XP: both are present, but they have no semantic features in common,
PXP: both are present, they are semantically identical (supposing that this occurs in reality)
PX/XP: both are present, they have certain features in common.

The differences can be semantic, grammatical or both. Type 1 is illustrated by han ombragte aviskonen 'he killed the woman who distributed newspapers, the paper woman' /aviskonen bragte aviser om 'the paper woman distributed newspapers'. Type 2: ophore|hore ox, both meaning 'cease, stop' (identity being proposed, of course, with certain reservations). Type 3: antægge|ægge an 'build, construct', but ægge an på is 'start a flirt'. However, it is easily seen that determination of the type is not without problems.

In the same way as we have characterized the AA-verb (verbs for Aktionsart) as the "innermost secret" of the Russian verb, this author finds that the heterosyntagmatic position of the verb could be called the innermost secret of Danish. We have in mind the verb in both languages.

10. The prefixal column

The paradigm of verbs beginning with a prefix will be called a prefixal column, or simply "the column". It may have two shapes:

<table>
<thead>
<tr>
<th>Prefix with 1. simplex</th>
<th>simplex with 1. prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. -</td>
<td>2. -</td>
</tr>
<tr>
<td>3. -</td>
<td>3. -</td>
</tr>
<tr>
<td>etc.</td>
<td>etc.</td>
</tr>
</tbody>
</table>

The left column will be very large (the entity of verbs with the given prefix), whereas the right column amounts to a maximum of some twenty verbs.

It is peculiar that in both languages we do not know beforehand anything about the column other than its members begin with a prefix. It is characteristic of the column that it is not homogeneous.

Examples of columns (space compells us to set them up as a continous line): overholde 'observe (rules)', overfalde 'assault', overgå 'exceed or surpass
Danish versus Russian: the verb

etc., and the right column: anholde ‘arrest’ udholde ‘endure, stand’, overholde ‘observe (rules)’, afsolde ‘arrange, pay, hold (a meeting)’, afsolde sig ‘alstain from’ etc. In Russian such columns would contain, on the left, očistit’ ‘clean’, okol’cevát’ ‘mark (a bird, a tree) with a ring’, obkosit’ ‘mow’, obkuriť ‘season a pipe’ etc., and in the right column, opit’ ‘cause somebody expenses 1 y one’s drinking’, raspit’ ‘drink, split a bottle with somebody’, prípit’ ‘drink everything, empty a bottle’, and several others.

It seems permissible to unite the two columns into one. The lack of homogeneity asserts itself in a uniform way in the two languages (a statement made, again, with certain reservations). To put it briefly: there will be the question of whether or not a simplex is present; this applies thereupon to derivational relations and prefixal potency, and, as far as Russian is concerned, to the position of the secondary imperfective. Further, mood and the transitive/intransitive relations must be considered; a question that suggests itself is whether a transitivization has taken place. Furthermore, the stress must be taken into account (Danish forlokke ren: cigle, lure, seduce’, but astokke ‘elicit from, wheedle out of’), and the relations to -sja (Danish sig). As for syntax, it will be a question of whether the verb is used absolutely; here changes of government must be considered and the requirement of an object, in this connection also the nature of the object. The lack of homogeneity asserts itself with regard to stylistics and frequency, too, as well as the whole question of semantics (the semantic fan). A separate question must be posed as well for the Danish column only: does the verb occur as a “divided” verb? In both languages, the formation of nouns differs from member to member.

11. Specialization

On the basis of the specialization which, in the author’s opinion, is the decisive and most radical feature of prefixation, you realize the other successive effects: transitivization, changes of government, obligatory object. Each of these effects will be described below in separate sections.

Specialization, briefly presented in the preceding text, manifests itself by a “segment” being extracted from the diffuse simplex (the word “segment” not to be taken literally always),
and it is easily seen that absence of simplex causes difficulties. *U-glub-it* and Danish *for-dyb-e sig* must be understood as segments of non-verbal units (*glubokij*, *glub-* and Danish *dyb*).

The segment is "less" than the simplex. Although we may find solo-meaning in the prefixed verb, as in *opit* 'cause somebody expenses by one's drinking' (complete explanation), the prefixed verb will normally (or at least most frequently) fall into several "sub-significations". Characteristic of the segment is precisely that it is "compressed" (though we feel convinced that the segment covers less semantic area than the simplex).

The sub significations (the semantic fan) should be distinguished from homonymity.

The current conception that the verbal aspect is changed by magic when a prefix is added must be rejected. The limitation described is the basis of perfectivity, but great difficulties are caused by a distinction between the semantic limitation of the segment and the limitation that is characteristic of perfectivity. The Danish prefixed verb likewise depends on a diffuse simplex, and a straitening or contraction takes place in connection with such prefixation (Danish *tage: optage*), but no perfective aspect is created.

A relationship of equality does not exist between the laying down of the segment and the rise of perfectivity. Russian *vypisal* does not possess a segmental character in a higher degree than *vypisyval*, which is imperfective. While the secondary imperfective annuls the element of limitation, it does not annul the segmental element.

The change of aspect should be considered a subordinate factor (thus, for instance, J. S. Maslov (1961)). And, as explained earlier, the thought is rejected, largely, nowadays that a prefix may serve solely as an indicator of perfectivity. According to traditional conceptions such an "empty prefix" can convey a "perfectivization", but here it is more relevant to talk, as Ivanenko does, about a "technical perfectivization", implying that something more happens via the prefixation — a specialization in some sense or other (1960:168).

Danish *udsætte* may illustrate such a specialization, since the verb is, with regard to semantic area, less than *sætte* and specializes the latter. The segment *udsætt* proves to be strongly compressed. It is divided into several sub-signifi-
cations, including *udsætte et ønsket barn* 'get rid of an undesired child', *udsætte en vagtpost* 'station a sentry', *udsætte et møde* 'discontinue, postpone a meeting', *udsætte nogen for fare* (with an indispensable for) 'expose somebody to danger', *udsætte for orkester* 'transcribe for orchestra'. A Russian example is *zavesti.* Vesti is roughly translated into 'lead', but *zavesti* specializes the meaning and shows a ramified semantics with its main lines being (according to the Russian-English dictionary) I. 'bring/lead somebody to a place (and leave there)', (combined with *vtupik* 'lead somebody up a blind alley'). II. 'acquire, buy'; 'acquire a habit, establish, introduce (a rule), (semi ju) acquire a home and family; settle down in life etc. (delo) start a business. Also, combined with *znakomstvo* 'set, strike up an acquaintance', with *razgovor* 'start a conversation', 'with *sescru* 'raise a quarrel'. III. wind up, start with the object *grammosôn, budil'nik, motor.*

In depicting Danish *antage, optage, nedlage*

we can analyse the meanings of *antage* in sequences like *antage et tilbud* 'antage et nye elever, antage en religion' 'accept an offer, engage three new pupils or apprentices, adopt a religion', and we might here speak about a second kind of specialization. In cases of a given signification being at the same time specialist language and non specialist language, we might speak about a third kind of specialization. Here we will briefly note that *optage, indtage* are combined each with its own objects, cf. *indtage en fødsning, indtage en ukårenes hjerte, indtage en engelsk bof* 'capture a fortress', 'conquer the heart of the beloved girl', 'partake of a meal'. The objects are (most often, but not necessarily) foreign to the remaining members of the column.

12. Transitivity

The specialization makes the transitivization comprehensible. Transitivization is among the most characteristic features of prefixation in Danish as in Russian. cf. Danish *bøjse* 'wave', but *ombøjse nogen* 'surround by flattery and applause', Russian *sidet*, but *zasidet* 'make (the windows etc.) dirty (with excrements)*

An intransitive simplex denotes the process (or state) generally as something going on (or being, existing), without information about the originator
and without connection to any object (thing). The prefix, via specialization, confines the process, which is now brought in contact with a limited domain of objects: for example, stige ‘rise, ascend’, but overstige ‘exceed, surpass’ (expectations, power, income); Russian rabotat’ ‘work’, but obrabotat’ ‘work (up), treat, process, machine, 2. cultivate, 3. dress, polish, 4. colloq. influence, persuade’. Whereas an intransitive simplex may be depicted as a figure with indistinct contours and a chaos of threads symbolizing the numerous possibilities for combinations, we imagine the prefixed verb (in so far as we are talking about a transitive prefixed verb) as an oval (demonstrated earlier), with threads extending out from it that are to be fastened to an object.

Transitivization deeply interferes in the language. As for the Russian simplex, Kareevski (1927) supposes a numerical balance between transitive and intransitive verbs. The intransitive verb “resists” prefixation whereas the transitive simplex has a greater capacity of prefixation with the result that transitive verbs are predominant in a corpus. From a Danish point of view we find flamm (intrans.) with few prefixations and tag (trans.) with many. Transitivization is inconsistent, however; falde is intransitive, frafalde ‘give-up, abandon one’s claims’ and overfalde ‘assault, attack’, are transitive, while forfalde ‘decay, fall due’ and forefalde ‘happen, occur’ are intransitive.

A transitive simplex largely remains transitive. A partially transitive verb, it seems, must become transitive. Kalde, in pligten kalder, literally “duty is calling”, is intransitive, but indkalde ‘call in, call up’, nedkalde ‘call down, invoke’, opkalde ‘call or name after’, udkalde ‘call out’ are transitive. As for Russian we find šagat’ ‘walk (slowly)’, but iss šagat’ trans. ‘go through, pass by, through (many places)’; sidet’ and zasadet’ have just been mentioned. A prefixed verb may show partial transitivity, cf. perespat’ ‘oversleep’ as well as ‘spend the night’.

(It seems that a considerable role must be assigned to transitivization in English, cf. outsit (sit longer than), outsleap (sleep longer than) and several others of that type). Russian may use -sja for intentional intransitivization as in stiraju ‘I wash (the washing)’, stirajuś is approximately covered by ‘it is my turn to wash’; further comments on this follow.

13. Changes of government

Prefixation causes a shift in the syntagmatic perspective. A series of changes of government are observed, and the combinability (sočetaemost’) of the verb changes completely. Transitivization has been treated separately,
Considerable changes occur with regard to prepositional members depending on the prefixed verb. The prefixed verb produces prepositional members although they are not obligatory, and they are not necessarily distinct prepositions, since various ones are used according to the sense.

When we look at the corpus we seem to find a verb with an arbitrary prefix combined with an arbitrary prepositional member with no apparent patterning, but a closer analysis uncovers lawfulness. Both languages evidently operate with 1) a rigid relationship in which a given prefix in the individual verb must activate a fixed preposition, and perhaps a tautologic correspondence is present, as in Danish udbytte afhænger normalt af indsats, ‘profit normally depends on your efforts’, and 2) a free relationship, which may be lawful or completely capricious.

For certain syntactically defining members, the prefixed verb can “resist” members containing temporal determinations. A phrase centering about ja napisal ‘I wrote’ (the object is indispensable) cannot be expanded with, e.g., dva časa.

In Danish, the verb fore ‘lead’ is combined with several prepositional members (til noget, fra noget, over noget etc. ‘to, from, over something’), and underfore en tunnel will imply a preposition under. Underrette om, undervise i (‘inform, teach’) show natural prepositional members (the speaker will use precisely that preposition), but undersøge ‘examine’ is different, because it is not combined mechanically with any fixed prefix. We should briefly note, too, stå ‘stand’ with prefixes: tilståd ‘confessed’, udstød ‘endured’, but afståd fra ‘renounced’, indståd for ‘answered (vouch), guaranteed for (correctness)’ (we have used past tense in these examples).

Russian pisat’ is connected with člo, komu, čem, o kom-čem, but opisat’, zapisat’ and perepisat’ and others ‘to not have the same government. Danish rette, roughly translated ‘direct, correct’, indrette ‘arrange, organize’, oprette ‘establish, found, draw up’, udrette ‘effect, perform, achieve’, afrette ‘train (a dog)’ illustrate the same relationship.

14. Obligatory object

Transitivization makes the obligatory object comprehensible. In Russian the rule apparently is formulated as follows: If it is transitive, a perfective prefixed verb must have an object. And if we look at the Danish forms han udsendte, han afsendte, han indsendte, han fremsendte (‘he sent out, he sent off etc.’), we also encounter the necessity of an object. (At this time, it is of less interest to us under which circumstances simplex involves the same requirement. It is common in Danish to say Radioen sender ikke i øjeblikket ‘does not send for the moment’, although the verb sende normally requires an object. In the same way, the position of the Russian secondary imperfective is not
examined here since the rule of obligatory object concerns the perfective verb).

We are less occupied by the fact that the given prefixale is combined with several objects, and that these will be within fixed semantic circles (the circle may be very wide — you can indlevere ‘hand in, deliver, deposit’ everything in the world, but not human beings and not abstract notions).

For example

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| obligationer, gevinster ('bonds, a prize, winnings') |
| stopper af planter ('substances from plants') |
| udtrække |
| en tand ('tooth') |
| spisebordets plads ('top of dining-table') |
| tiden ('time') |
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illustrates the semantic wealth of the verb udtrække ‘draw out, pull out, extract’.

What concerns us is that the place of the object is occupied (it is not left empty), and the question arises as to how we might depict this mechanism. We have expressed transitivization by means of an oval with dangling threads and we can now say that the threads not only have a capacity but, also, a “duty”, as it were, to be fastened to an object. The explanation can only be found in the specialization viewed together with the polysemia (the “semantic inn”). Without an object, the utterance is meaningless. The Danish forms han overfaldt ‘he attacked’, and vi ophispile ‘we ate up’ require an object, and the same holds true for on proveril in Russian ‘he controlled’ (his comrades, an instrument, a composition at school etc.). It is questionable whether there is a contents plan in proveril (or other Russian or Danish prefixed verbs). And from another point of view, not concerning the obligatory object, one could ask if a prefixed verb in -sja has a “meaning”. On provalisja is among other things ‘he fell into the water etc.’ and ‘he was plucked at the examination’.

Does this hold good in the opposite way: ——— —? That is to say, does the given object presuppose precisely the given prefixed verb? An example would be Han forvandt aldrig tabet ‘he never recovered from the loss’. This idea is advanced with great caution, since a natural objection would be that the phrase could just as well run Han *we aldrig ...’

The semantics require an object in the situation described, for it is only the object that secures the message. But what is demanded for producing the message may be something else. For example, a prepositional member in the sequence understå dig i at være mig ‘don’t dare to wake me’, and a sentence beginning with that (an explicative sentence) may replace the object as in han bestred, at ‘he contested that’ (han bestred udtalelsen ‘he contested the statement; ’Danish has no han bestred in itself finis, since bestred requires an object.) It should be added that the object (of course) does not convey
Danish versus Russian: the verb

full information about the meaning. A sequence *hun indsatte* makes several demands. This is past time of Danish *indsatte* which is translated ‘put in, insert in, deposit, establish, install, substitute’ etc. and in our case ‘make somebody one’s heir’. And an addition of *byens katte* ‘the cats of the town’ does not give sufficient information. If we add *til universal-arving* ‘heir general’ the message is complete. The same situation is illustrated by Russian *on ostavil* ‘he left’. The Russian phrase *on ostavil demodan* acquires its meaning only through the continuation, which can be *v vagone* ‘on the train’ or *detjam* ‘to his children’.

These elements (object and perhaps other members) do not necessarily occur after the prefixed verb, cf. *Modet udsatte formanden på grund af sygdom*, etc., literally, ‘The meeting postponed the president owing to illness’, etc.

Violations of the rule of obligatory object demand our attention. An example is perhaps *tyskerne angreb* ‘the Germans attacked’, where the context (the preceding context) seems to illuminate the goal. We can also note *Han uttalte smukt* ‘pronounces beautifully’, where there is no doubt that it is a matter of articulating sounds of a language. Imperatives like Russian *izvinit!* and Danish *Undskyld!* I’m sorry’ may dispense with an object (and in most cases they do). The object must be implied in the preceding text.

Some difficult problems are connected with the confinement to perfective verbs (in Russian). Here we observe the commandment *Ne ubivaj!* without object, but *ne ubej!* ‘don’t kill, don’t murder!’ seems to require an object. If the rule of the confinement to perfective prefixed verbs is true (the restrictedness described according to which only perfective prefixed verbs are affected by the rule), this might lead to a revolutionary change of the conception of pair.

15. Preposition vs prefix

Problems associated with prepositions are numerous, but most important for us is that Russian uses prepositions as Danish does. In both languages their number is relatively small, but defining what a preposition is presents certain difficulties. That Russian prepositions may occur in a “vocalized” shape (*izo* for *iz* etc.) has already been mentioned. It is superfluous to point out that a Danish preposition does not automatically correspond to a Russian preposition.

The Russian preposition governs a case and Danish has relic forms like *til sos, til vejrs, til bunds* ‘on the sea, up in the air, to the bottom’ and others. A remarkable feature is that Danish can disengage a preposition from its government, cf. *den mand jeg talte med* ‘the man to whom I spoke’, while Russian cannot (but English allows for ‘the man I spoke to’).

The meaning of the propositions is complicated; simple cases like *i vagnen, på vagnen, bag vagnen, efter vagnen* ‘in the car, on the car etc.’ do not give
us much information about the complex semantics. In this regard, sequences like på gulvet, på mandag, erklæring på tro og love, på trods af 'on the floor, on Monday, a solemn declaration, in spite of' with no automatic correspondence to Russian (or English) are illustrative. Treating the Russian preposition za (or some other preposition), we find meanings scattered to the same degree. Our preposition does not necessarily have a direct counterpart in the other language; Russian has, for instance, instrumentalis.

It is not immediately clear when we do face a prepositional member in Danish. If we oppose the two sentences

- han stillede på knappen
- han stillede på mødepladsen

(meaning 'he regulated the button', 'he arrived at the place of appointment'), we might, according to the author's view, consider classifying stillede på as a verbal unit with knappen as object, while på mødepladsen is a usual prepositional member. Only detailed investigations will show whether Russian involves cases that lead to similar ideas.

If we collect the many meanings of a given preposition in one semantic sum, the latter will not coincide with the sum we imagine as a product of an addition of the meanings of the prefix. (“Meanings of the prefix” exist only for the purpose of discussion. We have solid grounds on which to maintain that the prefix is de-individualized when connected with simplex.) The Russian preposition ojob predominately occurs in connection with verbs of uttering (speak about, write about etc.). The prefix o-job- is quite different. The verbs express for instance that the action has the shape of a circle or a half-circle, indicates a direction downward, or the verb contains the element of hurting, damaging someone, pejorativity, deteriorization, or the action is characterized as done above the norm or standard, surpassing others etc.

In Danish the preposition om has varied uses, cf. skrive om, 'write, about', tale om 'speak about', vædde om 'have a bet on it', om hjørnet 'round the corner', om mandagen 'on Mondays', om halsen 'round the neck', ubekymret om fare 'reckless of the danger', tvivl om 'doubt about', håb om 'hope of', om et år 'in a year'. But the prefix om differs. It may, for instance, characterize the action as repetitive (and correcting), as having the shape of a ring or a circle (omslutte 'encompass, surround, environ, encircle, embrace'), or as expressing a notion of turning over something (omstyrte 'overthrow, subvert') etc.

The meaning of the preposition does not account for the meaning of the prefixed verb, but this principle, though to a great extent universally valid, is usually overlooked. Operating with the precarious notion of spatial meaning as in underfore en tunnel under vejen 'plan to “lead” a tunnel under the road', one could, of course, maintain that one and the same “under” occurs. We would have, then, ignored sequences like under krigen 'during the war' and
Danish versus Russian: the verb

under store afsavn 'during a time of heavy wants or in spite of...'. In Russian, pod, when taken in a spatial sense, is Danish 'under', but that notion is not contained in poddełat' 'falsify', podstręlić' 'wound (not seriously) by a shot' etc. For the present we can summarize these observations saying that prefix is foreign to preposition in both languages.

Russian nasmotret' and smotret' na are two different things. The heterosyntagmatic position described earlier for Danish is foreign to Russian. The first form (nasmotret') may be translated 'discern, discover, catch sight of', and smotret' na is 'look upon'. If we now tentatively maintain that the na attached to smotret' specializes the simplex, we are approaching the observation made about the process of prefixation. However, the inappropriateness of such a comparison can be seen immediately. The semantics of smotret' are, indeed, untouched, and the aspect is as well untouched. (Smotret' has a wider degree of combinability than shown (smotret' na) — v temnotu 'look into the dark', iz oknä ‘from the window’, pod stol ‘under the table’; and smotret' may in contemporary Russian be used as a transitive verb).

For the most part, we can say that, as far as the present state of language is concerned, prefixes display one kind of semantics, prepositions another. It would, however, be unreasonable to assume that such a division were original. At the base of prefix and preposition (other investigators, too, have adopted this way of thinking) must lie an adverbial notion, a common joint, and an ensuing differentiation must be presumed. Reminiscences of such a remote state of language can possibly be found in a form of the type oststojät' 'stand at some distance from something', where the verb is imperfective! One could say that the language (Russian as Danish) has exploited the materials maximally when prefix and preposition leave each other. It could be said, too, that we are bringing together things that go by themselves. When the speaker leaves the spatial sphere, a differentiation must take place, as in under hungersnaden 'during the famine' etc. which is foreign to undersøge 'examine' etc.

16. Semantics. Stock, constituent parts, organization

The semantics of the simplex are far-reaching and complex, Danish tage with several meanings (English 'take') illustrates this. If we imagine thousands of simplicia attached to, say, from 5 to 20 prefixes, roughly fifty thousand verbs appear. (Among them, there is in Russian a great number of cases in which the prefixale “repeats” the simplex modifying it. Apart from them are verbs with what Isačenko (1960:222) calls a “qualificator-prefix” which creates new lexemes. Those problems cannot be treated here.). To that colossal expansion we can add in the verbs in -sja (Danish sig), and what Danish loses in consequence of the lesser proportions of the prefixation, it gains by the specifically Danish phenomenon of heterosyntagmatic position.
The semantics of verbs carrying a prefix in both languages are more accessible for a semantic analysis, and the only reliable method, to be sure, is by going through the prefixes one by one.

The verbs in o-/ob- have earlier been mentioned briefly. The complete analysis has involved an investigation of the entire stock of verbs with that prefix. Only an inquiry of this sort makes it possible to find out circles of signification characteristic of these prefixales. That a prefixed verb belongs to a particular signification sphere means that it contains that semantic element (SE), but evaluation of SE inevitably depends on a subjective judgment.

Listing the entire column of verbs in o-/ob- would be prohibitive, so we will confine ourselves to a fragment of that list. For the prefixed verb, we identify one SE, though we know beforehand that most frequently several SE are placed side by side. The demonstration is realized as follows. We set up, for instance, 25 verbs in o-/ob- one under another, and to the right of them we indicate the signification spheres which we have established on the basis of an investigation of the entity of o-/ob-verbs. Typical SE are “surround/environ/encircle”, “a surface is treated”, “direction downward”, “all/many/multitude”, “provide with”, “adapt, make apt”, “control/revise/check”, “re-establish”, “pejorative”, “deterioration”, “cheat”, “erroneous action”, “ignore/skip/omit/leave out”, “excess/exorbitancy”, “surpass”. If, at this point, lines are drawn from each verb to a signification sphere, chaos results, and from a single signification sphere threads go out to several or many verbs. Space has only allowed us to indicate some few characteristic signification circles within the verbs in o-/ob-. We have omitted SE “action of ring-shape”, “pass by (avoiding something)”, “spreading to the whole object”, “lean/support”, “mutative”, “factitive”, “hurt/damage”, and some vague or indefinite SE as, for example, “to acquiesce with/cause to stop or rest”, cf. ostanovit ‘to stop’. We must be satisfied with this rough division for the present. A fine division would lead to numerous sub-divisions, and, ultimately, could perhaps show the single prefixale as an autonomous unit.

O-/ob has not monopolized the SE’s observed, cf. to this point Danish over- and for- sig in overdrive ‘exaggerate’ and for-spise sig ‘to overeat’, both expressing too high a degree.

In Danish we can analyze the verbs in om- in a comparable way, but in this case the signification spheres are identified according to intuitive judgments (since no description is available of that group of verbs). They prove to be, for example, “notion of circle” (omsøve ‘drift, sail, around something’), “half circle”, into which may enter the element “avoiding”, (omgå ‘evoke, by-pass (regulations)’), “move something”, “overturn, upset” (omstyrte ‘overthrow, subvert’), “spoil” (omkomme ‘perish’), “repetitive (and correcting) action” (omsy ‘remake (a dress)’).

In these two columns (incomplete in our presentation) we have apparently
determined the semantics, but it is immediately seen that this is an illusion. The sub-significations of the verb have not been taken into consideration; in other words, from the single verb in both languages lines should be drawn to more than one signification sphere. The result is a complex net of connecting threads.

Danish verbs in over- might have been chosen, but they would have given the same result. We can attempt to evaluate the SEs. Overse, which contains several meanings, including ‘survey, have a full view of; fail to notice, pass over, overlook, miss, fail to see or detect, connive at; look down upon, treat suporcially’, seems to involve the SEs “a surface is treated”, “pass by”, “go round something”, “ignore (consciously or not)”, and perhaps SE “damage”, “deterioration”, “erroneous action”. Overfore seems to contain the SE “carry across something”, but such a spatial conception is less distinct when talking about overfore penge, sine tanker, etc., ‘transfer money, one’s thoughts, ideas’. Overkomme ‘manage to do’, oversid ‘get over, get through’, overvind ‘defeat, overcome’ possibly show SE “oust, defeat competitor” or “destroy”.

The choice of the prefix, and this is valid in our time, too, is one of the most puzzling riddles. The only answer apparently available to us is that the mechanism behind the selection of precisely over- (see above) is Sprachgefühl, linguistic instinct. Referring to prepositional meaning proves most often to be a failure. Danish overskride ‘cross, exceed, overrun, transgress or overstep; act ultra vires’ is not understood as a combination of skride ‘stalk, stride’ and over-, and similarly Russian poddelat’ ‘falsify, forge’ is not based on delat’ and pod-.

The question of what the appearance of semantics depends on is twofold (in the author’s opinion): first the nature of the prefixation itself (something of adverbial character is presupposed), and secondly the question of how the recipient knows what sub-signification the speaker has in mind.

With respect to the latter problem we can take obkosit’ as a starting point. The verb is explained (according to MAS): ‘1. mow round about something, 2. mow (without that addition), 3. surpass somebody in mowing, 4. to make (a scythe) serviceable mowing with it’. The disconnected unit obkosit’ (or the disconnected obkosit, past tense) in itself contains no information about the meaning. The meaning (in terms of the verb) presupposes certain information about the object (the nature of the object). This information involves a distinction, person or thing as well as more detailed sub-divisions. In Danish han underholdt (finis, the word finis is used for no continuation, stop) has no meaning, or it has perhaps just an acceptable meaning. A meaning may, with difficulty, be acknowledged as ‘he was an entertainer, he did the job of an entertainer’ (“silent prefixed verb”). A context is required, and in several cases the whole “situation” must be illuminated.
We have emphasized the object giving the prefixed verb a voice, adding that in place of the object a sentence, beginning with that (an explicative sentence) may be used, but the role of the subject should not be forgotten. It is noteworthy that Danish han overså finns has no meaning, whereas han oversås is meaningful. (Oversås is passive and presupposes a de overså han ‘they ignored him’, which provides the meaning.)

In Danish and in Russian the prefix is “wedged into” simplex creating an inviolable fixed unit. (One of the Russian investigators uses an appropriate term, “a conglomerate”.) Here we pass by the prefix that is “hooked on” the simplex by Russian verbs of Aktionsart. The relation described leads our thought to the “indholdsfigurer” (literally “figures of contents”) of Louis Hjelmslev 1963:101: the Danish word ko ‘cow’ in the expression plan is divided into a consonant and a vowel, while the contents plan is dissolved in ‘ox’ and ‘feminimum’, but not in such a way that one constituent part belongs to the consonant, the other to the vowel. Ko is an entity in the same way as our prefixed verb.

The signification sphere observed on the single verb we call SE, it is tentatively depicted as a rectangle with the short side on the writing line: □. But in the majority of cases the prefixale contains several SEs, which may be depicted □□□, or typographically SE&SE. Often a SE, however, might be interpreted in another way (showing a “Janus-face”), which can be depicted with a stroke through the rectangle and by tapering the short sides, in print SE;SE. (Russian ožinit ‘sharpen (a pencil)’ may be claimed here to involve SE “adapt” and SE “ring-shaped action”; in Danish om styre one may recognize SE “overturn-action” as well as SE “destroy’, ‘overthrow, subvert”) But the real stumbling block for the student of semantics is rather the situation where a SE does not allow for isolation, where two SE’s are inextricably connected. We will then talk about a “faceted SE”, depicted as △, in print SESE. Thus otmětit ‘provide (trees, washing) with a mark’ includes both SE “provide with” and SE “many/all”, two concepts that cannot be disengaged from each other, and in Danish omgå loven ‘evade, by-pass (regulations)’ and omgå fjendens stillinger ‘outflank, by-pass (an enemy stronghold)’, showing SE “cheat” and SE “passage around something”. The latter situation might possibly be associated with deceitful manoeuvres.
The object of obkosil (described above) tells the recipient which part of the verb is meant. The object may be a field, a scythe, a person. (In obkusivat'sja the subject gives the information.)

The chain (the linguistic utterance) may be depicted as a long band, in which we insert a SE:

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[ ]
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the SE might also have been a tapered SE. According to current conceptions he SE is 1) recognized immediately, and 2) only once SE is actual. Point 2) cannot be doubted, but we have just observed that point 1) is wrong. The disconnected obkosil has no meaning, with SE present "as a matter of fact". — "Delayed SE" must be considered normal, a "simultaneous SE" is sensational. SE and its resolution probably most often appear in this order, but there is no impediment for an object (or other member) to be presented before the verb, thus solving the semantic "riddle" in advance.

We have had Russian obkosil in mind, but Danish displays the same situation. Han udleverede finis 'delivered, surrendered, restored' gives no meaning; other examples are han autog 'he accepted or engaged', han nedlagde 'closed down, abolished, dismantled', han opgav 'he stated or he resigned'. Looking at Danish han indfoererede the understanding is obviously simultaneous (although the object may have different shapes, a message, an advertisement, the object is no person, it is no abstract notion).

The sequence of the words — in Danish as in Russian — is not deeply rooted in the linguistic structure. Nothing prevents Noglen udleverede han først på opfordring, literally 'The key he handed back only when requested'.

(German plays a different picture. We confine ourselves to citing a sequence like er führte...auf. We are acquainted with the object before the constituent auf of the verb.)

Above, the "delayed SE" was considered normal. Extra delay may occur after obkosil in our example an adverbial member might no doubt appear; cases in point in Danish are man indlagde efter nogen tids venter patienten and man indlagde efter nogen tids venter elektricitet 'having waited some time they sent the patient to a hospital' vs 'installed electricity'. With some delay, we are informed what was meant by "indlagde".

Danish with its heterosyntagmatic principle has possibilities of ambiguity (intentional or not), cf. de spillede i årenes lob en formue ind. de spillede i årenes lob en formue op 'playing they brought in a fortune' vs 'gambled away a fortune'.

The tolerated delay must be restricted in both languages, and if necessary, the verb must be "brushed up". An imaginable example is hun pillede fol-
lowed by a long inserted sequence and ultimately the object et beløb or Jens som barnets fader (The verb udlægge alludes to 'lay out money' and 'alleged father').

The peculiar features of the verb in -sja as far as semantics are concerned, and the problems connected with Danish -s and sig must be put off for the next section. The semantic structure exhibits considerable accordance of Danish and Russian.

17 Reflexivity, reciprocity etc. and word formation. Resuming problems of -sja, sig and -s

A. Considerable difficulties are encountered when we look at the use of the "particles" -sja, sig and -s (-sja is called a postfix by Roman Jakobson). Russian investigators as well as others have searched for one distinction to account for -sja. Isačenko's (1968:453-463) distinction between reflexive forms and reflexive verbs is useful here: passive (in -sja) and impersonal verbs with -sja are transferred to grammar, whereas everything else is considered as belonging to lexicography. Russian -sja is firmly attached to the verb, whereas Danish sig is free in that respect. Placing the sig in front of a clause is rare and obsolete, thus Sig månen langsomt hever 'the moon is rising slowly'. Danish -s ends the word, and drengen har slå-s-set is a rare and curious phenomenon ('the boys have been fighting', slås is 'to fight').

In Danish, passive is used in a fully natural way in Drengen roses 'the boy is praised', whereas Russian does not typically allow living beings to occur with passive in -sja (although infringements of that rule do occur): okno metsja is "the window is washed", and metsk moetsja is 'the boy washes himself'.

The following scheme can be established:

<table>
<thead>
<tr>
<th></th>
<th>passive</th>
<th>reciprocal</th>
<th>reflexive</th>
<th>word formation</th>
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<td>-s</td>
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<td>sig</td>
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<td>reflexive</td>
<td>word formation</td>
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<td>-sja</td>
<td>passive</td>
<td>reciprocal</td>
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(We will then ignore the Danish "s-verb", since it is beyond the scope of the problem under discussion, e.g. jeg længes etc. I am longing for' etc. However, a duplicity can be pointed out in the case of mindes: afslade mindes 'the deceased person is commemorated', and vi vil mindes afslade 'we shall remember...').

The scheme can be compressed into

\[-sja \quad \underline{-s} \quad \underline{\text{sig}}\]

although we do not mean to imply that a Danish verb in -s or sig corresponds to a given verb in -sja, nor that -s and sig are of equal weight.
Danish versus Russian: the verb

-Sja is close to Danish with regard to reflexivity and word formation as well as in the question of passive and reciprocality. Hesitation is felt in Danish with nette sig/nettes 'tidy oneself up'; jeg skal lige nettes is a natural utterance 'just tidy myself up'.

There are two types of possible collisions (see above scheme) in Danish, one in Russian, but the latter is fourfold. Danish resolves these difficulties by pushing reciprocal and reflexive (true reflexive) meaning into the background. In Russian, the language is compelled to introduce strong distinctions, as well as eliminating reciprocal and reflexive meanings (-sja). The difficulties in Russian are more properly understood when we realize that -sja performs four functions and that the postpositive -sja, colourless in itself, may be said to colour the preceding element in four ways. (The subject has, of course, given considerable information for the semantics, this has been explained earlier and will be resumed later. With prefixed verbs, we saw that it was particularly the object that cleared up the semantics.)

With carapat' 'scratch' as a starting point we can make the following statement:

1. carapat' | 2. carapat'sja.
3. ocarapat' | 4. ocarapat'sja.

The relationship of 1:2:3:4 is not familiar to us a priori, and with an arbitrary verb we cannot, of course, be sure that the four places are covered. As a parallel in Danish we note

1. føre | 2. føre sig
3. opføre | 4. opføre sig.

roughly translated: føre 'carry, take, transport, convey, guide, conduct, lead', but føre sig 'carry oneself'. Opføre is 'build, erect', and opføre sig 'behave'. Only an analysis clears up the relationship of 1:2:3:4.

An artificial word SJG is introduced for -sja and sig viewed simultaneously as one entity. And by the artificial word ANTE (or Ante) we mean here the verb with the SJG cut away. -sja occurs frequently in Russian, and verbs in sig are abundantly represented in Danish as well.

Three situations occur: 1) the verb can both occur with and without sig, 2) the verb cannot occur with sig (only Ante appearing), and 3) the verb must occur with sig (no Ante appearing). (Applicable working terms, not to be used in printed works, might be Danish "tilbud", "forbud" and "påbud", literally "offer", "prohibition" and "order", which in English probably correspond to compatibility, exclusion and presupposition.) The same three situations are familiar in Russian.

Relations of presupposition are not identical with derivation. The Russian simplex may rest on a verb without -sja, or a simplex may occur only with
-sja (like bojat'sja). With prefixed verbs (verbs carrying a prefix), we encounter a division between prefixation (ponravit'sja), postfixation (-sja is added, as in obnjat'sja 'embrace (each other)'); and circumfixation (opisat'sja 'make an error when writing' from o + sja). But the derivation is only recognized through a semantic analysis.

Considering Danish danne, danne sig, uddanne sig ('form, make, mould, constitute', but danne sig 'be in process of formation', and uddanne sig 'study, learn, qualify as'), the latter (uddanne sig) cannot be classed with danne sig, but if fits more naturally with uddanne 'educate' (and the role of sig becomes a problem).

An example of ambiguous derivation is found in a comedy by Chr. Richardt. The phrase man kan sæ nemt forlove sig may be interpreted in two ways, forlove sig being either 'be engaged (to), become engaged (to)' or 'promise too much'.

If the rules of passive (described earlier for Russian) are valid as assumed here, the consequences are considerable. -Sja with a perfective verb, then, signals active, with -sja serving word formation, not formation of form. An example is opisat'sja 'make an error when writing, typing' in contradistinction to opisyvat'sja, which is solely 'be described', and this is a case which is not unique.

Nothing corresponding to the rules of passive exists in Danish. Our -s is a rather reliable signal of passive, and only rarely does employment of reciprocal -s disturb the speaker (for example, kysses, meaning 'be kissed' or 'kiss each other', although the second meaning is becoming obsolete).

Passive (with -sja) is in numerous cases (perhaps more precisely: in many cases) used in an active sense as well. Obnimat'sja is certainly passive ('a tree, a sculpture, is embraced'), but it has also the reciprocal meaning of 'embrace each other'. A parallel can perhaps, in part, be found in Danish De to lande deles om broudgifter, Landet deles eller krigens afslutning 'the two countries share the expenses of the bridge', and 'the country is divided after the end of the war'.

C. Reciprocity is considered a reality in both languages, subject and object are said to direct the same action towards each other, and the formal means are -s and -sja. A Danish example is kysses, de kysses 'kiss each other'. But the same form in certain cases (and more frequently) expresses passive as well, as in bornene kysses til farvel 'the children are kissed good-bye'. And Aage Hansen (1967:56) says that it is 'most simple to consider this application (reciprocity) as falling under the active-passive-system'.

The same holds true for Russian. Odnimajutsja is reciprocal 'they embrace each other', while at the same time being passive 'they are embraced', but Russian has in the rules of passive an effective means of distinction. If obnimajutsja is passive, the subject is a non-person (it may be trees, columns etc.). A threatening collision is thus avoided. As explained above, the danger is by far greater in Russian than in Danish.
Danish versus Russian: the verb

The parallel development is remarkable. Reciprocal verbs are poorly represented in both languages; in Russian they give way to a drug-druga-construction ('each other'), and in Danish they follow a similar path (a "hinanden"-construction: each other, one another).

D. When the verbs in sig and -sja are bracketed together, in the group of reflexive verbs, the riddle of the concept of reflexivity is veiled. We here prefer to call the verbs sig-verbs and sja-verbs, taking the word reflexive in a narrow sense (truly reflexive, properly reflexive). We use the artificial word SJG tentatively for -sja and sig viewed as one entity, and the artificial word ANTE for a verb from which SJG has been cut away.

The current conception is that reflexive verbs are recognized by the action "going back" upon the subject itself. In the author’s opinion, the characteristic feature is that the action of the subject remains "within the circle of the subject". Usual examples are Danish vaske sig and Russian myt'sja with the same meaning.

Not every SJG creates reflexive meaning, as has been underlined in the preceding text. In Russian, the passive verbs are sorted out immediately. If we consider Danish udgive (en bog) 'publish (a book)', udgive sig (for greve) 'try to pass oneself off as (a count), impersonate', the point of view "reflexive" with udgive sig is dropped, when we stick to the meaning "publish" (udgive). The existence of separate udgive and udgive sig must be recognized.

What we are searching for is the true reflexive meaning. A condition on this meaning holds that we have "the-same-person-relationship" (which goes by itself); Ante must be active and transitive; probably the subject must be a person. bordpladen har sidet sig 'the table top has warped' does not show reflexive meaning.

We oppose two cases to each other: jeg vasker mig, jeg vasker dig 'I wash myself, I wash you' with the same "wash-action", but jeg mører mig, jeg mører dig 'I amuse myself, I amuse you' with two "amuse-actions". This shows the involvement of a new-person-relationship, which sheds light upon the problem of reflexivity. Jeg vasker mig may be considered reflexive; jeg mører mig, on the contrary, may not.

Parallel to that, Russian has ogorčit' 'annoy somebody', ogorčit'sja 'be annoyed, feel annoyance, disappointment'. Myt'sja 'wash oneself' and riđovat'sja 'be glad, feel joy, pleasure' cover the same idea as our opposition jeg vasker mig/jeg mører mig.

Reflexive meaning may be excluded in advance. The SJG-verb may occur 1) side by side with Ante, 2) be unknown as only the Ante occurs, 3) be obligatory (there is no Ante). Only the first case gives a theoretical possibility of reflexivity (real reflexivity is rare).

Analyzing the SJG, the investigator must unceasingly reject reflexive
meaning. *En storm rejste sig* ‘a storm sprang up’, *han rettede sig* ‘he improved (morally), he went straight (after having been a criminal)’, *jeg orienterer mig,* etc., do not show reflexive meaning, and neither does *Lyset bevæger sig med en hastighed af* etc. ‘light moves at a speed of...’.

Obligatoriness-of-person is, tentatively, our name for the situation where the verb is connected only with the same person (and the same numerus), thus *forregne sig* ‘miscalculate’ *(jeg forregner mig, du forregner dig, but no jeg forregner *dig)*.

If *sig* is obligatory, no movement of person can take place. There is no *(jeg undslår dig, only jeg undslår mig)* ‘I decline, refuse, excuse myself’. Some cases shun obligatoriness of person: *(jeg forterker dig ikke)* i ‘I cannot blame you for’ occurs, but there is no *(jeg forterker *mig)* etc. The opposite is the two-person-principle: *(jeg vasker mig, jeg vasker dig)*. Another type is *(jeg forhører mig (om prisen)* ‘I inquire (what the price is)’, but *(jeg forhører dig (om din frien)* ‘I examine, interrogate, you (with regard to your activities, movements)’. The latter case shows a normal object *(to forhøre)*. In Russian we find *onslåel menja* ‘examined my inner organs, made an auscultation’, but on *onslåel serja* ‘omitted to obey, disobey’d’.

In *(jeg foragter dig, du foragter mig)* *(‘despise, disdain’)* the pronoun functions in the same way, but *(jeg foragter *mig)* is not acceptable in Danish. Only *(jeg foragter mig selv)* shows true reflexive meaning. This meaning is due to *(selv)* (and in Russian *sebja* plays the same role). For the sake of explicitness: *(jeg foragter dig selv)* does not have reflexive meaning, which is self-evident, since the word *(selv)* is not connected with the object, but with the subject.

It is assumed in this treatise that verbs for “tidying up oneself” do express reflexivity *(like vask sig)*, and if a *(selv)* were added, we would end up with something without meaning or at any rate not what we are searching for. *(Jeg vasker mig selv)* is not reflexive *(contrary to English)*. The author is inclined to confine the circle of true reflexive verbs in Russian to the verbs for “tidying up oneself”; verbs for suicide will be discussed below. *(And the situation jeg skal vaskes will be treated under item E.)*

A distinction is attempted between two qualities of the SJG: *abso* and *contin*, our abbreviations for absolutive position and continuatio, the latter saying rather primitively that a continuation is required as in Danish *(afholde sig)* ‘abstain from, refrain from’ *(a preposition fra must follow)*. *Abso* means that the verb is sufficient in itself, not requiring any explanation, but it does not necessarily forbid a continuation. This is a common Danish/Russian feature, which can hardly be viewed as a matter of course. We can mention some scattered examples, even if it is not clear what we elucidate. Perhaps some lawfulness could be found. *(Udsætte sig)* ‘lay oneself open to, expose oneself to’, *(modsætte sig)* ‘resist, oppose’, *(opholde sig)* ‘stay, live, reside’, go to the type “contin”. *(More sig)* ‘amuse oneself, enjoy oneself, be amused’ may be “abso”, but is it
Danish versus Russian: the verb

not necessarily. Han undslog sig 'he declined, refused, he excused himself' may be "absol". Russian ostat'sja 'remain' is "absol" and "non-absol". On pritvorjaetsja 'pretends to be, simulates..' seems to be "contin" (it is connected with a member in instrumentalis or with a sentence with budto by 'as if', but "absol" cannot be excluded). Otväźit'sja 'make so bold as to' demands na čto or an infinitive (it is "contin"). The continuation required may be a prepositional member (not an arbitrary one) or an instrumentalis, etc.; with pritvorjaetsja, for instance, bol'onym.

A schematic outline:

more more sig more sig selv
čuvstvovat' čuvstvovat'sja čuvstvovat' sebja
e tc.

shows a homogeneous interplay between the columns.

The author concludes that true reflexivity with SJG is doubtful, yet it seems incontestable with the type vaze sig and hange sig 'wash oneself' and 'hang oneself' (verbs of tidying up oneself and verbs for suicide). The presupposition is perhaps that a person directs an action towards his own body. True reflexivity is obviously expressed by sig selv and Russian sebja.

Great Danish/Russian similarity can thus be seen. (What makes this matter indistinct is that Russian -sja also serves to express passive, as will be explained later. This element does not interfere in Danish.)

-sja and sebja expressing reflexive may in some cases overlap each other, but sebja is victorious. In Danish sig selv, in the author's opinion, is the victorious construction. The disharmony ANTE:SJG, disharmony SJG: sig selv and sebja, and the harmony sig selv and sebja: ANTE, are, to be sure, essential for the contrastive analysis.

E. Russian may use -sja to make a verb intransitive. What is surprising is not that an intransitive verb appears, since verbs in -sja are intransitive, but that the language intentionally creates an intransitive verb which is active like the verb it already had, while remaining semantically unchanged. Kärcevski (1927) here uses the designation la neutralisation. (Perhaps we could profit by a shortened term "neutral" for this special purpose.). An example is §jus' 'I am sowing (something)', or stirdjus' 'I am washing (something)', or perhaps 'it is my wash-day to-day'. The speaker reports what he or she is doing, but does not mention the object. This is perhaps superfluous, or the speaker conceals it. Possibly we have in Danish a parallel in hun venter sig 'she is expecting'. Perhaps "holde sig" in children’s language (for holde vandet 'omit, postpone, urination') belongs to that group as well. Possibly Danish jeg skal lige redes (pronounced re'æ), jeg skal lige frises and similar instances ('I must comb my hair') should be explained in a similar way.
It appears to the linguist that this phenomenon is exceptional, but it might prove to be commonplace. Do we have a concealed object in Danish *jeg over mig* 'I am practising, preparing the lesson (music etc.)'? Or is it simply stated that I am occupied by practicing, exercising, preparations? Danish may also "forcibly" make the verb intransitive, cf. *jeg over finis, man må lære* 'one must learn' (without object). A large number of Russian verbs are perhaps explained in this way, cf. *ja uču slová 'I am learning words', but ja učus* (with no question of object). No reflexive meaning can be pointed out here, and the meaning may quite simply be. I am displaying diligence, taking pains.

F. The utilization of -*sja* in *sobaka kusáetsja* 'the dog is snappish' is strange. The Danish translation *hunden bider* in every particular agrees with the Russian expression. In Danish we do not mean that the dog is biting now, as it were, but that the instinct of a dog, or perhaps this dog, is to bite, and under the circumstances it may be a fierce, snappish dog. In Russian a -sja indicates this phenomenon, while the Danish solution is intransitivity forced upon the verb. The usage (in Russian) has been designated in various ways, among them *verbs of tendency*, the author uses tentatively the name "særprægsverber", verbs denoting a distinctive mark, a karakteristikon.

It is surprising that Danish has a parallel, described by Aage Hansen (1967:62) as "tilbojelighedens lideart", literally "passive of inclination", illustrated by *hunden bider* 'the dog bites', *nælden bandes* 'the stinging nettle stings' (it is a dialectic phenomenon).

These verbs should probably be classed with word formation. There are natural restrictions as to tense — the deep-rooted quality blocks the use of a preterit, and prefixation seems to be excluded.

G. SJG — Russian -sja and Danish *sig* considered jointly — is now under discussion (and we have attributed little importance to reflexive use, etc.). SJG is made use of in impersonal expressions. *det sommer sig* (be becoming, be proper), but there is no *han sommer sig*, Russian *ročetsja* 'feel like something, want' etc. Isačenko (1968) certainly here speaks about formation of forms. In Danish this relationship is not easily seen through. The use of *sig* appears here to belong predominantly to the simplex and to occur chiefly with present tense.

In the preceding text, the semantic "fan" was supposed to be less with SJG than with Ante. The prefix conveys a semantic limitation, the same is obviously true of the SJG. But the SJG-verb is not necessarily impoverished with regard to meanings, cf. *indstille sig* 'enter for an examination' as well as 'prepare one's mind for new changed conditions, an unsafe future etc.' and Russian *obit'sja* 'fight and get rid of one's attackers' as well as 'get away from (one's military detachment), be lost in this way'. The lexeme-forming activity of SJG grows to become the predominant feature. -sja produces (with a simplex) one verb,
Danish versus Russian: the verb

and a prefix produces up to some twenty verbs. In combination they make a considerable expansion possible.

Though we view SJG as the remedy serving word formation, we do not say that the particles have been added. SJG may occur accompanied by a prefix, cf. opisat'sja ‘make an error when writing’, from pisat’ with o+sja added, and Danish forgribe sig ‘lay violent hands on’.

ANTE and SJG are semantically different. The distance may be great, comparatively great, small, perhaps hardly perceptible, but a new word appears. Talk about a difference from something (a semantic cleft) is not always justified — there is not necessarily an ANTE, cf. forgribe sig without any *forgribe. Theoretically one can establish a system of equidistant lines and depict the “distance” on them, but it is seen immediately that this is only a subjective statement. An objective measurement is out of the question.

Some examples are: pleseti ‘plait, braid’, but plesetis’ ‘shuffle, shamble’, nesti ‘carry’, but nestis’ ‘move quickly, also lay eggs’, obložit’ ‘surround with; tax’, obložit’sja ‘mislay, put in a wrong place’. All prefixes obviously give the same evidence: vstupit’ ‘enter, join (a club, a political party)’, vstupit’sja ‘go in for, advocate somebody’, vybrat’ ‘choose, elect’, vybrat’sja ‘find one’s way out’, zaderžat’ ‘keep back, detain, withhold’, zaderžat’sja ‘be delayed’, razučit’ ‘practise, rehearse’, razučit’sja ‘forget (what you have learned)’.

This tremendously important semantic jump has often been considered a characteristic of Russian. Danish, however, behaves in the same way. Some few examples include: vise ‘show, demonstrate’, but vise sig ‘appear, show off’, skabe ‘create’, but skabe sig ‘be affected, attitudinize’, komme ‘come’, but komme sig ‘improve, recover from’, svare ‘answer’, but svare sig ‘pay, balance, be worth the trouble, be profitable’, holde ‘hold, keep etc.’, but holde sig ‘wear, hold; postpone urination’. Some examples of prefixed verbs include: afholde ‘hold, arrange, pay’, but afholde sig ‘abstain from’; forlade ‘leave’, but forlade sig ‘rely on, trust’; forlobe ‘pass away, pass off’, but forlobe sig ‘forget oneself, let oneself be carried away’.

There are perhaps obvious reasons for this semantic jump. If we contrast afholde (ball, meeting, expenses) and afholde sig (from commentaries, from intervention), the rich semantics of afholde seem to be totally wiped out in afholde sig, and the semantic jump, then, contains no riddle. — What is puzzling lies more in the variation.

In practice, one should make clear that the two languages operate with differences of vocabulary in a banal sense. No coherence can be found in zasidet’ and zasidet’sja, ‘soil with excrements’ and ‘sit (too) long in tho same place’, with both verbs derived from sidet’.

H. Considering -sja, sig and -a we find great structural harmony between the two languages. Reciprocal and reflexivity seem to be declining in both
languages, and the peculiar phenomena described in sections E and F are supposed to show common features. A corresponding similarity in principle is seen with word formation. For certain reasons Russian passive with -sja demonstrates separate features.

Only now we can gather the threads. An investigation of obmaniit'sja, which does not mean “cheat oneself”, but ‘be disappointed, be mistaken (with regard to friends e.g.)’, and obmanyvat'sja, which has the same meaning (in addition to being passive, but requiring an inanimatum for its subject), is instructive. In order to express a concept like “cheat one self (in connection with trade e.g.)” the language would probably resort to sebja. Russian secures itself against collisions of meaning by effective precautions, as demonstrated earlier. Danish does not face the same pressure. -Sja draws a heavy load, while in Danish the burden is distributed between sig and -s, making the risk of collision moderate or trifling in Danish.

Retrospect and conclusion

Glancing at what has been elaborated about the verb in Danish and Russian, we hit upon the decisive difference: in a context the Russian verb must express aspect, whereas the Danish verb only occasionally displays a relationship of aspective nature, and then not intraverbally as Russian.

Aspect, however, does not hamper the contrastive analysis. If, in accordance with the reasoning nowadays, we reject the “empty prefix” in Russian in favour of the explanation by means of Aktionsart, a simplex becomes a verb of one aspect (it is imperfective), on equal terms with the Danish simplex.

Formation of Aktionsart by means of a prefix is a specifically Russian phenomenon (only in isolated cases a Danish parallel can, possibly, be drawn). Aktionsart in Danish is expressed by other means.

Further, the prefix in Russian, and more frequently, serves the formation of lexemes as in Danish. Russian solely, then, develops a secondary imperfective (an imperfective counterpart with the same meaning). Still this function of the prefix (formation of lexemes) is, in contrast to formation of Aktionsart, perceivable from a Danish point of view. A common feature, then, is that prefixation creates a verb that is different from the simplex.

With regard to diathesis, a similarity in principle is seen in the utilization of two methods for the formation of the passive voice (English is different), but the choice (of method) is in Russian governed by the aspect, and strict rules apply to passive in -sja. However, this obvious difference is explainable on the basis of the fourfold use of the particle -sja. (In Danish these uses are distributed to -s and sig, which in a decisive way diminishes the danger of collision in this language.). Part.praet.pass. (“ppp”) is in Russian formed from perfective verbs. Danish, having no aspect, takes an indifferent stand. A peculiar similarity, however, appears in quite a number of cases when the
Danish versus Russian: the verb

adjectivized ppp is considered, since a prefix is required. (The language rejects de *rogede cigarer, literally ‘the *smoked cigars’, whereas en tilroget pibe ‘a seasoned pipe’ is accepted.)

Both languages distinguish between transitive and intransitive verbs, and partial transitivity is a common feature.

A specifically Danish phenomenon is the heterosyntagmatic position of the verb (afdrage|drage of ‘pay by installments/ take off (one’s boots)’) (which is also familiar to English and German).

A simplex is diffuse with respect to semantics. It may be absent in both languages (seen from the prefixed verb), a situation which does not restrain the prefixed verb from occurring. A common feature is that simplex is rarely in the mind of the speaker when he uses a prefixed verb. The contrastive analysis must attach a special weight to the enormous role of prefixation in the service of word expansion (English being different). This colours the formation of nouns in the two language as well.

The stock of prefixes has about the same size in Danish and Russian. In the process of polyprefixation a strong limitation is met, and with regard to its use there seems to exist a uniform principle. In both languages some of the prefixes appear as prepositions, but there is no semantic identity. Specifically, Danish has the detached preposition, placed after the government, a postpositive, which is also familiar to English.

Derivation shows further similarities between the two languages on a large scale. A simplex may be derived both nonverbally and deverbally. A prefixed verb is created (chiefly) by putting a prefix in front of a simplex or by circumfixation as in Danish ud- | yb-e or Russian u-glub-it’. Suffixation in connection with the formation of a secondary imperfective is solely a Russian phenomenon. A great number of verbs are derived by Russian -aja and Danish sig following the same pattern. Thus, the expansion of the word stock follows uniform lines.

The fluctuating capacity of a simplex to be united with a prefix (potency of prefixation) is a common feature. And in both languages the prefix is “wedged” into the simplex when we consider the prefixed verb. The prefix is dis-individualized, and the simplex moves into the background or is completely “forgotten”, cf. Danish undersøge ‘examine’ without coherence with søge ‘search for’.

If we establish a “prefixal column” (a column of verbs carrying a prefix, simplicia with one prefix, simplicia with different prefixes), the column in both languages proves to be non-homogeneous, and this quality spreads in a uniform way. However, the heterosyntagmatic utilization (tildt|til ‘confess/ go well with, match’) is peculiar to Danish, and the possible formation of the secondary imperfective is solely a Russian feature.

The effects of prefixation are the same in Danish and in Russian. The decisive mark is the “specialization”: the prefixed verb takes out a “segment” of
simplex (segment should not be taken literally), and a semantic straitening is achieved. The segment may in both languages be “compressed” (normally the verb falls into several sub-significations).

A characteristic consequence of prefixation is transitivization: an intransitive simplex is changed into a transitive prefixed verb, although naturally not consistently. Thus, transitive verbs dominate a corpus. This is especially true of Russian. Changes of government after prefixation are also characteristic: the syntactic perspective is shifted, and the verb acquires new combinability.

The obligatory object is also conspicuous, since without an object, or another member, the prefixed verb has generally no “meaning”.

The organization of semantics is based on the same principles in the two languages. The semantics of the simplex spread in all directions. As a rule, it resists a well-arranged grouping, and the prefixed verb is, due to the semantic straitening, open to a division according to meaning. If we consider the totality of verbs with a given prefix (this treatise has used the Russian verbs in o-lob-, and for Danish, to a certain degree, verbs beginning with om- and over-); we realize a distinct number of “circles of signification”. Examples include ‚action performed to an exaggerated degree, above the norm’ and “repetitive action”. A semantic element (SE) of that type may be assigned to a single verb, but one and the same verb most often contain several SE’s side by side (a case of polysemy which in the present treatise is called a “semantic fan”). It is possible to establish categories of meaning, but the individual verb, of course, is not interpreted semantically with completeness, and the evaluation of SE is inevitably based upon a subjective estimate. A common feature is that a SE is not necessarily unambiguous. With similar justification, the observer might in several cases maintain a different SE (the observed element shows a “Janus-face”), or it may be impossible to isolate a SE, because it is inextricably tied up to another SE (“faceted SE”).

In both languages, the prefixed verb, if detached, normally has no “meaning”. Only the context determines the contents. With a transitive verb, the nature of the object is decisive above all (han udleverede nøglen, han udleverede konens privatliv, ‘he gave up, handed over the key, he compromised his wife disclosing her private life’), and there is no han udleverede finis (finis indicating full stop). The subject and prepositional member also determine the meaning. In this way the SE will generally be “delayed” since the verb can not be interpreted the moment it is heard or seen.

The above-mentioned verbs in -sja and -s as well as sig have naturally been treated on equal terms with verbs without these particles, but in both languages they require a separate discussion under one common point of view. Russian -sja, as it were, “corresponds to” Danish -s and sig. A decisive factor in the contrastive analysis is that Russian -sja performs 4 functions
(1. formation of passive voice, 2. reciprocity, 3. reflexivity, 4. word formation); in Danish those functions are distributed to -s (numbers 1. and 2.) and sig (numbers 3. and 4.). Russian avoids the danger of collision by strict rules for passive (in -sja), the consequence being strict rules for word formation. In both cases, definite conditions must be fulfilled by the aspect. It is a feature common to both languages that reciprocal and reflexive (genuine reflexive) meanings move into the background. The "hinanden"—construction and Russian drug-druga-construction are victorious, and true reflexivity is marked by sebja and Danish sig selv. It seems that Danish parallels can be drawn to the so-called neutralization and verbs of tendency (in -sja) in Russian. The decisive element is that -sja (we are here ignoring passive forms) and Danish sig serve word formation. Minor importance may be attached to the remaining use of -sja and sig.

The contrastive Russian/Danish analysis as far as the verb is concerned has unveiled few cases of pronounced structural discord. In certain cases they can be "explained". But structural similarity is much more often prevalent, and in several cases we are entitled to characterize the accordance as astonishing.

It is impossible to consider the verb in isolation. The prepositions necessarily enter into the analysis, and a peculiar feature of Danish is the use of a disconnected preposition (postpositive). The problem of prefix vs. preposition has the same shape in both languages, and a casual glance at the formation of nouns demonstrates great structural similarity.

The boundary we have established between differences and similarities is nearly always radical and solid, not a distinction that is confirmed now and then.

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Рассудова, О. П. 1908. Использование видов глагола в русском языке. Москва: МГУ.
One of the striking and interesting differences between Polish and English is the extent to which reflexive constructions are used in one language and not in the other. In Polish reflexive constructions tend to occur much more often. Reflexivization shows up in a number of different Polish constructions where corresponding English examples do not show even a trace of being reflexive. Niedzielski (1976) calls some of these constructions pseudo-reflexive since although in form they resemble true reflexives semantically they appear to be non-reflexive. In the majority of cases się reflexive particle appears in such pseudo-reflexive constructions. Hence the subject of this paper. It must be however noted that pseudo-reflexive constructions are also possible with reflexive pronoun sobie like in (1) and (2).

(1) Pójdę sobie do domu.
I will go home.

(2) Janek myśli sobie o Marysi.
John is thinking about Mary.

Such constructions are however not as common as the się constructions and will not be discussed here.

This paper is meant to voice some questions which seem to deserve an explicit explanation. Any answers hinted here may be judged as varying in their plausibility or implausibility. Thus it must be kept in mind that any tentative conclusions reached here are hardly conclusive and that all the issues discussed in this paper need a more thorough and serious treatment than offered below.
The following list of się constructions and their English counterparts will be examined:

A. True reflexives

(3) Janek myje się.  
John is washing (himself).

(4) Janek myje siebie.  
John is washing (himself).

(5) *Janek myje.  
(6) Marysia skaleczyła się.  
Mary hurt herself.

(7) Marysia skaleczyła siebie.  
Mary hurt herself.

(8) *Marysia skaleczyła.  

B. Symmetric predicates.

(9) Jaś i Marysia pocalowali się.  
John and Mary kissed (each other).

(10) *Jaś i Marysia pocalowali siebie.  
*John and Mary kissed themselves.

(11) *Jaś i Marysia pocalowali.  
(12) Jaś i Marysia kochają się.  
John and Mary love each other.

(13) *Jaś i Marysia kochają siebie.  
*John and Mary love themselves.

(14) *Jaś i Marysia kochają.  

C. Inchoatives

(15) Gwóźdź zgiął się.  
The nail bent/The nail got bent.

(16) *Gwóźdź zgiął siebie.  
(17) *Gwóźdź zgiął.  

(18) Drzwi otworzyły się.  
The door opened.

(19) *Drzwi otworzyły siebie.  
(20) *Drzwi otworzyły.

1 Examples (5) and (8) may in fact be acceptable but not on the reflexive reading.
2 Examples (11) and (14) may be acceptable but not on the symmetric predicate reading.
D. Reflexive verbs which must be accompanied by się.

(21) Niebo zachmurzyło się.
The sky clouded up.
(22) *Niebo zachmurzyło siebie.
(23) *Niebo zachmurzyło.
(24) Jaś boi się ciebie.
John is afraid of you.
    John fears you.
(25) *Jaś boi siebie ciebie.
(26) *Jaś boi ciebie.
(27) Jaś wahal się przez chwilę.
    John hesitated for a moment.
(28) *Jaś wahal siebie przez chwilę.
(29) *Jaś wahal przez chwilę.

E. Verbs with in some contexts must occur with się and in some may not.

(30) Janek irytuje się tą sytuacją.
    John is irritated by this situation.
(31) *Janek irytuje siebie tą sytuacją.
(32) *Janek irytuje to sytuacją.
(33) Ta sytuacja irytuje Janka.
    This situation irritates John.
(34) *Ta sytuacja irytuje się Janka.

F. Subjectless (impersonal) constructions.

(35) a. Tę książkę czyta się z przyjemnością.
    This book is pleasant to read.
    b. This book reads with pleasure.
    c. This book is read with pleasure.
(36) *Tę książkę czyta siebie z przyjemnością.
(37) a. Ten samochód prowadzi się łatwo.
    This car is easy to drive.
    b. This car drives easily.
(35) *Ten samochód prowadzi siebie łatwo.

It is obvious that this list is anything but exhaustive but for the time being it will do for a tentative and rather informal analysis.

Niedzielski (1976) claims that one of the tests for pseudo-reflexives is the substitution of się by siebie, which is possible only in case of “true” reflexives. The substitution of się by siebie yields grammatical sentences only in the cases of A and B. The difference between pairs of sentences like (3) and (4)
or (6) and (7) is only slight. (3) and (6) are perceived by some native speakers as having larger integrity than (4) and (7). Besides, in (3) and (6) the agentive function of the subject NP does not seem to be as stressed as in (4) and (7). This is particularly visible if one compares examples (39) and (40).

(39) Janek upił się.
John got himself drunk.

(40) Janek upił sieć.
John got drunk.

In (39) the subject NP stands for a demoralized agent who seems to have got himself drunk on purpose while in (40) the subject NP seems to denote a rather unlucky patient.

In the case of B a change of meaning seems to be involved. (12) does not convey the same message as (13). (12) describes a nice couple while (13) conveys an image of two individuals with inflated egos. If however siebie in (13) is supplemented by nawzajem the original meaning is restored.

Examples in C, D, E and F are clearly pseudo-reflexive since się cannot be replaced by siebie.

Another obvious observation is that only in the case of A can we speak of a coherent English reflexive counterpart of the Polish construction. However in the case of "true" reflexives deletion of the reflexive pronoun is sometimes permissible in English (3) while in Polish constructions the reflexive particle is always retained.

In the case of B the counterpart of the Polish $V+$reflexive particle is English $V+$\{each other \{one another\}. The reflexive particle cannot be deleted in Polish while in English the deletion of each other/one another forms is sometimes possible (9).

In the case of C Polish reflexive inchoatives correspond either to English inchoatives, which are not reflexive contrary to their Polish counterparts, or to get passives (15).

Polish reflexive verbs (D) correspond to English non-reflexive ones or to $be+$adjective construction.

Polish reflexive verbs in E correspond to English $be+$past participle in passive constructions.

Finally the Polish impersonal pseudo-reflexive constructions correspond to the English passive construction or the $be+$adjective+$complement$ construction. The two other possible English counterparts are the patient-subject construction (37c) of the type discussed by Lakoff (1977) and the construction with one acting as the subject.

It may thus be said that Polish się constructions are (with the exception of A and perhaps B) pseudo-reflexive and correspond to a large number of
English non-reflexive constructions. The abundance of pseudo-reflexive constructions in Polish will be the sole reason for reflexivization being such a common-place in Polish when compared to English. This is perhaps true but even if true it is a somewhat trivial observation. What must be elucidated is why should all these seemingly unrelated Polish constructions be marked in the same way i.e., is there a common semantic denominator for all these constructions which would warrant the appearance of the same syntactic marking. Another question to be answered is why does the Polish (and not only Polish but also Spanish, Portuguese and probably many others) grammatical system allow so many pseudo-reflexives while English does not. However before trying to consider these problems it might be helpful to discuss the status of the *się* particle itself.

According to Fisiak, Grzegorek-Lipińska, Zabrocki (1978) *się* is a reflexive pronoun in some cases just like siebie, sobie, sobq and a reflexive particle associated with a verb in other cases. Thus when it occurs in “true” reflexives *się* is a reflexive pronoun and when it occurs in pseudo-reflexives it is not. This is somewhat strange. Curiously enough *się* displays interesting behavior also in “purely” reflexive constructions. For instance it may not be conjoined with other NPs (41).

(41) *Janek skaleczył się i Marysię.*
Janek skaleczył siebie i Marysię.
John hurt himself and Mary.

It does not appear in prepositional phrases (42).

(42) *Patrzc na się.*
Patrze na siebie.
I’m looking at myself.

It does not appear in isolation from the verb (43).

(43) Kogo widzisz na tym zdjęciu?  
Whom do you see in this picture?  
[*Się.* Siebie.]

(44) a. Kogo widzisz na tym zdjęciu?  
b. Widzę się na tym zdjęciu.  
c. Widzę siebie na tym zdjęciu.  
Whom do you see in this picture?  
I see myself in this picture.

Another curious fact is that in (44), (44b) is not perceived as an appropriate answer to (44a). An appropriate answer to (44a) is (44c).

All these problems would automatically disappear if *się* was not a reflexive pronoun at all, even in “true” reflexives, but a reflexive particle associ-
ated with verbs. If this were the case, się not being a NP could not appear in prepositional phrases, could not appear in isolation from its verb and finally could not appear conjoined with NPs. Się could not also act as a direct object in a sentence. Since upon uttering (44a) the speaker requests information about the identity of the direct object of the action, (44b) could not be an appropriate answer to that question. It may thus be claimed that in the case of się constructions rather than having a subject, which is the agent, a verb and a reflexive pronoun, which is the direct object and patient, we have a reflexive verb (verb + reflexive particle) and a subject which is both the agent and the patient. It is interesting to note here that in Russian verbs are reflexivized by means of suffixes — cs or — ca. It would be even more difficult to speak of these suffixes as reflexive pronouns.

There is however a strong counterargument of the claims made above. Polish has two variants of the singular second person personal pronoun in the accusative case: cię and ciebie. Cię obeys restrictions very similar to the ones imposed on się. It does not appear in prepositional phrases (45), it is not conjoined with other NPs (46) and so on.

(45) *Patrzę na cię.
    Patrzę na ciebie.
    I am looking at you.

(46) *Widzę cię i Janka na tym zdjęciu.
    Widzę ciebie i Janka na tym zdjęciu.
    I see you and John in this picture.

In this case however it cannot be claimed that cię is not a personal pronoun. Perhaps the curious behaviour of się should be explained in terms of the idiosyncratic properties of all short pronominal forms. Nevertheless, even if this were the case its properties would set się apart from the other reflexive pronouns. Therefore the claims presented above are considerably weakened although not completely vitiated. Incidentally, it should be pointed out here that Polish reflexive pronouns will differ quite substantially from all the other pronouns. Pronouns are usually characterized by such categories as person, number and gender. Polish reflexive pronouns are exceptional in that respect while the English reflexive pronouns correspond quite neatly to that paradigm.

If się is not a reflexive pronoun, then in “true” reflexives the subject is both a patient and an agent (or to use Lakoffian terminology will have properties of both patient and agent). That the subject NP in a sentence with a verb + reflexive particle is both a patient and an agent, is not an uncommon way of viewing things and may be found implicit in Woleżyńska-Sudd (1977), who however still maintains that się is a reflexive pronoun. What is perhaps new here (at least in comparison to the transformational treatment of reflexivization) is that instead of having two NPs one standing for the patient
and the other for the agent, the link between the two being coreference, we have only one NP with properties of both patient and agent. *Się* is treated only as a reflexive particle accompanying the verb. This would incidentally account for the relatively greater integrity which seems to characterize *się* constructions in comparison to *siebie* constructions where an analysis in terms of two coreferential NPs seems to be the most plausible solution.

The situation is very similar in the case of symmetric predicates. There are however at least two agents and patients in such constructions. Whereas in the case of "true" reflexives the agent is also a patient of the performed action, in case of symmetric predicates one of the agents is also a patient of the action performed by the other agent and vice versa.

In inchoative constructions the subject seems to be a patient and the verb is reflexive. What will differentiate this construction from the previous two is that the subject is not an agent. However Lakoff (1977) claims that the most important property of an agent is primary responsibility for the action he performs. In case of inchoatives primary responsibility for the action seems to be a property of the patients which act as subjects.

Polish reflexive verbs will to some extent overlap with Polish inchoatives. There is however a lot of variation within this class of verbs. In (21) the subject may be characterized as a patient with primary responsibility for the action. Other examples will differ from inchoatives in allowing more, so to speak, agenthood in the subjects (27). All these constructions seem to have one thing in common, the person or object designated by the subject NP rather than being a source or instigator is a recipient of an action. This is the reason why Niedzielski (1976) calls reflexive verbs like *bać się* passive.

Verbs of the E group will be reflexivized only if their subject is an experiencer, again a recipient of an action. This does not mean of course that all verbs which take experiencers as subjects will be reflexivized. (47) clearly shows that this is not the case.

(47) Każdy lubi kaszanka.
Everybody likes blood sausage.

(48) Każdy zachwyca się kaszanką.
Everybody is enchanted with blood sausage.

(49) Ta kaszanka zachwyca wszystkich.
This blood sausage enchants everyone.

What (47)–(49) exemplify is that only those verbs which allow the experiencer in the direct object position will be reflexivized if the experiencer is promoted to the subject position.

Subjectless or impersonal *się* constructions differ quite significantly from all the constructions previously discussed in that they do not have grammatical subjects. What appears as subject in the English counterparts will
not be a subject in the Polish sentences, i.e., not being in agreement with the verb and in nominative case. However even in such constructions NPs denoting patients, if present, seem to be characterized by primary responsibility for the action or state of affairs denoted by the verb, and more often than not will be topicalized. Impersonal constructions will be perhaps most similar to inchoative constructions, since both will be characterized by the absence of the agent.

The conclusions of this short informal discussion of się constructions may be summarized in the following diagram:

![Diagram](attachment:image.png)

Object NP promoted to the subject position or properties of the patient / experiencer realized in the subject.

Agent denoted from the subject position and not expressed.

Individual properties of the patient / experiencer more responsible for the action or state of affairs depicted in particular sentences.

Individual properties of the agent not responsible for the action or state of affairs depicted in particular sentences.

All these observations are quite curious and again the question as to why the się particle appears in all these constructions might be raised. Van Oosten (1977) and Lakoff (1977) write about patients of the action which to some extent act as agents in the so-called patient subject constructions. They evoke the principle of partial pattern matching to account for such constructions. Perhaps this principle might be made use of also in case of Polish pseudo-reflexives.

In English active constructions the prototypical subject is an agent and the prototypical direct object is a patient. In the passive constructions the prototypical subject is a patient and the agent ends up as a chômeur and need not be even expressed. The patient might be promoted to the subject position or properties of the patient / experiencer realized in the subject.
tion in active constructions provided it has primary responsibility for the action characterized by the verb (the agent in such cases is not expressed).

In Polish the situation is rendered more complex by the existence of the "middle" or reflexive voice. The subject in the Polish middle voice constructions will be both a patient and an agent. Thus Polish will have three prototypical constructions (active, middle, passive) while English only two (active, passive). This situation might be schematically represented in the following diagrams:

\[
\begin{array}{cc}
\text{English} & \text{Polish} \\
\text{active voice (subject}=\text{agent} & \text{active voice (subject}=\text{agent} \\
\text{direct object}=\text{patient}) & \text{direct object}=\text{patient}) \\
\text{passive voice (subject}=\text{patient} & \text{reflexive (middle) voice (subject}=\text{patient and agent}) \\
\text{agent}=\text{chômeur}) & \text{passive voice (subject}=\text{patient} \\
& \text{agent}=\text{chômeur})
\end{array}
\]

In English the less prototypical patients which bear larger responsibility for the action, will appear as subjects in active constructions via partial pattern matching to the active voice prototype. In Polish the less prototypical patients will appear as subjects in reflexive voice (the closest prototypical construction intermediate between the active and passive voice). In case of less prototypical (absolved from primary responsibility) agents we will move down the scale also towards the reflexive voice prototype. Thus the Polish pseudo-reflexive constructions may be viewed as instances of partial pattern matching to the reflexive voice prototype. English reflexive constructions will find their place either in the active voice or passive voice paradigms.

This scheme may seem to be fairly neat but again reality is more complex than theory.

The first claim which cannot be retained in its full strength is that all these constructions may be characterized using such semantic labels as agent and patient. The whole E group will stand out as an exception, demanding an analysis in terms of experiencer and source labels. This is true also in case of other constructions (50).

(50) Janek i Marysia słyszą się doskonale.
John and Mary hear each other very well.

Can we really speak of two agents and patients in (50)? It may be possible to resolve this problem by either claiming that the realization of the patient in
the subject position is the prototypical case and the other examples will be instances of partial similarity to the prototype or by claiming that we rather deal here with instances of direct objects being promoted to subjects (a not totally unfamiliar view characteristic for relational grammar).

Another problem appears with the reflexive verbs (D). What on earth can account for the reflexivization of the verb in (51) and not in (52)?

(51) Janek przechada się.
John is taking a walk.

(52) Janek spaceruje.
John is taking a walk.

Is the verb in (51) really so semantically different from the verb in (52) as to deserve special syntactic marking? Is there really anything notionally passive about a verb like modlić się: to pray? Perhaps it may turn out to be necessary to label these verbs as “fossil” reflexives which only sometimes retain reflexes of their once notionally passive character and to trace the reasons for their reflexivization not on the synchronic plane but in the depths of diachrony.

Finally there are problems with the impersonal się constructions and their relation to the other się constructions. It is indeed tempting to place such pairs of sentences as (53) and (54) under one label.

(53) Polskie konie świetnie się sprzedają za granicą.
Polish horses sell very well abroad.

(54) Polskie konie świetnie się sprzedaje za granicą.
Polish horses are sold very well abroad.

Sentences like (53) seem to have a lot in common with the other się constructions while sentences like (54) seem to resemble only reflexive inchoatives. In other words inchoative constructions share some properties with “true” reflexives and symmetric predicates and other with impersonal constructions.

Naro (1976) claims that notional passives are only in diachronic relationship with reflexive impersonal constructions in Portuguese. A similar state of affairs might be hypothesized for Polish. Any thorough account of Polish się constructions will have to cope with this problem.

The basic question asked in this paper is why does Polish allow so many pseudo-reflexive constructions and English does not. The answer to this question given here is a very poor one, if indeed it is an answer at all, but perhaps may serve as a stimulus for a more adequate and closer to empirical data account of this interesting and complex problem.
Polish SIE constructions

REFERENCES


MORE ON THE TIME REFERENCE AND THE ANALYSIS OF TENSE

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The main thrust of this paper will be descriptive and focussed on the interaction of punctual time adverbials in English and a number of verb structures. The semantic consequences of such interactions will be discussed and a brief attempt will be made to formalise the findings within the framework of a multi-predicate analysis (see Lakoff 1970, McCawley 1971 and Anderson 1973); a semantically-based approach is favoured as a good basis for cross-language comparisons of either a theoretical or a pedagogical nature. The assignment of tense morphemes and time adverbials is understood to be a function of various configurations of temporal markers: Past, Present and Future.

The syntactic behaviour of sentences in English containing perfective have plus a punctual time adverbial indicates that certain transformational operations like clefting produce a significant change in meaning beyond that which is associated with the notion of ‘topicalisation’. Furthermore, negation and question transformations may have the same effect thus also supporting the conclusion that sentences like, Gerald had left the office at five are ambiguous and require more than one underlying representation. A consideration of sentences containing no perfective elements but rather different kinds of verbal forms like, was/were going to and will be VERB-ing indicates that similar distinctions may be relevant although in a less crucial way.

When dealing with perfective have in conjunction with time adverbials that refer to a specific point in time (punctual adverbials) we need to examine either have following a modal auxiliary (e.g. will have) or the past form had.

1 This paper was given at the 12th International Conference on Contrastive Linguistics in Bialowieża in 1970. For a subsequent theoretical treatment of time and tense which takes issue with this approach, see Pankhurst (1980).
M. Sharwood Smith

since (1) is, of course, unacceptable:

1. *Gerald has left the office at five.

Equivalent sentences in languages like French, Dutch or German are quite acceptable. English, however, allows this type of adverbial in the other above-mentioned contexts. For example:

2. Gerald had left the office at five.
3. Gerald will have left the office at five.

It seems to be the case that the perfective sentence (1) may not have "present orientation" as is the case with the present perfect. Whether this is to be analysed as a result of a restriction imposed by the syntactic source for have and has rather than had in non-modal sentences or by a semantc representation is an important question.

It should be noted in passing that the restriction is not valid for non-finite versions of perfective have.

If we now compare (2) and (3) with (4):

4. Gerald left the office at five.

we may notice that a topicalisation transformation that proposes the time adverbial gives us, as might be expected, no significant change in meaning:

2a. At five, Gerald had left the office.
3a. At five, Gerald will have left the office.
4a. At five, Gerald left the office.

If we then apply cleft, pseudo-cleft, negation or question transformations to (4a) there is still no fundamental change in meaning apart from the meaning intrinsic to negative and interrogative sentences, namely the result of something in the proposition being negated or forming the focus of a question:

4b. It was at five that Gerald left the office.
4c. What Gerald did at five was leave the office.
4d. At five, Gerald did not leave the office.
4e. At five, did Gerald leave the office?

However, this is not the case as regards sentences like (2) and (3) since they are in contrast with (4) and (4a—4e), ambiguous. The ambiguity centres round the question as whether the time of leaving is the same as the time expressed by the time adverbial. In other words, at the time expressed by the time adverbial was it the case (or will it have been the case) that Gerald left at that time precisely or was it the case that he had already left prior to that time? That this distinction is syntactically trivial is thrown into doubt by the following facts:

A. When the time adverbial is proposed and the 'sentence' then undergoes
either a negative or a question transformation, the time of leaving is normal
time understood to be different from the time expressed by the time
adverbial. This will be called the non-simultaneous reading.

B. If clefting and pseudo-clefting is applied, keeping the time adverbial in
the proposed position, the sentence is normally disambiguated in favour
of the simultaneous reading (time of leaving equals the time expressed by
the time adverbial in (2) and (3)).

C. Since the restrictions apply to had and will have, they may be a function
of Perfective have in general rather than just the Past form of have (had).

D. The simultaneous/non-simultaneous distinction seems to operate although
in a different way to explain favoured readings for equivalent sentences
with was/were going to.

E. The simultaneous/non-simultaneous distinction helps to explain an im-
portant but apparently subtle ambiguity in equivalent sentences with will
be V-ing.

The first observation (A) is evidenced by the following:

5. At five, Gerald had not left the office?? Had he in fact left earlier
5a. At five Gerald had not left the office. He had in fact left later.

When putting sentences in a discourse context, the convention?? will be
used instead of an asterisk (star) to indicate highly unlikely combinations.
Since the relations holding between sentences are not as fixed as those holding
within sentences (i.e., the speaker can “change tack” before passing to the next
sentence without breaking a law) it seems inadvisable to use the inflexible
symbol indicating “unacceptable in all contexts”. (5) and (5a) should be read
without marked intonation and stress patterns for the restriction to hold.
If, however, the first sentence in each example is read with contrastive stress on
anything except the time adverbial, the reading may be reversed in favour of a
simultaneous interpretation. In this case the first sentence ends with a rising
intonation anticipating the “resolution” of the problem as in:

5b. At five, Gerald had not LEFT the office: he had in fact ARRIVED then.
5c. At five, Gerald had not LEFT the office but had in fact ARRIVED then.

Note that it is an either/or situation as regard the reading. It is difficult to
retain a non-simultaneous reading for (5b) and (5c). This means that the
contrastive versions do not reintroduce ambiguity but rather a switch in
unambiguous interpretation. Notice also that this is not simply a matter of
stress since, when the final part of the intonation pattern for the first sentence
involves a falling intonation and not a rising one, then we still have non simulta-
nous reading even when Gerald, left or office is stressed. For example:

5d. At five, Gerald had not LEFT the office.

The assignment of various phonological patterns does seem to depend on
the prior establishment of whether the sentence is to be read as simultaneous or non-simultaneous.

The following examples with will have give us a similar picture:

6. At five, Gerald won’t have left the office. He will in fact have left earlier.
6a. At five Gerald won’t have left the office. He will in fact have left later.
6b. At five, Gerald won’t have LEFT the office; he will in fact have ARRIVED then.
6c. At five, Gerald won’t have LEFT the office but will in fact have ARRIVED then.
6d. At five, Gerald won’t have LEFT the office.

If we now turn to question forms with the time adverbial proposed we find a parallel situation except we may predict that the rising intonation that the question transformation invokes interferes with the disambiguation illustrated in (5d) and (6d) since it becomes difficult if not impossible to distinguish the question provoked rise with the rise provoked by the contrastive or “concessive” interpretation. This is in fact exactly what happens (see 7d.):

7. At five, hadn’t Gerald left the office? (unmarked stress and intonation) ?
7a. At five, hadn’t Gerald left the office? (ditto)
   Yes, he left later.
7b. At five, hadn’t Gerald LEFT the office? I don’t think he ARRIVED there then!
7c. At five, hadn’t Gerald LEFT the office rather than ARRIVE there then?
7d. At five, hadn’t Gerald LEFT the office?

It is difficult to disambiguate (7d) in favour of the non-simultaneous reading without employing disambiguation via the discourse context. All we might say would be that with the minimal rise at the end of the sentence this would be the most favoured reading.

The same seems to be true of (8), (8a—d):

8. At five, won’t Gerald have left the office? (unmarked stress and intonation)
   ? Yes, he will have left later.
8a. At five, won’t Gerald have left the office? (ditto)
   Yes, he won’t have been there at five.
8b. At five, won’t Gerald have LEFT the office? I don’t think he will have ARRIVED there then!
8c. At five, won’t Gerald have LEFT the office rather than ARRIVE there then?
8d. At five, won’t Gerald have LEFT the office?
With regard to the second observation (B), we find that clefting seems to disambiguate in favour of the simultaneous reading. Contrastive or concessive versions seems very odd if intended to be non-simultaneous. Thus:

9. It was at five that Gerald had left the office.?? He had in fact left earlier/later.
9a. It was at five that Gerald had left the office. It was indeed at five SHARP.

10. It will have been at five that Gerald will have left the office.
   ?? He will in fact have left later/earlier.
10a. It will have been at five that Gerald will have left the office.
    He will in fact have left at five SHARP.

Actually, there are two other versions of (the first sentence in) (10) and (10a), namely:

10b. It will have been at five that Gerald left the office...
10c. It will be at five that Gerald will have left the office...

The first one (10b) with the simple past left in the that-clause forces the past time reading whereas (10) and (10c) are ambiguous as to whether the state/event is still to take place or whether it has already taken place and the speaker is simply hazarding a guess about its time in the past (using predictive will). All of them, however, (10, 10a—c) must be read as simultaneous. A switch in this reading can only be made, that is in the case of all except the simple past version (10b), by introducing already into the that-clause.

As regards pseudo-clefting, a similar but not identical situation obtains. With a phonologically unmarked reading, a disambiguation is also achieved in favour of the simultaneous interpretation:

11. What Gerald had done at five was leave the office.?? He had in fact left earlier/later.
11a. What Gerald had done at five was leave the office. He had in fact left at five SHARP.

12. What Gerald will have done at five will be to leave the office.
   ?? He will in fact have left earlier/later.
12a. What Gerald will have done at five will be to leave the office.
    He will in fact have left at five.

The choice between will be to, will have been to and is does not effect the meaning, that is to say, as the choice of left does in (10b). The sentences may still be either future or past referring. However it might be argued that by placing
an extra stress on the verbal form *done* in the *wh*-clause ambiguity is reintroduced as far as simultaneity is concerned:

11b. What Gerald had *DONE* at five was leave the office.

12b. What Gerald will have *DONE* at five *is* leave the office.

In this case *DONE* could be read as meaning "already done". However, as indicated above, *will* may be used by itself in the second clause. In this case a stressed *DONE* does not seem to have the same effect: the sentences still seem to be unambiguously simultaneous:

12d. What Gerald will have *DONE* at five will be to leave the office. (?) He will in fact have left earlier.

It seems that clefting and pseudo-clefting, at least with time adverbials of this type are not the simple operations they are sometimes made out to be. One should also note, in passing, that time adverbials with *at* are not the same as time adverbinals with *by* although in many of the examples here they seem on the face of it to be synonymous. Nevertheless:

13. He had left *at* five (non-simultaneous)

and

14. He had left *by* five.

should be regarded as distinct as:

15. Leave at five.

and

16. Leave by five.

It seems reasonable to suppose that in all cases *at* means "specifically at time X" and *by* means "at some unspecified time in the period leading up to time X". Thus (17) is similar but certainly not the same as (13):

17. He had left by five.

(13) means that specifically at five it was the case we could say "he has left". Observation D may be illustrated by the following examples:

18. At five, he was not going to leave the office.
19. At five, was he going to leave the office?
20. It was at five that he was going to leave the office.
21. What he was going to do at five was leave the office.

It seems to be the case that the favoured if not exclusive reading for (18) and (19) is the non simultaneous one provided the stress and intonation are kept unmarked. However, if we have the contrastive/concessive reading with the characteristic rising intonation at the end, the situation is reversed:

18a. At five, he was not going to LEAVE: he was going to STAY.
19a. At five, was he going to LEAVE or was he going to STAY?
In the case of (20) and (21), the favoured reading is the simultaneous one. Observation E concerns the ambiguity of (22):

22. Gerald will be leaving at five.

One reading would give us the meaning: at five Gerald will be in the process of leaving. The alternative reading would be what Leech calls the future-as-a-matter-of-course (c.f. Leech 1971) giving us the meaning: “at some time in the future it will be possible to say that Gerald’s (future) leaving at five”. (cf. Sharwood Smith 1977). This analysis of the second type enables a speaker of English to ask someone:

23. Will you be driving into town tomorrow?

without seeming to force the response:

24. Yes, why, do you want me to give you a lift?

or even “worse”:

25. No, but if you want to go in, I can, of course.

The inclusion of will makes the question more circumspect, distancing the announcement of a present intention or plan by projecting it into the future (“will it be your plan to drive in”). If the time adverbial is preposed giving us, for example:

22a. At five, Gerald will be leaving.

we seem to get a disambiguation in favour of the first, progressive reading. It is at least a favoured reading out of context. How this ties in with simultaneity is as follows. In the progressive reading the time adverbial expresses the same time as that which the process of leaving is located. In the other “programmed” reading (c.f. Sharwood Smith 1977) the time adverbial expresses a time as different from the time at which the “program” is located. This may be clarified in the following way:

At five there will be a process (Gerald leaving) versus

At some time in the future there will be a program (Gerald leaving at five)

To sum up, in all cases where there is a possibility of two relevant points in the past (or future) being required to explicate the meaning of the sentence, there seems to be a relevant distinction, described here as simultaneous versus non-simultaneous, which mediates between various syntactic and phonological alternatives. In the case of perfective sentences (excluding present perfect examples) the distinction seems to be more crucial. In the case of was/were going to and will be V-ing, the distinction seems to be at least helpful in explaining favoured readings. In the case of the last construction it may help to explicate a rather subtle semantic distinction. The best and perhaps only way of expressing the simultaneous/non-simultaneous distinction is to use a minimum of two predicates in order to be able to locate the time adverbial in
one rather than the other. The following solution is, tentatively, proposed. All these sentences should be analysed as containing one predicate of the kind.

\( \text{it be (time adverbial)} \) and one or more predicates containing the rest of the proposition:\(^2\)

\begin{enumerate}
\item (HAD LEFT)
   \[ \text{it Past be} \quad \text{Gerald Past leave.} \]
\item (WILL HAVE LEFT)
   \[ \text{it Fut be} \quad \text{Gerald Past leave.} \]
\item (WAS GOING TO LEAVE)
   \[ \text{it Past be going to be}^3 \quad \text{Gerald Fut leave.} \]
\item (WILL BE LEAVING)
   \[ \text{it Fut be} \quad \text{there Pres be PROCESS} \quad \text{Gerald Pres leave.} \]
   \[ \text{there Pres be PROGRAM} \quad \text{Gerald Fut leave.} \]
\end{enumerate}

The second might be expanded to cope more satisfactorily with the past time \( \text{will have} \), which should be understood as essentially predictive (anyone will be able to see that Gerald left) despite the fact that the event logically took place in the past. Thus:

11a. it Fut be \( \cdots \) it Past be \( \cdots \) Gerald Past leave.

The simultaneous/non-simultaneous distinction may then be expressed by locating the time adverbial in the first or in later predicates:

\begin{enumerate}
\item (I)
   \[ \text{it Past be at five} \quad \text{Gerald Past leave} \]
   \[ \text{it Past be} \quad \text{Gerald Past leave at five.} \]
   \[ \left( \text{"it was the case at five that one was able to say: G. has (already) left versus} \right. \]
   \[ \left. \text{"it was the case that G. left at five"} \right) \]
\item (II)
   \[ \text{it Fut be at five} \quad \text{Gerald Past leave.} \]
   \[ \text{it Fut be} \quad \text{it Past be at five} \quad \text{Gerald Past leave.} \]
   \[ \text{it Fut be} \quad \text{Gerald Past leave at five.} \]
\item (III)
   \[ \text{it Past be going to be at five} \quad \text{Gerald Past leave} \]
   \[ \text{it Past be going to be} \quad \text{Gerald Past leave at five.} \]
\item (IV)
   \[ \text{it Fut be at five} \quad \text{there Pres be PROCESS} \quad \text{Gerald Pres leave} \]
   \[ \text{it Fut be} \quad \text{there Pres be PROGRAM} \quad \text{Gerald Fut leave at five.} \]
\end{enumerate}

\(^2\) This analysis is an adaptation and extension of an analysis by J. Thorne of English past tenses discussed in paper on quantifiers in Poznà?, 1974.

\(^3\) For a further analysis of \textit{Going to see} Sharwood Smith (1977).
(4) would be accordingly analysed as:

- it *Past* be ........................................... Gerald *Pres* leave *at five*.
- and the present perfect version (Gerald has left) as:
  - it *Pres* be ........................................... Gerald *Past* leave.

The restriction as regards time adverbials (see 1.) could then be expressed as operating on particular combinations of tense markers in the different associated predicates. The existence of *Pres* in the initial predicate could be the element that disallows punctual time adverbials in the surface sentence. However we need to distinguish program and process readings of:

- 23. He is leaving.

  - (?it *Pres* be) ..............there *Pres* be PROGRAM ...........he *Pres* leave
  - (?it *Pres* be) ..............there *Pres* be PROCESS ...........he *Fut* leave

The punctual time adverbial is allowed in the second reading only so it seems that both *Pres-Pres* and *Past-Past* combinations disallow it but *Pres-Fut* does not.

What this type of analysis has over an orthodox account (cf. Jacobs and Rosenbaum 1968) is that, apart from the fact that the facts referred to in observations A — E are accounted for, the necessity for having a separate category Perfective is eliminated. Moreover, Progressive is reinterpreted as being something distinct from Perfective and not part of a more general category "aspect". This solution seems intuitively to be closer to the facts. Nevertheless something new is introduced, namely the tense marker *Fut.*

The ambiguity of sentences like (23) provides the justification for this new distinction despite the fact that the reflexions of *Fut* include auxiliary forms unlike the "orthodox" [*±Past]* distinction.

For the purposes of contrastive analysis, translation theory and pedagogical grammar, analyses that are not founded on a belief in autonomous syntax would seem to be more viable. Such an analysis as hinted at here would aim to represent more clearly the fundamental conceptualisation of time that a native speaker of English has and that underlies the time-referring utterances that he makes in English. A key factor in this is the *perspective* involved in time reference. Thus a past event may be given a present perspective and its linguistic correlate in the Present Perfect. A future event may equally be given a present perspective and linguistic correlates of this include the present tenses (surface tenses, that is) and going to with the present forms of be. Languages like Polish have no equivalent to the Present Perfect and in this case

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4 c.f. Seuren (1969). Seuren's "tense qualifier" *U*, however, does not seem to be strictly necessary since time-neutral or "universal" readings could better be left to pragmatic/knowledge of the real world interpretation.
present perspective if it turned out to be a valid category for Polish would presumably be expressed via adverbials such as *już* etc. Until such time as autonomous syntax produces a viable theory of universal tense structure that can cope satisfactorily with all time/tense problems, the best methodological starting point for present purpose is assumed to be one that begins at the semantic end.

An analysis of time reference within a clearly semantico-syntactic framework might follow the lines sketched out below:

Every sentence would contain a temporal marker (TM) which ultimately decide the tense marking of any verb in the surface structure. Time adverbs would be understood to derive from sentences and thus would possess their own TM. All TMs in the derivation could be indexed (much the same as underlying NP’s in a theory that introduces pronouns transformationally). The syntactic and phonological behaviour described in this paper would then be a function of particular types and combinations of TM. There would be three types, namely Past, Pres and Fut.

The topmost sentence represents the perspective in which the speaker wishes to place his state/event. Thus all predictions will have the initial (topmost) TM: *Fut* which does not of course preclude the state/event being actually in the past. Here, *Fut* simply means “it *Fut* be the case”. Below are some examples:

N.B. TM’s indexed with the same number represent an identical time.

(it is now the case that Gerald left the office — *at five)
GERALD HAS LEFT THE OFFICE (*AT FIVE DISALLOWED)
GERALD HAD LEFT THE OFFICE AT FIVE (TWO READINGS)

GERALD WILL LEAVE THE OFFICE AT FIVE
GERALD WILL HAVE LEFT THE OFFICE (PRESENT AND FUTURE TIME READINGS)

GERALD WILL HAVE LEFT THE OFFICE AT FIVE (PAST TIME READINGS)

N. B. Convention: two Pasts immediately following Fut locate state/event in speaker's past.
GERALD LEFT THE OFFICE AT FIVE

N. B. Numbering disregards category of TM, i.e. only signals simultaneity.

GERALD WILL BE LEAVING (TWO READINGS)
GERALD WAS GOING TO LEAVE THE OFFICE AT FIVE (TWO READINGS)

N. B. The omission of "program" automatically excludes sentences like: Gerald was leaving at five.

REFERENCES

In this paper, I should like to present some general and detailed observations on the status and position of 'performatives' in linguistic description.

There are many descriptions of what performative utterances are, though the one which appeals to me most is that presented, indirectly, by Stenius (1967). He suggests that every sentence be analysed as containing a sentence-radical and a modal element, the former signifying the descriptive content of a given sentence, and the latter, its mood. The fact that he refers the notion of mood only to such distinctive variables as Indicative, Imperative, and Interrogative is immaterial because we know, on the other hand, that the notion in view may as well comprise and dominate such modal variables as, e.g. necessity, obligation, etc. (Fowler (1971: Ch VI)). In fact, we might generalize that the notion of mood in this sense comprises and dominates any possible kind of modality in a given sentence.

On the basis of the above observations, it is easy to infer that it is the main clause in the performatives that takes the function of the previously mentioned modal element, and that the sentence-radical role is attributed to the subordinate clause, as in:

(1) I declare [that you are absent-minded]

(ME) (SR)

mood descriptive content

The consequence of this situation is that when we delete ME in (1), we deprive the utterance in view of its modality (except the Indicative) to preserve its solely descriptive load:

(2) You are absent-minded
To continue, according to Austin (1962), performative utterances are not analizable from the point of their truth value. The analysis I am placing beneath seems to confirm this supposition at full length:

(3) a. I declare [that you are absent-minded] → You are absent-minded and I declare it.  
   \hspace{1cm} [- Assertion]  
   b. I regret [that you are absent-minded] → You are absent-minded and I regret it.  
   \hspace{1cm} [+ Assertion]

The point is that in these two utterances, the presupposition ‘you are absent-minded’ may be asserted only in the one with the non-performative verb — regret (3b). It cannot be asserted in the utterance (3a) because declarations cannot be assertions by nature. Now, if we assume that all modal elements (ME) in performative utterances share the same property of their inability of being asserted, we can generalize that our judgment on the truth value in the performatives — in general — can be referred exclusively to SR, to its descriptive/informative truth value.

The above situation determines a semantic status of the modal part of performative utterances. Strictly, the speaker is left with his optional CHOICE of potential, intentional, and non-asserted variables, modal in their essence, and functioning as purely semantic concepts. According to Austin (1962), these variables are used by the speaker with a certain intention to express some definite function, or force, named illocutionary force. In the following utterances we may observe how it is possible for the speaker to reveal various kinds of IF in the same SR:

(4) I \{(declare)\} that you are absent-minded.  
\{\{guess\}\} for your being absent-minded.

To follow, all these variables of IF are limited in number and their complete inventory is encoded in the minds of both the sender of the message and its receiver. In abstraction, they constitute the concept of performative SEMANTIC FORM (Jahkendoff (1972); Jaranowski (in press)). The SF in view is a potential and optional ‘slot’ in a conversational procedure since it is up to the speaker’s choice whether to fill this slot or to delimit his utterance to its purely descriptive load (SR). Once the speaker has determined to take advantage of ME standing at his disposal, he has determined to ‘neutralize’ the truth value of SR because the ME is not an assertive element by nature; whenever it appears in a given performative utterance as a dominating ele-
ment, the truth value of its dominated SR gets decomposed:

\[(5)\]

\[S_0\]

\[\triangle S_1\]

\[I \text{ declare}\]

\[\text{You absent-minded}\]

--- as it is in the dialog:

\[(6)\]

A. I declare sth.

B. What do you declare?

A. That you are absent-minded.

B. But it's only your declaration. In fact, it's not true.

As it is above, the ME neutralizes the truth-value of SR in a linear, horizontal dimension. However, both the truth-value analysis and the principle of linear evaluation are by no means the only and the most vital data necessary to secure a full linguistic insight into the corpus under discussion; much more important is the analysis based on the concept of the above mentioned SEMANTIC FORM(SF), and on the principle of ANAPHORICITY.

According to the above concept and principle, the application of ME in a given utterance means that the speaker has triggered a chain-reaction of step-by-step choices. The sequence of these choices is spatially oriented which means that each of the sequential choices is anaphoric in relation to the following, dominated choice in a 'downward', spatial orientation.

In this sense, the basic, initiary anaphoric choice will be the choice of SF which means that the speaker has decided to use ME in his utterance. The SF directly dominates the marker of INTENTION since all the following choices will be intentional on the part of the speaker in the sense of showing his intention to the content of SR, to the listener, or to himself, e.g.:

\[(7)\]

a. I appoint you (you are) president of our club.

b. I affirm that you are president of our club.

The next successive slot to be filled by the speaker will be his choice on one of the modal variables (e.g. Mood A) indicating whether he intends to impose on the listener to do sth (Imp), to ask him about sth (Q), or to make a statement about sth (SR). Once he has decided on a given variable of Mood A, he must make his successive choice of Mood B, namely, whether he wants (Vandler 1972):

a. —to give a verdict: Verdictives e.g. accuse, charge,

b. —to make a decision in favour or against a certain course of action: Exercitives e.g. command, beg,
c. — to make a decision on making something the case: Operatives - e.g. appoint, charge sb. with,
d. — to commit the speaker to a certain course of action: Commisives - e.g. accept, agree,
e. — to react to other people's behaviour to express his own attitudes to sb. else's past or immediate conduct: Behabitives - e.g. congratulate, curse,
f. — to expose acts involving the expounding of views, the conducting arguments, and the classification of usages and references: Expositives - e.g. admit.

The choice of one of the above sub-types of Mood B, triggers the next choice of one variable belonging to the inventory of each of the sub-types, e.g.:

(8) Verdictives

| accuse   |
| analyze |
| calculate |

The choice of one of the variables ends the process of CHAIN-REACTIONS in the speaker's mind. As a result, the sequence consisting of ME and SR is uttered. The utterance triggers the listener's reaction.

The whole CHAIN-REACTION of CHOICES can be diagrammed as follows:

(9)
Principle (1) ___________ TREUTH VALUE ___________ (linear)
(SR)

\[ \text{(ME) [t.i.at ............]} \]

Principle (2) \( \text{Ch}_1 \rightarrow \text{SF} \)

\[ \begin{array}{c}
+ \text{Intention} \\
+ \text{Concept} \\
+ \text{Abstract} \\
+ \text{Distinctive} \\
\text{(e.g. Intention/ Necessity)}
\end{array} \]

\( \text{Ch}_2 \rightarrow \text{Mood A} \)

\[ \begin{array}{c}
\{ \text{State} \} \\
\{ Q \} \\
\{ \text{Imp} \}
\end{array} \]
Now, after all these theoretical considerations have been presented, let me expose some observations referring to particular 'levels' of the above diagram.

First, let me stress that a distinctive value of SF cannot be overestimated. I have met with the arguments that the performatives are not or should not be distinguished as a separate grammatical corpus because they function in the same way as many other structures in the sense that their ME may be optionally omitted, e.g.:

(10) a. I declare that you are absent-minded.
    b. It is likely that you are absent-minded.
    c. I regret that you are absent-minded.

It is obvious that in (10c), the ME does not neutralize the truth value of SR since the presupposition 'you are absent-minded' is asserted by 'regret'. However, both (10a) and (10b) are identical as to the fact that their SR has been neutralized by their ME as to their truth value. What only may distinguish these two utterances then, appears on the deepest level of semantic reality — which is the value of SF; thus, in (10a), the SF reflects the concept of intention on the part of the speaker when, in (10b), it is the concept of probability.

The second observation referring to the performatives is that, as Bolinger says — 'natural language has little or no use for pure performatives to introduce something said. It is generally deemed unnecessary when one is saying something, to say that one is saying it' (1977:513—14).

True as this opinion seems to be, let me observe, however, that the above Bolinger's statement should not be generalized too far. In fact, whenever used by the speaker, a chosen performative ME is instrumental in its inten-
ational sense -- it has some function to take in a given utterance; the point is that the degree of reliability of this function and the necessity of its usage depend on manifold criteria. For obvious reasons, let us discuss only the most obvious of them.

We already know that SR alone has got all sufficient informational data to be directed to the listener; as a consequence, it may form a message in itself, without any, or with some ME optionally added, as e.g. in:

\[
(11) \begin{array}{c|c|c}
\text{I} & \text{that} & \text{the earth is round (a)} \\
\text{declare} & \text{(SR)} & \\
\text{find} & \text{you are an old idiot (b)} & \\
\text{hold} & \text{(SR)} & \\
\text{admit} & \text{your leg has been broken (c)} & \\
\text{stress} & \text{(SR)} & \\
\text{postulate} & \text{n} & \\
\text{:} & &
\end{array}
\]

One should observe, however, that the placement of identical performatives (ME) in front of each of the above SR's, changes an instrumental function of these identical performatives according to -- to which of the above SR's they have been attached. In such a case, the only logical conclusion is that the function of a given performative verb depends, to much extent, on the informative load of a given SR.

First, let us assume that the speaker has placed one of the performatives listed in (11) in front of the SR presented in (11a) -- just to formalize or unnecessarily emphasize this otherwise obvious SR (the earth is round). He might have done so either to enforce his weak authoritative power, or to stress it -- just to show that the fact that the earth is round is not complete without his personal declaration on it. To him, his personal evaluation of the fact is more important than the very fact (the domination of his ME over SR). So now the generalization is possible that, whenever referred to any such well-known or even, in a way, trivial SR as the one that the earth is round, the speaker's intention will meet a contradictory reaction on the part of the listener, such as e.g.:

\[
(12) \text{I know [that the earth is round] whether you } \begin{array}{c|c|c}
\text{declare} & \text{find} & \\
\text{hold} & \text{you are an old idiot (b)} & \\
\text{admit} & \text{your leg has been broken (c)} & \\
\text{stress} & \text{n} & \\
\text{:} & &
\end{array}
\]

it, or not; all your declarations are just rubbish, and you yourself are an old block.
As a result, one may conclude that in this contextual situation the effect of the application of one of the listed in (12) performative verbs is inversely proportional to the intention of the speaker, and that these verbs act here as an instrument of an unconscious self-stupefaction on the part of the speaker in his listener's opinion. At the same time the speaker, though again unconsciously, has blocked any felicity conditions existing between him and his listener when referred to SR alone. In this case, the listener's objective judgment on the user of (11a) would be very pejorative and the only qualitative feature which might be attributed to him by the listener might be [+ stupid].

The example (11b) exposes quite a different situation. One may observe in it, at a glance, that the speaker's intention is evident in the SR alone, and that it is, at the same time, intentional to be either abusive, or provocative, or both, towards the listener. In this case, the insertion of a chosen ME may only intensify this intention and, hypothetically, will increase the intensity of the listener's reaction though the latter is, in fact, hardly predictable. However, as few people like to be called old idiots, the reaction of the listener, though it may vary as to its intensity from listener to listener, might often meet the expectations of the speaker because, probably, the SR alone might be less provocative than when supported by ME, as e.g. in:

(13) I stress that you are an old idiot!
— or, even, by some extralinguistic devices, as in:

(14) You are an old idiot, I do stress!

However, regardless of the intensity of the listener's reaction (from a contemptuous shrugging of his shoulders, through a counter-abusive response, up to the punch on the instigator's nose), all these reactions have one thing in common, contrary to the previous situation exemplified in (11a), the speaker blocks the felicity conditions between himself and the listener intentionally and deliberately. However, from the point of the fulfillment of his subjective intentions, any such non-agreeable reaction of the listener would, in fact, satisfy and not block the felicity conditions in view. This speciality refers to both — SR alone, and when it is accompanied by a chosen ME working as an instrument of the enforcement of the provocative value of SR.

Now, when we compare the above examples (11a, b) with (11c), we can prove that Bolinger's generalization (see p. 85 in this paper) might be too strong:

(15) I postulate that your leg has been broken. (11c)

The example shows that though the SR in (15) (your leg has been broken) cannot be asserted by any performative verb as the performatives are unable to assert the truth value of SR's, the insertion of a well-chosen verb of this
group may be very reasonable and well-motivated. The motivation for the application of the performative in (15) has been enforced by the application of the 'professional' selectional restriction [-i-surgeon]. In this situation, the felicity condition between the speaker and the listener is fully preserved as the listener usually accepts any professional postulates of this kind without any argument.

As this short and unavoidably incomplete analysis indicates, one should be very careful in one's general rejection of the applicability of the performatives or the delimitation of their usage to formalizing and intensifying purposes. In fact, they form a very special linguistic instrument the effectiveness of which depends on linguistic and mental capacities of their users.

On particular occasions, the use of some performatives is well-motivated by either cultural or social backgrounds, e.g.:

(16) a. I pronounce you man and wife (Bolinger (1977:513))
    b. We declare that the treaty has been officially confirmed.

In fact, both Operatives and Exercitives can be applied with sound motivations as well:

(17) a. I appoint you leader of the party.
    b. I charge you with a task of councillor.

The speciality of these sub-types is that the applicability of their ME is obligatory in the surface structure because their SR cannot appear alone in the form:

(18)a. *You leader of the party.
     b. *You with the task of councillor.

In point of fact, the performatives belonging to these sub-types are not uniform in their functional value as their performative function coexists with a causative one:

(19) Owing to my \{appointment
                  \{charging you with this task\}, you will
                  \{leader of the party\}
                  \{counsellor\}

    – and this fact determines their closer (than in the other sub-types) relationship with their SR's which, in turn, makes them, as obligatory elements, influence the surface form of these SR's. Compare:

(20)a. I declare that you are absent-minded. →
      You are absent-minded and I declare it.
    b. I appoint you leader of the party. →
      *You are leader of the party and I appoint you.
To end the present discussion on the semantic motivations for a performative usage, there remain two more general observations. First, it seems that the contrast ‘general/detailed’ has some influence on it. Namely, if the SR is ‘less generally’ and ‘more detailly’ oriented, the justification for the application of a given ME increases, as in:

(21) a. I \{find \{postulate\} \} that the earth is round.

   b. I \{find \{postulate\} \} that your leg has been broken.

(— it has already been explained under (12) why it is unwelcome on the part of the speaker to apply any performative ME’s to SR’s exposing truisms and generalities).

Second, it is easy to notice, that the variables belonging to the same subtype (e.g. Verdictives) reflect different modal (emotive) intensity — from very weak to a very strong one:

(22) a. I charge you with a crime. [Verdictives]

       I \{find \} that you have committed a crime.

   b. I \{state \} that you are right. [Expositives]

       I \{stress \} that you are right.

So, the emotive load in ‘charge’ is much stronger than in ‘find’ and, analogically, in ‘stress’ than in ‘state’. The crux of the matter is that the stronger the modal (emotional) intensity of a given variable the stronger the speaker’s motivation to express his performative reference towards SR. To confirm this inference, one may notice that it is more probable on the part of the speaker to take advantage of the syntactic or extralinguistic devices to strengthen even more — not emotionally ‘weak’ variables, but the ‘strong’ ones:

(23) a. You are right, I do state!

   b. You are right, I do stress!

Now, to generalize, the motivation for an overt usage of the performatives depends on:

1. the type a given performative verb belongs to. The most applicable are Operatives and Exercitives,

2. the contents of SR. The generality of the informative load in SR is diversely proportional to the necessity of using ME overtly,

3. the modal (emotive) intensity of ME. This intensity is directly proportional to an overt usage of ME,

4. the manipulatory, authoritative and mental powers of the speaker. The weaker his authoritative power, the more powerful motivation on his part to apply an overt ME to well-known SR’s.
The next point claiming a separate treatment is the motivation for a syntactic analysis of the performatives. Strictly, my intention is to show why the syntactic analysis of the performatives is unavoidable if our objective is a complete linguistic description. Actually, there are two main reasons:

a. there are syntactic constraints placed on the sequence (ME)+(SR) during its transformation to the surface-structure representation so that this representation may appear in a variety of syntactic linear arrangements (Searle 1973):

(24) a.*I apologize that I have come here.
   I apologize for my coming here.

b. *I congratulate you that you have completed it.
   I congratulate on your having completed it.

The examples indicate that the pattern [NP + Perf. V + that] does not work with some performative verbs for purely syntactic reasons.

b. according to Kempson (1975:40), 'the performative use of a verb is restricted to first person and simple present'. However, one may distinguish quite a number of utterances which are not performative formally but, in spite of that, function as such and are used in non-formal speech on plenty of occasions (e.g. Bolinger (1977:513)):

(25) Let's agree that...
   The fact of the matter is that...
   No kidding that...
   Too hard to believe that...
   Might as well tell you that...
   Don't mind saying that...
   Give you my word that...

To my judgement, also the following utterances take the function of the performatives:

(26) To tell you the truth...
    To my judgement...
    It seems to me...
    I'm sure that...
    What I mean is that..., etc.

The variety of syntactic, surface-structure 'non-formal' equivalents stimulates the next problem of importance which is the need for a contrastive analysis of these equivalents. Though there is no want for any contrastive evaluation on their deep structure (semantic) level because all of them share
The same SF in any language, a surface-structure comparison shows syntactic differences of various kinds. Here are some examples:

(27) a. The fact of the matter is...
   Faktem jest, że...
   Fakt (p Pozostaje) faktem, że...
b. No kidding...
   Bez żartów...
   (Odlózmy) żarty na bok...
c. Too hard to believe that...
   (Zbyt) trudno (w to) uwierzyć że/ale...
d. Might as well tell you that...
   (Z równym powodzeniem) mógłbym Ci (również) powiedzieć, że...
e. Give you my word that...
   Daję (Ci) slowo, że...
   Slowo (Ci daję), że...
f. To tell you the truth...
   Jeśli mam Ci powiedzieć prawdę...
   Mówię prawdę...
   Prawdę powiedziawszy...
   Powiedziawszy prawdę...
g. To my judgement...
   Według mnie...
   Co do mnie...

As the examples indicate, the E—P contrasts appear on various levels of linguistic realization, such as linear arrangement, deletion, lexical replacement, case, category, etc.

As I have come to a mutual conclusion with D. Preston (private conversation), even very complicated phenomena can be disambiguated by a consistently performed contrastive procedure. To prove that this opinion works also when referred to the performatives, let me reanalyse the confrontation of the phrase to be afraid with to regret which Bolinger (1977:511) uses to prove that the latter is sometimes elliptical for regret to say. The point is that whenever the said to regret appears as elliptical for regret to say, its function changes from performative into non-performative. The main test Bolinger applies to prove it is:

(28) a. I'm afraid I can't help you.  
   I can't help you, I'm afraid.  
   [+Disjunct.]
   [-Assertive]
   [+Perform.]
b. I regret that I can't help you.  
   *I can't help you, I regret.  
   [-Disjunct.]
   [+Assertive]
   [-Perform.]
I can't help you, I regret to say.  
  
\[
\begin{array}{c}
\text{[+-Disjunct.]} \\
\text{[-Assertive]} \\
\text{[+Perform.]} \\
\end{array}
\]

I think, however, that a contrastive analysis of this problem can reveal subtler and deeper distinctions; compare:

(29) a. \{I'm afraid I can't help you. \}
  \{Obawiam się, że nie mogę Ci pomóc\}
  \{I can't help you, I'm afraid.\}
  \{Nie mogę Ci pomóc, obawiam się\}\n  \[-Disjunct.\]  
  \[-Assertive\]  
  \[+Perform.\]

b. \{I regret that I can't help you.\}
  \{Załuję że nie mogę Ci pomóc.\}
  \{I can't help you and I regret it.\}
  \{Nie mogę Ci pomóc i żałuję tego.\}
  \[+Disjunct.\]  
  \[+Assertive\]  
  \[-Perform.\]

\*c. \{I regret to say that I can't help you.\}
  \{Załuję to powiedzieć ale nie mogę Ci pomóc.\}
  \{Przykro (mi) o tym mówię ale nie mogę Ci pomóc.\}
  \{Niestety, Nie mogę Ci pomóc.\}
  \{I can't help you, I regret to say.\}
  \{Nie mogę Ci pomóc, {przykro mi o tym mówię\} \}
  \[+Disjunct.\]  
  \[+Perform.\]

The examples in (29c) indicate that the semantic load of \textit{regret with to say}, when, in its performative function, inclines, in English, to the semantic value of \textit{to be sorry} (I am sorry, przykro mi), the latter being an equivalental performative phrase also when with \textit{to say}, as in:

(30) \{I regret to say \}
  \{I'm sorry to say\}
  \{Przykro mi (o tym mówię)\}
  \{Niestety, \}
  \{ale nie mogę Ci pomóc.\}

Now, it is needless to add that no non-contrastive analysis could help in coming to the above conclusions.

To sum up the present paper, let us deduce that:

a. any attempt to analyse the performatives without taking into account all possible semanto-syntactic dependencies must result in a non-complete description, and thus fails to be reliable.

b. in spite of the fact that we often evaluate this section of grammar as possessing rather pejorative and redundant quality, and that it escapes any strictly scientific testing and formulation of rules (hence my infer-
On performatives

ences and regularities instead of rules in the paper), we should not neglect it in our studies as it is an integrated part of our language, no matter whether we like it or not. After all, it depends mainly on the speaker's individual abilities whether he applies a given performative with a sound motivation,
c. — a contrastive analysis of the performatives is very desirable in a surface-structure realization as it may clarify many ambiguous problems in a very clear-cut way.

To add, judging from the fact that we live in our contemporary world of relativization of truth value, when we desperately need any self-confirmation, and when any strengthening of our statements is welcome, we may foresee a growing career for the performatives though, on the other hand, we may realize how inexact and facultative they are.

REFERENCES

PROPERTIES OF RAISED CONSTRUCTIONS IN ENGLISH AND POLISH

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0. Introduction

The present article is devoted to a short presentation of the properties of raised constructions in English and Polish. Examples of relevant sentences are given in (1) and (2) for English and Polish respectively.

1a. Jake seems to be as good as his word.
1b. Jake appears to be good as his word.
1c. John believes Jake to be as good as his word.
1d. John declared Jake to be guilty.

2a. Janek zdawał się myśleć o czymś innym.
    John seemed reflexive to think of something else
    Appeared refl. to avoid near their neighborhood.
    (past, partic.) (masc. gen.) (masc. gen.)
    He appeared to avoid staying in the vicinity of them.

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1 This article is a revised and shortened version of the master's thesis. Boniewicz A., Raising in English and in Polish, University of Gdańsk, 1978. I would like to thank here to Roman Kalisz, Elizabeth Riddle and Paul Neubauer for their invaluable help in writing both the thesis and the article.
2c. Uważam te znaki po prostu za tak
I consider these signs simply for so
(1st person, present)
2d. Franciszkę Pierzechockiego uznać winnym
Proper name, masculine, accus. come to consider (past, impersonal) guilty

I consider (1st person, zwany these presented) falszywy signs (GRAB:51)
called false alarm

2d. Franciszka Pierzechockiego uznaną winnym
Proper name, feminine, accus. come to consider (past, impersonal) guilty

F. P. has come to be considered guilty of the crimes he was accused of.

Sentences of this type have been argued to be an output of the Raising transformation – one that moves the subject of the complement clause (referred to as the raised NP) to either subject or object position in the matrix sentence (see Rosenbaum 1967, Postal 1974, Borkin 1974, and others). The underlying structures for raised sentences are illustrated in (3) and (4) for (1a, c) and (2b, d) respectively. The raised NP is underlined.

3a. [Seems [Jake be as good as his word]]
3b. [John believes [Jake be as good as his word]]
4a. [Wydawało się [On unikać bliskiego ich sąsiedztwa]]
4b. [Uznano [F. P. być winny zarzucanych mu zbrodni]]

In the present article an attempt is made to deal with Raising in terms of its prototypical properties, following Lakoff’s theory of linguistic gestalts (Lakoff 1977).

Lakoff believes that human knowledge is organized in terms of holistic structures which he calls gestalts. Gestalts refer to various phenomena, both linguistic and extra-linguistic. The knowledge about a given phenomenon is an association of the most prototypical, humanly relevant properties connected with it. Lakoff claims that also linguistic phenomena can be dealt with in terms of prototypical properties. In this type of analysis the list of prototypical properties is established for a given phenomenon eg. for some type of construction. The properties are cross-modal, that is, they may refer to various fields of linguistic study: semantics, syntax, or pragmatics. When the prototype has been construed, each manifestation of a given phenomenon is confronted with it. The more properties it shares with the list the more prototypical it is. For example, the subject NP in sentences like (5) is more prototypical than the subject NP in sentences like (6).
5. I read the book.
6. This book reads well.

Lakoff argues that subjeethood pairs with primary responsibility, volition and control (Lakoff 1977:249). Volition and control are possible with human subjects only, there is none on the part of the book. Thus, the subject NP in (5) shares more properties with the prototype than the subject NP in (6).

Lakoff abandons the notion of transformational derivation (Lakoff 1977. 265). He claims that all the relevant relations for a given sentence may be presented without referring to the notion of deep structure. He focuses his attention on how the sentences are understood and what are the prototypical ways of relating the thought and its expression in the process of communication. Consequently, two types of relations are taken into consideration when analyzing sentences. understood and grammatical relations. Understood relations are based on semantic roles fulfilled by particular NPs in the sentence. The roles are predicted by the role structure of the predicate. In (7a), for instance, the subject NP, the girl, is the understood subject of the sentence since it is the agent. Agents are understood subjects in agent-patient sentences (Lakoff gives a list of prototypical properties of agent-patient sentences, Lakoff 1977:244). The subject NP in 6b, the roses, on the other hand, is not the understood subject, since it is the patient.

7a. The girl has cut the roses.
7b. The roses have been cut.

Lakoff’s analysis is adopted here in order to ‘try out’ his theory, rather than to contribute to his criticism of Transformational Grammar. It seems convenient for handling cross linguistic data, since the properties, in terms of which the data are analyzed, refer to various fields of study, as noted before, and therefore, it is easier to demonstrate similarities between corresponding structures of two languages which are superficially different. Consequently, Lakoff’s analysis seems to be useful for the purposes of contrastive studies.

In this article the following procedure is observed. In section 1 the list of prototypical properties of raised constructions is given. These properties are discussed in detail in sections 2, 3, and 4.

Raising in Polish has not been investigated so far except for preliminary investigations done by Yael Ziv,2 who delivered a seminar talk on the subject at the University of Illinois (Yael Ziv 1976). She proposed the following predicates as Raising verbs in Polish. zdawać się, wydawać się, wygądać na,

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1 The problem of distinction between Raising and Equi is discussed in Postal (1974) and Borkin (1974).

2 Papers and studies... 18
A. Boniewicz

awojać za, czućjedcować, and verbs of permission like pozwalać. Her arguments are not summarized in the handout to which I have the access.

It seems legitimate to treat Polish sentences like (2) as raised constructions because, as it will be evident from the discussion below, they manifest the prototypical properties of Raising listed in section 1, similarly as English constructions do. Treating these constructions as parallel in the two languages allows to capture the similarities which would be missed otherwise.

Since Raising in Polish is not generally known, a tentative list of Polish raisers is included in this article in the appendix.

Now I shall proceed to presenting the prototype of Raising.

1. Prototypical Properties of Raising

I. Raised constructions consist of two clauses: the main clause and the complement clause, which function as one unit by virtue of the occurrence of an integrating NP the raised NP in transformational approach.

II. The integrating NP has a double grammatical bond. It functions as the subject of the complement clause and as the subject or the object (S/O) of the main clause.

III. The integrating NP does not bear any understood relations with respect to the main clause.

IV. The main clause predicate is finite.

V. The main clause predicate includes an information object in its role structure. Object is understood here as a role, not as a grammatical relation. For example, Lakoff gives the following role structure for believe (Lakoff 1977:264):

   believe   believer: INFORMATION LOCATION
   believed: INFORMATION OBJECT

VI. The complement clause is the understood S/O of the main clause.

VII. The complement predicate is non-finite.

VIII. The complement predicate is stative.

IX. The time reference of the main predicate is posterior or simultaneous with respect to the complement clause.

Properties I—VII have been proposed by Lakoff (1977:275) except that he does not use the term: integrating NP. Properties VIII and IX are discussed by Postal (1974), Borkin (1974) and Riddle (1976).

Properties I, II, IV, and VII refer not only to raised constructions. For example, they also apply to Equi. Property III is distinctive of Raising:

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3 The distinction between A-Raising and B-Raising was introduced by Rosenbaum (1967) and extended by Postal (1974).
hence it will be regarded as its central property. It will be discussed together with properties V and VI in section 3. The stativity of complementation and the time reference of the main predicate will be argued to follow from the other properties in section 4.

Since properties I, II, IV and VII seem to be closely connected, I shall start analyzing them with respect to these properties.

2. Raised Constructions as Units

Raised constructions involve two clauses, the main clause and the complement clause. The latter clause not does function as an independent clause since it is non-finite. Borkin (1974) argues that non-finite form of the complement is one of the consequences of the process of clause boundary destruction. If there is a weak clause boundary the complementation is infinitival, as in 8. If there is none the complementation is non-verbal as in 9.

9a. Suppose the Hewsons just happened to pick it up like they said.
(NGAIO:172)
8b. I know him to be out of England.
8c. Wydawal się unikać bliskiego ich sąsiedztwa.
8d. Arnes zdawał się myśleć o czymś innym.
seemed to think of something else
(instrumental)

9a. Ho turned out a wonderful companion.
9b. I believe him a fool.
9c. Maszynista okazał się świetnym fachowcem.
(trian-driver turned out excellent expert
(masc., nominative) (past. masc.) (instr.) (instrum.)
9d. Janka uznał mnie za swoją najbliższą przyjaciółkę.
consider me for her closest friend
(3rd person (accus.),(accus.) (accus.) (accus.)
sg. present)

The two clauses function as one unit. They have one finite form of the verb the main predicate. The occurrence of an NP that bears a double grammatical bond, with respect to the main clause and with respect to the complement clause is a factor integrating the two constituent clauses, hence the term. the integrating NP. For example, look at (10). The integrating NPS are encircled.
10a. Maszynista okazał się dobrym fachowcem.
10b. Maszynista uważał to rzecz oczywistą.

The train driver considered it an obvious matter (instr.).

Such diagrams as above are used by Lakoff to represent the relations in sentences (Lakoff 1977:265 – 267). Some explanations are necessary here:

- S means subject
- O means object
- COMP means complement

Unidirectional arrows relate sentence constituents. As can be seen, the encircled NPs bear relations with respect to the main clause and to the complement clause; other constituent NPs bear grammatical relations with respect either to one or to the other clause.

It is necessary to show that the integrating NP is virtually involved in double grammatical relations. Its subject object status with respect to the main clause does not need additional support because it is indicated by such properties as:

- subject-verb agreement for A — Raising (sentences in 11) and word order in English and case marking in Polish for B — Raising (sentences in 12).

*The test was suggested to me by Elizabeth Riddle and Paul Neubauer.*

97
11a. He seems to be inadequate in what he is saying.
11b. Ona zdawała się nie rozumieć o co chodzi.
She seemed not to understand what is the point.
(feminine (past, feminine) pronoun) morpheme

12a. I consider John to be a party-breaker (I have underlined the SVO string).
12b. Uważam tę dziewczynę za piękną.
   I consider demonstrative pronoun girl for beautiful.
   (feminine, accus.) (fem. accus.) (fem, accus.)

Feminine accusative morpheme -ą is distinctive of direct object in Polish.

What is crucial for the sake of the argument here is to show the complement subject status of the integrating NP. Borkin discussed the behaviour of not—initial NPs in B-raised constructions for this purpose (1974:51). She observed that not—initial NPs like not much and not many are relatively better in pre-infinitival position with raised constructions than other object positions. Postal (1974) argued that not—initial NPs are acceptable only in subject position. Consider (13).

13a. Not many of our students have come to the meeting.
13b. He knows not many students in the Japanese Department.

Borkin argues that sentences like (14) come in between (13a) and (13b) as far as acceptability is concerned.

14a. (Borkin’s 28a)? This latest communiqué proves not much to be happening at the home office.
14b. (Borkin’s 28c)? The Evening News reports not many people to be pleased with the upcoming increase.

If she is right in her interpretation of the data, the relative greater acceptability of not—initial NPs with raised sentences shows the complement subject status of the integrating NP. This test, however, is unapplicable to Polish data.

More persuasive evidence, elaborated on by Postal (1974), is provided by the behaviour of non-referential NPs like existential there, weather — it and idiom chunks. The occurrence of these NPs in simple clauses is highly restricted. Yet, they can occur with raised constructions, provided that the restrictions are observed.

(i) Existential there in simple clauses occurs with an indefinite NP and a restricted class of existential predicates like be, exist, appear etc. Consider (15) and (16).
15a. Then, there is a man called Allerton. (CHRISTIE:19)
15b. There exist many people who don’t believe in God.
16a. *Then, there shouted a man called Allerton.
16b. *There dance many girls well.

It can occur in raised constructions, as shown in (17).
17a. But even there, there seemed a lack of any connecting link. (CHRISTIE:30)
17b. I don’t reckon there to be anything at all doing after sundown. (OTHER:136)

The occurrence of this item is unacceptable if the complement predication violates the restrictions for it, as in (18).

18a. *I don’t reckon there to dance any pretty girls.
18b. *There seemed to sneer strange faces at me.

The same type of argument holds for the predicates like snow, rain, and sleet. They occur only with empty it as their subject. They may occur as complement predicates with raised constructions, but, again, only with empty it. Consider the paradigm given in (19).

19a. It is raining outside.
19b. *Rain is raining outside.
19c. It turned out to be raining outside.
19d. *Rain turned out to be raining outside.
19e. I believe it to be raining outside.
19f. *I believe rain to be raining outside.

There are idioms whose meanings are associated with a certain type of clause subject idiom chunks: for example, Even the walls have ears. The idiomatic meaning is preserved in raised constructions. Look at example (20).

20a. Even the walls seem to have ears.
20b. Even the walls may have ears.

There are other idioms, where the subject NP is associated with a particular verb (predicate idiom chunks), eg: to keep tabs on. These are also allowed in raised constructions without change of meaning. Consider (21).

21a. (Postal’s example) Tabs were believed to have been kept on all of them.
21b. Tabs were claimed to have been kept on all of them.

In Polish, there is no corresponding form for existential there or weather — it, but the idiom chunk test is applicable, although finding idioms that would
be easy to manipulate is not a simple task because we need idioms which would be followed by mieć (to have) or być (to be) + adjective participle. The reason is that Polish raisers are often followed by prepositions or by the particle jako (as), for instance, uważać za (consider for), uznać za (come to consider for), oceniać jako (evaluate as). Consider the examples below.

22a. Ściany zdają się mieć uszy.
   Walls seem to have ears.
22b. Ściany mogą mieć uszy.
   may

23a. Gra wydaje się być warta świeczki.
   Game seems to be worth a candle genitive.
23b. Gra zaczyna być warta świeczki.
   begins

24a. Uznaliśmy tę grę za warta świeczki.
   We have come to this game accus genitive consider (accus.)
24b. Nie rezygnuj, jeżeli uważasz tę grę za warta świeczki.
   Do not give up if you consider

   I consider the dice cast.
   We cannot now to withdraw.
   (past participle)
25b. Uznano kości za rzucone.
   The fight began for good.
   (past, impersonal)

26a. Tubylcy uznali chyba lody za
   Aboriginers come to consider probably ice for
   (past, plural)
   przelamane, bo zaczęli czynić przyjazne gesty.
   broken since begin to make friendly gestures.
   (past part.) (past, plural)
26b. Uznano pierwsze lody za przelamane.
   Somebody even
   first ice
   wyciągnął pół litra.
   pulled out half a liter of vodka.

Another test to show the complement subject status of the integrating NP in Polish is provided by the behaviour of the possessive pronouns.

* For more examples of role structures see Lakoff (1977: 264—5).
In Polish, there are two forms of the possessive pronoun: *swój* — which is not marked for person, and *mój, twój*, etc. which is marked for person. The form *swój* occurs only in the same clause with the possessor NP to which it is coreferential (example 27) and only if the possessor NP is the subject NP in this clause (example 28).

27a. Oni oddal mi swoją — książkę.
He gave back to me his book

27b. *Oni powiedział, żebym oddał mu swoją książkę:
He said that I should give him back his book.

27c. Oni powiedział, żebym oddał mu jego książkę.
(the marked form)

28a. Ja dałem Jankowi swoją książkę.
I gave to John my book.

28b. *Dałem Jankowi swoją książkę.

I asked (masc. accus.) for his opinion

Now, let us test the behaviour of the unmarked form *swój* in raised sentences. Consider (29).

29a. Uważam go; za okrutnego dla swojej żony.
I consider him for cruel for his wife.
(masc. sg. accus.) (adj. masc. accus.)

29b. Uznano Janka za godnego swojej nagrody
come to consider deserving his prize
(past, impersonal) (adj. masc. accus. gen.)
(gen.)

The marked pronoun can also occur in the same clause with its coreferential subject possessor NP, especially for the sake of emphasis, as in (30); however, the unmarked form is preferred in this position.

30. Mam dosyć moich własnych kłopotów.
I have enough my own trouble
(pl. gen.) (pl. gen.) (pl. gen.)

The crucial point is, however, that the unmarked form can occur only if it is corefential to the subject NP. Therefore, its occurrence in raised constructions shows the complement subject status of the integrating NP.

Thus, the claim that the integrating NP bears double grammatical bond in raised sentences seems to be substantiated. In the following section I shall proceed with the analysis of the central property of Raising: property III.
3. The Lack of Understood Relations of the Integrating NP versus the Properties of Raising Predicates

Consider the following sentences:

31a. Martha discovered Jane to have been working as a CIA spy.
31b. Uznano tego ucznia za najlepszego w klasie. Acknowledge this student for the best in his class.

In (31a) it is not Jam who has been discovered by Martha, but the information about her. Similarly, in (31b) it is not the student who has been acknowledged, but the fact of his being the best in his class. The integrating NPs in these sentences are not understood objects of the main predicates. The complement clauses are property VI.

As mentioned before, understood relations are predicted by the role structures of predicates occurring in the relevant constructions. Raising verbs are one or two-place predicates (A — Raising and B — Raising respectively). That is, their role structures predict subjects or subjects and objects only. Consider again Lakoff’s role structure for believe.

<table>
<thead>
<tr>
<th>Predicate</th>
<th>Role Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>believe</td>
<td>believer: INFORMATION LOCATION</td>
</tr>
<tr>
<td></td>
<td>believed: INFORMATION OBJECT</td>
</tr>
</tbody>
</table>

A similar role structure can be established for seem.

<table>
<thead>
<tr>
<th>Predicate</th>
<th>Role Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>seem</td>
<td>what seems: INFORMATION OBJECT</td>
</tr>
</tbody>
</table>

All main predicates occurring in raised sentences seem to involve an information object in their role structure.

For example: uznawać the person: INFORMATION LOCATION
| the fact: INFORMATION OBJECT |
okazać się (turn out) the fact that turns out: INFORMATION OBJECT

Thus, the role structures of raising predicates are closely connected with the fact that the integrating NP is not involved in understood relations with respect to the main clause. In A—raised sentences the information object exhausts all possible understood relations predicted by the predicate. Hence,

---

* Consider the following examples:
1a. *Even the walls are eager to have ears.
1b. *Ściany chcą mieć uszy (walls want to have ears).
2a. *The professor encouraged tabs to be kept on all of them.
2b. *Gra zamierza być warta świeczki.

As can be seen, Equi constructions do not permit non-referring items.
the grammatical subject in sentences like (32) cannot be the understood subject.

32a. The pearls turned out to be worthless. (OTHER: 10)
32b. Perły okazały się bezwartościowe.
Pearls turned out worthless.

Analogously, in B—raised sentences the information object ‘occupies’ the understood object position in constructions like (33).

33a. I consider John to be a fool.
33b. Uważam Janka za głupca.

fool
(masc. accus.)

Such an account is advantageous for the following reasons:

(i) It explains why non-refential items are permitted in raised constructions. Being devoid of reference they cannot be involved in understood relations. Predictably, they will not occur in positions, where understood relations are involved, for example, in Equi constructions.

(ii) It allows the distinction between A-Raising and B-Raising without any final statement concerning the unitary status of these two types of rule. This problem has not been solved in transformational grammar.

(iii) By relating the properties of relevant predicates to the central property of Raising, it makes the analysis of these properties helpful in establishing the scope of Raising.

There have remained two properties to be discussed: VIII and IX. The next section is devoted to it.

4. Stativity of the Complement and the Time Reference of the Main Predicate

Postal (1974) and Borkin (1974) argue that stative complementation is preferable in raised constructions. Borkin (1974: 96, 97) establishes the following hierarchy of complement predicates according to their acceptability in raised sentences:

— to be and to have
— stative verbs like like
— generic verbs
— other types of predicates.

7 When investigating the problem I have come to the conclusion that neither the advocates nor the adversaries of the unitary treatment of Raising have presented enough substantiation for their views (Boniewicz 1978).

8 The list of English raisers is presented in Postal (1974:192; 297—317).
The sentences below are arranged from the most to the least acceptable.

34a. He appeared to be a pleasant fellow.
34b. Zdawał się być miliym chłopcem.

35a. He appeared to like the quiet life.
35b. Wydawał się lubić spokojne życie.

36a. He appeared to lack vitality.
36b. Zdawał się nie mieć w sobie krzty życia.

37a. *He appeared to dance.

The time reference of Raising predicates in English-constructions is posterior or simultaneous with respect to the complement predicate. If the complement predicate expresses an action, either the continuous form with be or the past form with have occurs. Consider the examples in (38).

38a. *She seemed to go in our direction.
38b. She seemed to be going in our direction.
38c. She seems to have bought out all the jewelry in the city.

Both the continuous form of the predicate and its past form express certain states; the former—a certain state at the moment of speaking, the latter—a past state with respect to the moment of speaking.

In Polish, the time reference of the raiser is simultaneous with respect to the complement verb. Although the continuous form is nonexistent in Polish, sentences like (40) correspond to English continuous form.

40a. Zdawała się tańczyć.

40b. She seemed to be dancing

The perfective aspect occurs rarely in the complement clause. Consider the following:

41a. *Janek wydawał się pójść do baru.

41b. She seemed to go to the bar

(perfective)
The requirement for stativity is stronger in Polish than in English, since Polish raisers prefer non-verbal complementation. B—verbs allow only this type of complementation (example 43).

Other verbs, like *zdać się, wydać się*, occur more frequently with non-verbal complements, too, as in (46).

41b. Janek wydawał się iść do baru
to go
(imperfective)

42a. *Zdajesz się zrozumieć.
seem to understand
(3rd. person, present) perfective

42b. Zdajesz się rozumieć.
to understand
(imperfective)

The following verbs behave differently with respect to stativity and time reference:
— Adjectives (lacking in Polish). They may have a future orientation and they permit verbs of action, as in (46).

46a. He is likely to go there tomorrow.
46b. This girl is certain to come.

— Auxiliaries. They may have a future orientation and allow the verbs of action. Look at (47) and (48).
47a. He must buy me the ticket.
47b. On musi mi kupić ten bilet.  
   He must to me to buy this ticket.
47c. He is going to buy me the ticket.
48. On powinien mi kupić ten bilet.  
   He should to me to buy this ticket.

— Aspectual verbs. They embed verbs of action. The time reference is always simultaneous.

49a. Maria zaczyna pisać.  
    begins to write.
49b. Mary is beginning to write.
50a. Sprawy zaczęły przypierać zły obrót.  
    Matters started to take bad turn.
51b. The matters started to look bad.

The preference of raised constructions for stative complementation is not surprising when juxtaposed with the fact that Raising predicates involve an information object in their role structure, since the information object usually refers to a certain state of affairs.

5. Conclusions

On the basis of the material presented in this article we may conclude that Lakoff’s theory of gestalts is capable of coping with linguistic problems. In particular, it allows us to cope with syntactic, semantic and pragmatic properties simultaneously. For this reason, it is convenient for the purpose of contrastive studies. As shown here, Polish raised constructions which, superficially, are so much different from the corresponding constructions in English, share all relevant properties of Raising.

The differences between the relevant constructions in English and Polish are the following:
(1) The scope of Raising in Polish is very narrow (compare the list of Polish raisers given in the appendix with Postal’s list of English Raising verbs (Postal 1974: 292, 297—317).
(2) Polish Constructions avoid infinitival complementation. Non-verbal complements are preferable.
(3) The time reference of the main predicate in Polish constructions is simultaneous with respect to the complement clause, whereas in English it may be both simultaneous and posterior.
APPENDIX

Raising predicates in Polish

I. A—verbs
1. lubić tend, okazać się turn out, wydawać się appear zdawać się seem,
2. Aspectual verbs: kończyć finish, imperfective, poczynać begin, archaic, przestać stop, perfective; przestać stop, imperfective, skończyć finish, perfective,
3. Modals: móc be able, musieć must, powinien ought, no infinitive form.

II. B—verbs
oceniać jako to evaluate as
odezuwać jako to feel as
ogłoszać to announce imperfective
gołośić to announce perfective
uważać za consider for
uznawać za consider for imperfective jako
uzań za come to consider for perfective jako
wyobrazić sobie jako to imagine as.

ABBREVIATIONS


REFERENCES

In a paper by Charles N. Li and Sandra A. Thompson (Li 1970) it has been suggested that Subject /S/ is not a universal category and that there exist languages that are rather Topic-prominent (T-prominent) than S-prominent in the sense that the structure of sentences in these languages should include — among other elements — Topics /T/ rather than Subjects; and that also in basic sentences (basic in the sense of Keenan (1970)) not derived from some other sentence having a simpler structure. In Li and Thompson (1970) all Indo-European languages are classified as S-prominent; although it is admitted that from T-prominence to S-prominence there exists a continuous scale rather than polarity of the two types.

According to Lehmann's (1976) proposal Proto-Indo-European should be regarded as a T-prominent language. Comparing modern European languages — especially those of Germanic and Romance branches — the conclusion is inevitable that a drift from consistent T-prominence to highly consistent S-prominence has taken place. The speed of this change is not equal for all the subgroups of the Indo-European family and it is being suggested in this paper that Slavonic languages are less advanced and more conservative in the T- to S-prominence drift. This general conclusion is warranted — it is felt here — by the data gathered from the comparison of Polish and English.

English is far advanced in its drift from T- to S-prominence. S is obligatory in the language and is normally placed before V (Verb). If for the reasons of pragmatic organisation of the sentence which, after Firbas (e.g. Firbas 1991), might be termed ESP (Functional Sentence Perspective) S must be placed

1 S-V order in English is more grammatically fixed than V-0 order; cf. sentences (32) and (33) at the end of this paper; also Halliday (1976:62).
further on in the sentence as required by the tonicity rules for unemotive (unmarked) sequences within information units (cf. Halliday (1976:101), then it leaves behind its formal “dummy” copy, known as anticipatory or slot-filling item, which agrees in number with V, i.e., acts as any other grammatical S, cf.;

(1) *It was interesting to meet him there*
    — to meet him there = notional S
(2) *There's some people in the waiting room*
    — some people = notional S

Slot-filling “it” and “there” have no equivalent in Polish, either historical or contemporary, except for cases of dialectal usage noted by Rospond (1973:354), e.g.,

(3) *óno pada — “it rains, it is raining”*
(4) *óno go nie belo widać — “it him was not to see’ =*
    — “he could not be seen”

and the interesting question would be whether (3), (4), and other such forms do not in fact represent some future trend for Polish — in full agreement with T- to S-prominence tendency — that is not being realised in standard literary Polish because of the normative system of schools and mass media.³

Contemporary Polish makes use of many S-less patterns (cf. Fisiak 1978), all their English equivalents obligatorily having semantic or dummy S. Generally S-less sentences would be expected when the semantic notion of agent is absent or need not be expressed (cf. Keenan’s notion of basic sentences in Keenan (1976); cf. also definitions of S in many classical grammars and the affinity of S to agent referred to therein). For the Polish data it is only partly true. Despite the fact that S-less sentences with agent being inanimate, unknown or some other force irrelevant for communication are regarded as most typical — because most often quoted — examples of the structures in question; they constitute only what might be classified as one group of such structures. They typically express process;

(5) *Dnieje — “it is dawning”*
    *Ściemniło się — “it grew dark”*,

or resulting state;

(6) *Było zimno w pokoju — “it was cold in the room”*.

---

2 On S-V agreement in “there”-sentences, cf. Quirk (1972:958). We regard the normal V-NP agreement in such sentences as imposed by logicians and grammarians.

3 The dialect in case is that spoken around Łowicz, central Poland. Therefore it is hardly possible to speak about foreign influence. Other Polish dialects also use empty “ono”, (cf. Klemensiewicz (1964:399)).
Showing syntactic and semantic affinity with the above group of sentences are patterns like:

(7) *Było nam zimno* — “we were cold”

with the sufferer (we), constituting T if unstressed, being put in the oblique case and no proper S, the causal force (agent) unknown or not easy to define. With only slight modifications the above discussion is also relevant to sentences like:

(8) *Chce mi się spać* — “I feel sleepy”,

though the pattern is also applied in cases with agent clearly known;

(9) *Udało mu się naprawić telewizor* —

— “he succeeded in mending the TV set”.

Another large group of the discussed type are sentences with verbs of increase, decrease, or lack of something:

(10) *Brakuje nam pieniędzy* — “we lack money”

*Wody przybywają* — “water is rising”

The genitive NP, if initial or enclitic to the verb then topical, cannot be regarded as S, the condition of its agreement in person, number, and gender with V not being fulfilled (cf. Golab 1958).

Somewhat similar to (10) is the last group discussed here; sentences with agentive NP containing a numeral which modifies the noun, the conditions for the numeral and also the nominal gender being given, for instance, in Szober (1969:307):

(11) *Pięciu studentów zdalo poniżej egzamin* —

— “five students satisfactorily passed the exam”

(12) *Trzy piękne córki było nas u matki* (from Szober 1969:307)

— “three beautiful daughters we were at our mother’s”

It is very important to note that sentences like (12) are in free variation with historically more recent variant (13), where the same NP is in agreement with V thus constituting the proper S;

(13) *Trzy piękne córki byłyśmy u matki* (Szober 1969:307).

In order to account for the above phenomena Polish grammarians (Doroszewski, Szober) have introduced the notions of “logical subject”, “grammatical subject”, and “logico-grammatical subject”. The word “studentów” in (11) will thus be logical S; logico-grammatical S is the normal subject agreeing in number, person, and gender with its V — as in (12) the whole NP; grammatical S may be exemplified by the numeral “miliony” in (14);
where only this numeral agrees with \( V \), the rest of NP \( \text{"gwiazd"} \) being in oblique case (genitive) (cf. Szober (1969); Doroszewski (1961:II; 188-189)).

It is clear that from our point of view only logico-grammatical \( S \) fulfills the conditions of being \( S \); for other types of Polish NPs being the primary participators in the process (state) denoted by \( V \) and yet appearing in oblique case and without an agreement with this \( V \) the status of Topic and not Subject is proposed here.

Considering the above argument, especially the existence of Polish sentences like (9) and (11) with clearly identifiable agent, being also transitive\(^4\), we can postulate that the status of \( S \) in Polish is equal to the status of Complement or the Objects /\( O_{\text{direct}} \) / \( O_{\text{indirect}} \) in that \( V \), being the only obligatory element (cf. sentences of the type (5) above) conditions the appearance of one, two, or three participant NPs, the primary participant being often anything but \( S \).\(^5\) The choice of \( T \), on the other hand, is not conditioned by the selectional restrictions of \( V \) and is governed by the general rules of \( T \) choice as discussed in Halliday (1976: 179–182) — also for Polish.

In contemporary English \( S \) constituent is in a privileged position in that it always necessarily appears and its position, since Middle English, is fixed to that before \( V \).\(^6\)

The above observations about the role of \( S \) in Polish can also be confirmed on syntactic grounds. Let us compare the following sentences.\(^7\)

(17) E: It is \textit{good} that you told me about it.
   P: \textit{Dobrze, że mi to powiedział.}

(18) E: To swim in a river is \textit{pleasant}.
   P: \textit{Pływać w rzece jest przyjemnie.}

(19) E: It is very \textit{cold} today.
   P: \textit{Jest dziś bardzo zimno.}

(20) E: We were \textit{cold} and \textit{uncomfortable}.
   P: \textit{Było nam zimno i niewygodnie.}

In the above sentences Polish Adverb corresponds to English Adjective, the whole of the respective counterparts being equivalent in meaning and no

\(^4\) (11) may thus be regularly passivized;

\(^{11.b}\) \( \text{Egzamin został pomyślnie zdany przez pięću studentów.} \)

The restrictions on passive here are of general character, similar in Polish to that discussed in Granger-Legrand (1976).

\(^5\) Cf.: "\textbf{boli mi głowę}" = "I have a headache" — Polish primary participant NP is syntactically \( O_{\text{dir}}; \text{"wydają mi się, że..."} = \text{“it seems to me that...”} — \( O_{\text{indir}}.\)

\(^6\) Cf. note 1. above.

\(^7\) The examples (17), (18), and (19) we owe to Fisiak (1978:213–214).
Subject- and topic-prominence

other so close translation existing. This equivalence is discussed in Fisiak (1978:213-215). Here we would like to propose some farther reaching causes of that phenomenon. Adjectives are known to typically modify Nouns, NPs, or Sentences. Adverbs typically modify verbal concepts. The structure of English and Polish counterparts, therefore, might be informally represented in the following way:

(21) E:  
NP — V  
|   |   
|   |   
Adj  

P:  
NP  
V — NP  
|   |   
|   |   
Adv  
NP

Therefore the fact that in sentences like (17)–(20) above the structure of modification is different in idiomatic structures of sentences should be directly connected to the generally known tendency in English towards nominalizations; in accordance with the observations of Czech linguists (cf. Firbas (1959); 1961); also Ry barkiewicz (1977)). This tendency manifests itself in the preference for the structure: thematic NP + communicatively weak V (often copulative) + rhematic and stressed NP; with thematic NP constituting S.

In Polish and, generally, in Slavonic languages the communicative weight is put on the verbal concept which was once characteristic of early Germanic dialects, too, (cf. Gothic, also OE).

The expression of primary participant in Polish is often fulfilled by personal endings on V. These endings have S function in that they can be replaced by a pronoun or a NP agreeing with them in number (person) and thus constituting S proper. Nevertheless, they do not get deleted in this process, which constitutes a proof of their rather exceptional status as Subjects. Another factor is their unclear origin (cf. Lehmann (1976:454–456)). In other words, it is not at all certain that they represent old personal pronouns appended to verbal stems. Therefore, many actually spoken Polish sentences are, at

Of course, there is a possibility of translating the above into Polish using also adjectival modification; e.g. “dzisiaj jest dziś zimny” or “pływanie w rzeczce jest przyjemne” (“the day today is cold”; “swimming in a river is pleasant”). We do not regard these variants as either idiomatic or, sometimes, well formed.
least syntactically, if not morphologically, S-less:

(22) Wridzi-limit go niedawno — ”I saw him recently”

\[
\text{Primary participant} \\
V \quad \text{O} \quad \text{Adv}
\]

expressed by verbal ending (morphologically)

(22) represents the same structure as that of (23); i.e. characteristic for OE coordinated sentences:

(23) Her hiene bestaef se here ... ond geridon Wesseaxna lond — ”In this year this army went stealthily ... and they attacked the land of Westsaxons” (Anglo-Saxon Chronicle; entry 878).

The appearance of S-less sentences in OE was much more restricted than it is in contemporary Polish, pointing toward the drift of English from T-prominent to S-prominent structure.

Both in English and in Polish T may be introduced using a sort of sentence equivalent “as to ...”, “co do ... to ...”, “odnośnie...” etc.;

(24) E: As to John, he doesn’t like apples.
P: Co do Janka, to on-nie lubi jablek.

Yet, in contemporary usage, such structures express a marked, emphasized or contrasted T. Unmarked normal T is typically expressed by S in English and by any NP — very often in an oblique case — in Polish. The spread of sentences like (25) replacing (26):

(25) Miliony gwiazd świecily na niebie.
(26) Miliony gwiazd świeciło na niebie,

as well as the spreading colloquial use of non-contrastive personal pronouns reinforcing verbal endings reflect the fact that also in Polish T is expressed by S more and more frequently.

The important characteristic of T in T-prominent languages is that T is fully integrated into the sentence structure with or without any overt morphological marking but within one intonational pattern (Li and Thompson 1976). This T need not be — and what is important for our argument; it rarely is* — the primary participant of the process (state) expressed by V. In fact, its connection with the rest of the elements in the sentence may be

* Otherwise it would simply be S.
Subject- and topic-prominence

indirect and very general. Rendering such a structure word for word in English we get:

(27) apples — John — likes
(28) linguistics — John — admires — Chomsky,

meaning “as for apples, John likes them” and “considering (talking about) linguistics, John admires Chomsky” respectively.

In colloquial spoken Polish such intonational integration of loosely connected elements is observable. The examples (taken from actually heard speech) are:

(29) Nasz nowy sąsied to go zastaną —
— “Our new neighbour shall I find him in?”
(30) A two brat czy mu już przysłali to zawiadomienie?
— “And your brother have they already sent him this notification?”

Standard Polish literary usage accepts such general Topics when they are introduced by a phrase called above „sentence equivalent” of a roughly adverbial nature, of:

(31) Odnóinie fizyki, Heisenberg to wielkie nazwisko
— “As for the science of physics H. is a great name” =
— “In physics H. is a great name”.

It is, therefore, not possible to claim that the Polish T-scale is comparable to that of, for instance, Chinese (Li and Thompson 1976). What does seem possible is to look at the Polish flexibility in choosing T — in contradistinction to English where T now tends to be at the same time S. — from the point of view of this T- to S-prominence scale. That such flexibility exists may once again be shown and confirmed by the fact that in Polish no restrictions so far exist on T being something else than the primary participant NP, i.e., that only S is accepted as T. In English the sentences that go beyond the scope of this restriction are either ungrammatical or very highly “marked”, contrastive or emotive. Compare the following sentences:

(32) P: Tę książkę kupił Janek.
E: (a) This book John bought.
     (b) This book was bought by John.
(33) P: Jankowi Marysia dala książkę.
E: (a) To John Mary gave a book.
     (b) John was given a book by Mary.

Cf. Fisiak (1978:38—40) on the problem of word order and promotion to initial position in Polish and English.
English sentences of the type (a), when they do appear, are highly contrastive and are realized phonologically as two information units, with the so-called "marked theme" (cf. Halliday (1970: 159), also Halliday 1976). In Polish sentences of the type exemplified by (32) and (33) the initial element may be both "marked" or totally neutral depending only on contextual requirements. For Polish sentences with proposed Oincur there exists only one option, as in (33), Oincur never becoming S of the passive sentence in Polish. Normal, unmarked and non-contrastive English equivalents of similarly unmarked non-contrastive Polish sentences of the type (b) where T becomes the primary participant NP, i.e., S of the sentence.

Summing up the above argument, Polish, together with other Slavonic languages like Czech or Russian, seems still highly T-prominent language — more T-prominent than even OE and its colloquial register even more so. Not admitting such loosely attached topical NP's as fully T-prominent languages do; it, nevertheless, must be placed further back on T-to S-prominence scale of historical development than in the case of both contemporary and Old English.

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11 Cf. Kovtunova (1976) on Russian word order from the point of view of FSP.


Although multiple negation seems to be a marginal phenomenon in English syntax, deserving therefore little attention, its existence cannot be denied or ascribed to dialectal variations only. Any theory, and particularly any theory of negation must face the problem of accounting for multiply negative sentences. In view of the fact that the problem of single negation is complicated enough to have produced no unequivocal account so far and that there are still many controversial issues which are unresolved it is not surprising that multiple negation has always been treated almost as an embarrassing subject.

As a preliminary, we should focus our attention on one of the vital problems of many transformational generative grammars, viz. their inability to generate multiply negative sentences at all. Nearly all analyses of negation carried out within the framework of Transformational Grammar postulate at most one deep structure constituent NEG per simplex sentence, which obviously excludes multiply negative sentences from the set of grammatical and well-formed sentences. Some analyses do admit two NEG constituents, restraining them however to specific configurations only.

Thus Klima (1964: 316) admits two constituents NEG per simplex sentence, but only with an intervening adverb:

\[ S \rightarrow \langle wh \rangle / \langle neg \rangle / \langle Adv \rangle / \langle neg \rangle / \langle ADV \rangle / \text{Nominal} \rightarrow \text{Predicate} \]

1. He doesn't really not understand.
2. He hasn't often not paid taxes.
3. He doesn't really not like her.

Klima's extremely influential article stands as one of the major treatises.
on negation. Up to the present moment, nearly all accounts of negation have been based in one way or other on Klima's solutions.

Although some linguists have admitted that this model is inadequate for handling multiply negative sentences, in order to preserve the simplicity and elegance of their analyses, they have excluded multiple negation from their studies. Therefore it has become a matter of common agreement to place the NEG constituent under the domination of S, sentence initially.

Klima had two reasons for placing the NEG constituent sentence initially. One was the scope of negation, which he says ranges over all elements that are in construction with NEG. A constituent is said to be in construction with another constituent if the former is dominated by the first branching node that dominates the latter. Another reason was the Indefinite Incorporation Rule, which applies to all quantifiers that are in construction with NEG, and can be therefore formulated in a simple way: (Klima (1964: 319))

\[
\begin{align*}
X & \ [\text{Affect}]^{\text{GSF}} \ Y \\
1 & \quad 2 & \quad 3 \\
[\text{Indef}]^{\text{GSF}} & \quad Z=1; \ \text{Indef } +2, 3
\end{align*}
\]

Negation is considered by him as the grammatico-semantic feature "Affective", and the indeterminate constituents that may be in construction with it are: too, sometime, somewhere, once, a, many, some. The rule is responsible for the change of some to any, too to either etc., in negative and interrogative sentences:

They think that rain fell somewhere else.

They think that rain didn't fall anywhere else.

As has already been mentioned, Klima's placement of the NEG constituent was adopted by most linguists no matter whether they accepted the rest of Klima's analysis or not. Some of the linguists, however, suggested different solutions which will be briefly discussed. Fillmore (1968), for instance, also places the NEG constituent sentence initially, yet not under the immediate domination of S. Instead, he places it under the domination of the Date constituent. A similar solution was adopted by Hall-Partee et al. (1973), who reformulated some of Klima's transformations and following Langer (1969), abandoned the notion "in construction with" in favour of the notion "command" which is more general.

"A node "A" commands another node "B" if "A" does not dominate "B", "B" does not dominate "A", "A" is in structure S1, and node S1 dominates "B"." (Partee (1973: 240))

The notion "command" does not require that S should immediately dominate NEG in order to define the scope of the some-any rule and allows for simplification of the rule itself within the framework adopted by Partee.
A yet another position of *not* was postulated by Lakoff (1979), who suggests that *not* is an ordinary predicate:

```
S
  NP
  VP
    V
    not
```

However, none of these analyses, varied as they are, is adequate for handling multiple negation, because of the restriction on the number of the NEG constituents in the deep structure.

A completely different and initially very promising solution was offered by McCawley (1973). He argues that *not* is an intransitive verb of the sentence that dominates a positive sentence:

```
S
  NP
  V
    not
```

Note that McCawley's treatment, in contradistinction to all other treatments, places no limits on the number of negative elements: there is nothing to prevent *not* from having as subject a sentence whose verb is *not* etc. McCawley's analysis was partially motivated by multiply-negative sentences. And here he took an independent line in stating that "no proposal for deep structures can be sufficient to distinguish between grammatical and ungrammatical multiple negation, since the grammaticality of the sentence depends not on the way that negatives are combined in deep structure but on the way in which they are combined in surface structure" (1973: 288). Therefore, he goes on to suggest an output constraint to exclude sentences in which negatives are combined in an ungrammatical way. He states however that "the details of the constraint on multiple negatives are not yet clear." "Moreover, there is a considerable variation among speakers as to which combinations of negatives are grammatical" (1973: 289).

One can get an idea of how complicated the task is from Garber's (1972) study of multiple negation, where 18 different response patterns on "dialects"
were distinguished. Carden postulated two constraints: NDN (no double
negation) Constraint nad Explicitness Constraint. Dialects differ in three
ways:

1. Presence or absence of NDN and Explicitness Constraints,
2. The definition of negation used in each of these constraints,
3. The point of application of NDN constraint.

In Carden's study, only dialects with the "logical understanding" of multiple
negation were examined, where two negatives make (roughly) a positive:

4. I didn't have no money.
4'. It was not the case that I had no money = I had some money

Dialects where multiple negation expresses single logical negation were dis-
regarded:

Substandard: Nobody didn't do nothing.
Standard: Nobody did anything.

By way of comment, we have to note the similarity of Substandard multiple
negation in English to Polish negation, where we also have quantitative
negators plus the negative particle nie:

5. Nikt nie zrobil nic.

The Polish sentence, like its English counterpart, expresses single logical
negation. Therefore the derivations of these two sentences should be almost
identical.

The difference between the standard and substandard English negative
sentences is ascribed to the existence of the Negative Attraction Rule in
standard and the Negative Concord Rule in substandard English (Labov
(1972)). The rules can be expressed informally as follows: the Negative Attrac-
tion Rule states that "the negative is attracted to the first indeterminate,
obligatorily if it is a subject" (1972: 777). "The Negative Concord Rule
incorporates NEG into all indeterminates" (1972: 784), that is, causes supple-
tion of all the some, any words into no words.

Standard: Nobody likes anybody here.
Substandard: Nobody don't like nobody here.

Therefore, we might postulate this kind of rule for Polish as well. However,
this type of negation is not the central issue of this paper.

The main concern of our analysis are sentences in which something con-
taining negative is negated, that is, sentences with the logical multiple ne-
gation; e.g.

6. Not all the boys didn't go. (Carden (1972 : 36)).
7. Not every student doesn't accept this. (Seuren (1974 : 198)).
8. Not many of the boys didn't talk to John. (McCawley (1973 : 206)).
9. Not many people have nowhere to live. (Quirk (1972: 379)).
10. He doesn’t often really not understand. (Stockwell (1973: 247)).
11. Chomsky doesn’t not pay taxes for nothing. (Stockwell (1973: 247)).
12. I can’t not obey. (Quirk (1972: 379)).
13. Everybody doesn’t like something but nobody doesn’t like Sara Lee. (Horn (1971: 130)).
14. Nobody wasn’t given anything. (McCawley (1973: 283)).
15. Nobody didn’t say anything. (McCawley (1973: 208)).
16. No one had nothing to eat. (Stockwell (1973: 247)).
17. I didn’t have no money. (Carden (1972: 32)).
18. Nobody doesn’t pay his income tax. (Carden (1972: 32)).
19. No one has nothing to offer to society. (Quirk (1972: 379)).
20. At no time didn’t Tom beat his wife. (My example).

The above sentences represent nearly all possibilities of placing multiple negatives in a simplex sentence; they can be generalized as follows:

Not Universal Quant. Not V
Not Compound Exist. Quant. Not V
Not Compound Existential Quant. V Negative Exist. Quant.
NP Not Not V
NP Modal Verb Not Not V
Negative Exist. Quant. Aux Not Not V (active)
Negative Exist. Quant. Aux Not V (passive)
Negative Exist. Quantifier V Negative Exist. Quantifier
NP Not V Negative Exist. Quant.
Preposed Negative Constituent Aux Not NP V

On the basis of these examples it would be nearly impossible to formulate any restrictions on the distribution of negative elements in the sentence. Therefore, McCawley’s suggestion that “an output constraint is necessary to describe the differences in grammaticality between various sentences with multiple negatives” (1973: 283) seems to set a Sisyphean task before a linguist willing to undertake it.

Pragmatically, it seems that for multiply negative sentences to be used felicitously they must be uttered in a context in which the corresponding negative sentences (sentences with single negation will be called just negative sentences) have already been mentioned, or in which the speaker assumes that the hearer believes in the corresponding negative sentence. In view of the fact that negative sentences themselves must be uttered in the context where the corresponding positive sentences have already been mentioned, discussed or implied, or the speaker assumes that the hearer believes in the corresponding positive sentence, (Givón 1975), it is possible to explain why multiply negative sentences are encountered fairly infrequently. A linguistic
and extra-linguistic situation of this kind is very rare and by no means typical, not to mention its artificiality. Another reason is that there are usually multiple sentence paraphrases for simplex sentences with multiple negation and the former are preferred.

However, a mere statement that a multiply negative sentence is a denial of the corresponding negative sentence is a gross oversimplification. The correspondence between a negative and a multiply negative sentence is more complicated than it might seem at first. Let us consider the following examples:

12. Not all the boys didn't go. ⇔ Not all the boys went.
13. No one didn't say anything. ⇔ No one said anything.
15. I can't not go to the party. ⇔ I can't go to the party.

Examples on the left are not negations of the examples on the right. Apparently then, there are some restrictions on what can be negated in negative sentences. Before we draw any conclusions, let us concentrate for a while on some other facts which are equally interesting. It appears that pairs of sentences can be found which should presumably have the same deep structure but only one of which contains an admissible combination of negatives (McCawley (1973 : 283)).


is grammatical, whereas its active counterpart:

17. They didn’t give nothing to anybody.

is ungrammatical.

There are also cases of sentences which look as if they should be derived from the same deep structure, but they are non-synonymous.

18. Never before had none of his friends come to one of his parties. (proposing)
19. None of his friends had never come to one of his parties before.

The above sentences can be paraphrased as follows:

18'. It is not the case that ever before none of his friends had come to one of his parties = Always before at least one of his friends had come to each of his parties.
19'. It is not the case that any of his friends had never come to one of his parties before = Each of his friends had come to at least one of his parties before.

Let us now examine the relation between active and passive sentences

20a) They invited nobody. ⇔ b) Nobody was invited.
21b) They didn’t invite nobody. ≠ b) Nobody wasn’t invited.
To capture the relations between negation and quantifiers in these sentences we can resort to simple logical formulae, which are a handy way of representing scope order relations. Thus we can interpret 20) as:

\[ 20'' \sim \exists x \text{ (they invite x) } \]

which is equivalent to:

\[ \forall x \sim (\text{they invite } x) \]

By rules of logic if we negate 20'', we get:

\[ \sim \exists x \text{ (they invite x)} = \sim \forall x \sim (\text{they invite } x) \]

Therefore the meaning of sentences 21a) and 12b) should be expressed by the above formula. However, only sentence 21a) has this meaning, while sentence 21b) seems to mean rather:

\[ \sim \forall x \sim (\text{they invite } x) = \exists x (\text{they invite } x) \]

which in turn can be derived by negating:

\[ \exists x (\text{they invite } x) \]

which expresses the meaning of the sentence:

22a) They didn't invite somebody

b) Somebody wasn't invited.

In the case of all active-passive pairs there is this lack of synonymity, which either means that transformations change meaning or that these sentences have different deep structures. The latter is more plausible as the difference between 20a/b and and 22a/b may be ascribed to the existence of the feature \(+\text{ specific}/ in somebody in the former, and \(-\text{specific}/ in the latter. The feature \(+\text{specific}/ is treated as a feature of the indefinite article and indefinite quantifiers and accounts for the differences in meaning between the following pairs of sentences:

a. I didn't see some of them.
b. I didn't see any of them.
c. Some of us didn't go to the picnic.
d. None of us went to the picnic.

And thus the sentence:

Nobody wasn't invited.

is the negation of:

Somebody wasn't invited.

\(+\text{spec}/

and not of:

Nobody was invited.

which in turn can be derived from:

Somebody wasn't invited.

\(-\text{spec}/
Therefore it seems possible to postulate that “Nobody wasn’t invited” is derived in the following way:

\[
\begin{align*}
  & S \\
  & \quad \text{NEG} \\
  & \quad \quad S \\
  & \quad \quad \text{NEG} \\
  & \quad \quad \quad \text{S} \\
  & \quad \quad \quad \quad \text{NP} \\
  & \quad \quad \quad \quad \quad \text{VP} \\
  & \quad \quad \quad \quad \quad \quad \text{NP} \\
  & \quad \quad \quad \quad \quad \quad \quad \text{they} \quad \text{invite} \quad \text{somebody} \\
  & \quad \quad \quad \quad \quad \quad \quad \quad /\text{spec}/
\end{align*}
\]

Since the problem of actual formulation of the phrase-markers and transformations is not central to our arguments, derivations will be presented in a schematic and oversimplified form.

I cycle: Passive \(\text{s/nots/nots/ somebody was invited/s} \) /\text{+-spec/}

II cycle: NEG lowering \(\text{s/nots/ somebody was not invited/s} \) \\
\(\text{S pruning} \) /\text{+-spec/}
\(\text{NEG placement} \)

Here, some-any-no suppletion rules do not apply because of the feature /\text{+-specific/} on somebody.

III cycle: NEG lowering \(\text{s/Nobody wasn’t invited/s} \) \\
some-any-no suppl.

For reasons mentioned before, (see p. 3), we have adopted the above deep structure of negative sentences following McCawley (1973:280), whose arguments for placement of NEG in the higher S seem to be convincing and well-motivated. We have rejected his treatment of Not as an intransitive verb for reasons which will be discussed directly below.

McCawley argues that not “appears in the same deep structure configurations as other things which are labeled as verbs; e.g. seem; both not and seem combine with a sentence to yield a sentence” (1973:281). Semantically they have no features in common, yet in McCawley’s analysis they would also be uniformly labelled as predicates since he rejects the traditional distinction between “predicate” and “logical operator” and treats negation, the verbs such as seem, happen, appear, and quantifiers as if they were simply predicates predicated of sentences. Thus claiming similarity between not and seem.
on syntactic grounds and between not and quantifiers on semantic grounds, he concludes that they are all predicates (or verbs), which seems to be the typical case of erroneously applied logical implication. The dubious syntactic similarity between not and seem or happen cannot therefore serve as sufficient motivation for adopting this particular treatment of not.

A few comments on the rules applying in the above derivation might prove useful. Since NEG has been placed under the domination of the higher S, a rule of negative lowering is necessary to bring the NEG constituent into the lower sentence. It might be tentatively formulated in the following way:

SD: \[ \text{NEG} - s/ \text{NP} - \text{VP} - X/s \]

SC: \[ s/1 2 3 4 /s \]

In our derivation we postulate that some-any-no suppletion rules apply on the third cycle in spite of some being /+specific/.

Some-any-no suppletion rules were first formulated by Klima (1964) as:

1. an optional rule changing some into any in sentences containing NEG and WH constituents,
2. an obligatory rule changing any into no when it precedes negation, optional if any follows negation.

One of the objections raised by many linguists was that the rule changing some to any created non-synonymous sentences:

\[ \text{I didn't see some of them.} \]
\[ \text{I didn't see any of them.} \]

R. Lakoff (1969) questioned the existence of the rules in connection with non-synonymous pairs of sentences, which according to her differ in presupposition:

\[ \text{Who wants some beans?} \quad \text{(positive presupposition)} \]
\[ \text{Who wants any beans?} \quad \text{(negative or neutral presupposition).} \]

She suggested that sentences of this type should be marked in their semantic representation to indicate the presupposition of the speaker, be it positive or negative or neutral.

Another measure, proposed by Fillmore (1968), was to assign some words the feature /±specific/ and make the rules sensitive to this feature. This solution was adopted by Hall-Partee (1973), who restrained the applicability of the some-any suppletion rule to /±specific/ some. It seems, however, that the some-any suppletion rule has to apply to /±specific/ some in sentences with multiple negation, or we shall get non-grammatical surface structures. Therefore, the rule has to apply in presence of two NEG-constituents:

SD: \[ \text{SX} - \text{NEG} - X/\text{+specific} - X/\text{indeterminate} - X - \text{NEG} - X \]

3 Papers and studies ... 15
A. Charęzińska

SC: change /+specific/ to /−specific/
change /−indeterminate/ to /+indeterminate/

In that way we get any which is /−specific
+indeterminate/, and which
can undergo the any/−no suppletion rule now:

SD: X − NEG − /−specific
+indeterminate/ − X

SC: 1 − 3

/−neg/

That these rules are of wider applicability is confirmed by sentences with
a negative-raising verb:

23. I don’t think that any people weren’t invited. =
(originally + spec)
= I think that no people weren’t invited.
24. I don’t think that no people weren’t invited. ≠
(−spec → no)
≠ I think that no people weren’t invited.

The sentence:

We didn’t invite nobody.

would be then derived in the following way:

s/NEGs/ NEGs/ they invite somebody/s
/− specific/

I cycle: no transformations of interest apply here,
II cycle: NEG lowering
s/NEGs/ they invite nobody/s
some-any-no supple.
III cycle: NEG lowering They didn’t invite nobody.
NEG placement

However, in this derivation as it stands, there is nothing to prevent us from
getting non-synonymous sentences coming from the same deep structure.
Suppose that in the last derivation the passive transformation applied on the
first cycle:

s/NEGs/ NEGs/ they invite somebody /s → Somebody was invited.
/−spec/ /−spec/

II cycle: s/NEG/s nobody was invited/
NEG lowering and some-any-no suppletion rules applied here,
III cycle: NEG lowering Nobody wasn’t invited.
NEG placement
Multiple negation in English and Polish

Sentences derived in such a way are not synonymous with their active counterparts, compare:

They didn't invite nobody. ≠ Nobody wasn't invited.

Therefore, we must prevent NEG from moving onto the auxiliary in the last derivation; in other words, we must prevent it from crossing over another negative. It seems that a cross-over constraint is what we need here. The constraint would ensure that in the derivation of the sentence NEG constituents do not cross over each other. Another possibility is to formulate the constraint in terms of precedence relations, that is, "no transformation may change the precedence relations of logical predicates." (Lakoff (1974:165)). By logical predicates Lakoff means quantifiers and negation. Although Lakoff formulated this constraint irrespective of multiply negative sentences, it appears that the constraint works here and therefore its application is much wider than its author ever suspected. A similar constraint was formulated by Lee (1974) within the Montague Grammar framework, but it blocks only universal quantifiers and negation from crossing over each other. Nevertheless, the necessity of introducing constraints of this kind was argued for on syntactic (Lee 1974) as well as semantic (Lakoff 1974) grounds. In view of this fact an attempt can be made at explaining why some multiply negative sentences cannot be denials of the seemingly corresponding negative sentences.

Semantically, multiply negative sentences are a combination of two types of negation: modal negation and pure negation, as they were named by Krzeszowski (1974). According to him, modal negation involves the act of negation on the part of the speaker:

"I think it is false that..."

Pure negation consists in negating an element within the nuclear subconfiguration:

"I think it is true that... not..." (1974(88–89)).

Pragmatically impossible is a sentence with two modal negations or two pure negations. Naturally, as follows from this line of argumentation, pure negation must be within the scope of modal negation and any change in the order of the two negative constituents results in a change of meaning. Of interest also is the fact that sentence stress always falls on the constituent containing modal negation, which would mean that the leftmost negation is in the Focus, and any negatives to its right are part of presupposition.

From the above sketchy presentation it does not follow unequivocally which of the various approaches towards negation offers the most insightful interpretation of multiply negative sentences. They range from a strictly syntactic account of Klima's (1964), through interpretive semantics to semantically...
based analyses of Lakoff (1974), Krzeszowski (1974) and McCawley (1973). Each of them grapples with a slightly different aspect of negation highlighting certain points, ignoring, however, other that seem of equal importance but do not fit into the author’s theoretical framework. For that reason we have been trying to avoid any commitment to any model of linguistic description. It has rather been an attempt at extracting observations that might throw more light on the neglected subject of multiply negative sentences. Needless to say, as is always the case, several theoretical issues arose unwelcome, the most conspicuous of which has long been the core of the controversy between generative semantics and interpretive semantics and might seem to be the ghost of the bygone area — yet here it raises its head again: if all semantic information is made available at the level of underlying structure then we need mechanisms such as global rules and transderivational constraints, if not, then transformations change meaning. In our analysis we have — following Lakoff (1974) — postulated a derivational constraint, which might suggest a bias towards generative semantics. It seems however that such a mechanism is too powerful indeed and that it might be reformulated as a constraint on specific movement transformations, in particular on NEG placement, which would make it a local constraint rather than a transderivational constraint. Such a device could be as well accepted within interpretive semantics.

What both generative and interpretive semantics have undoubtedly in common is the deeply rooted “logical” way of thinking; that is particularly striking in their treatment of negation. Logical understanding of negation in natural languages raises a number of problems and controversies which, according to Nagucka (1978), can be solved only after the logical bias in analysing negation has been abandoned.

Nagucka suggests an entirely different analysis of negative sentences, which is of particular interest for us as it tries to account for multiply negative sentences as well. Nagucka treats Sentence as consisting of Modality and Proposition, where Modality contains semantic primitives, one of which is “I diswant” (Nolo) responsible for negation, whereas Proposition contains arguments and VPs. All the relations expressed within the Proposition can be negated. However, the process of negativization is of operational character in Nagucka’s analysis and its function is to transfer the information onto the syntactic level. Sentences containing no words like nothing, nobody etc. contain at the semantic level more than one act of negation. For instance, by uttering the sentence:

I see nobody there.

the speaker states:

I don’t see NOT X there.

where NOT X is a statement about the empty subset of X. Therefore the
sentence expresses two acts of negation of which one involves Proposition, while the other involves an argument. In Polish, these two acts of negation are reflected in surface structure:

Nie widzę tam nikogo.

whereas in English there is a deletion rule which erases all nots but one. So, whenever a no word appears in a sentence, the sentence expresses a double act of negation. Naturally it means also that whenever we have multiple negation on the surface, the derivation of the sentence gets appropriately complicated, expressing up to four acts of negation, e.g. (Nagucka (1978:66)):

"Nobody had nothing".
1) I do not want to believe that X person had Y object
2) I do not want to believe that there existed X (empty subset).
3) I do not want to believe that there existed Y (empty subset).
4) I do not want to believe in what I didn't want to believe (I reject 1.)

Using the lexical material, the semantic representations can be illustrated as follows:

1) Janek didn’t have bread. (Janek nie miał chleba)
2) Nobody had bread. (Nikt nie miał chleba)
3) John had nothing. (Janek nie miał niczego)
4) Nobody had nothing. (Nikt nie miał niczego).

Naguoka’s analysis constitutes an interesting alternative to other analyses discussed in this paper. However, it does not avoid certain problems and inconsistencies, which weaken its descriptive and explanatory power. Thus the semantic structure which she suggests for negative sentences is nearly identical to semantic structures based on the logical understanding of negation, in that it postulates a single semantic primitive nolo in front of the Proposition, whereas in other theories it was a single morpheme or functor also placed in front of the Proposition. The only, and for Naguoka, basic difference is that she considers nolo to be the expression of the mental attitude of the speaker towards the proposition, while in other theories not was a logical operator stating that the proposition was false, to which Naguoka objects. Basically, she overlooks two facts; one is that the inclusion of the speaker's mental attitude into her considerations and referring to negation as an "act", automatically moves her analysis into the area of pragmatics, another is that for the speaker to deny a certain proposition, he must consider it first to be false, or rather infelicitous, which he expresses by negating it or denying. Thus, even mentally, negation cannot be divorced completely from the positive statement that is denied by the speaker, and Naguoka claims that it can.

Leaving aside theoretical considerations, which are part of a much wider
controversy, let us address some of the problems that arise within Nagucka’s own framework. She claims that arguments are unordered in the Proposition with respect to VP and therefore with respect to negation, which in the process of negativization is always placed between arguments and VP. How then can we explain non-synonymity of sentences with different orders of negative constituents:

Never before had none of his friends come to one of his parties.

None of his friends had never come to one of his parties before.

In Nagucka’s analysis there is no formal apparatus to explain this lack of synonymity, whereas logically based analyses can explain it in terms of the scope orders of negation and quantifiers. For the same reason her analysis would not be able to account for the lack of synonymity between active and passive sentences:

One of the strongest arguments in favour of her analysis, according to Nagucka, are sentences with no words, which she claims to be multiply negative in the semantic structure. They have propositional and argumental negation which expresses the empty subset of the set denoted by the argument:

Nobody likes Mary.

Not X doesn’t like Mary.

She argues that argumental negation has to occur together with propositional negation or “we would have to admit that” “nothingness”, “noness”, “neverness” etc. exist in the real world, and either can be perceived or experienced by our senses, or created in the mind of the speaker when interpreting his experience” (1918:58). It seems that Nagucka’s line of reasoning does not hold true even if we do admit double negation in the semantic structure of such sentences, because if we cannot say that “The empty subset likes Mary”, we likewise cannot say “The empty subset doesn’t like Mary” in the light of her claim that “negation is a statement, independent of declaratives and can be semantically interpreted without having recourse to any other kind of utterance.” (1978:22). Moreover, the derivations of sentences with multiple negation of this “and are very complex semantically and lead to some counterintuitive conclusions. Also her analysis predicts, incorrectly, that sentences a) and b) may be non-synonymous:

a) I see nobody there ≠ b) I don’t see anybody there

Sentence b) in Nagucka’s analysis can be ambiguous between single and double negation. If we adopt Kooij’s (1971:1) definition of ambiguity as “the property of sentences that they may be interpreted in more than one way and the insufficient clues are available for the intended or the optimal interpretation”, then it seems that sentence b) cannot be considered as ambiguous as it does not fulfill the first part of the definition.
Another problem for Nagucka's analysis are sentences with negative constituent and universal quantifiers:

a) Wszyscy nie przyszli (All/everybody didn't come)
b) Nie wszyscy przyszli (Not all/everybody came)

Sentence a) means "Nikt nie przyszedl" (Nobody came), that is, has the Quant-Neg reading. The other reading i.e., Neg-Quant is also possible, but it will be disregarded for a moment. Nagucka treats such sentences as cases with only one negation present, and obviously sentence b) will have to be treated in the same way. In both cases we will have propositional negation, as argumental negation expresses only the empty subset. Therefore, these two sentences will have to be assigned identical semantic structures, which constitutes a serious problem in view of the fact that in Nagucka's analysis the meaning of sentences is apparently determined in their deep structure. Also, the ambiguity of sentence a) will be left unexplained. A logically based analysis explains the differences in meaning between these sentences in a natural way as the difference in the scope orders of the universal quantifier and negation:

\[ A_x \neg (\text{przyszedl} x) \neq \neg A_x (\text{przyszedl} x) \]

Concluding this brief and sketchy presentation, it should be pointed out that the logically based theories have by no means solved all of the problems posed by negative and multiply negative sentences. Their shortcomings have become obvious in the course of the present analysis and their descriptive and explanatory adequacies leave much to be desired. However, in an attempt to clarify certain issues connected with multiply negative sentences, this paper raised more questions than it has been able to answer. Undoubtedly it has succeeded to prove that many, quite fundamental, problems remain at every stage. Yet the general direction it has tended to is definitely "logically" oriented, which seems to be the only promising route in the light of the facts that can be reviewed briefly as follows:

a) lack of synonymity between some active and passive sentences can be explained in terms of different scope orders of negative constituents and quantifiers,
b) lack of synonymity between sentences with different orders of negative constituents can be explained in a likewise manner,
c) interpretation of negative sentences in terms of logical formulae helps us to explain why some multiply negative sentences cannot be denials of seemingly corresponding negative sentences,
d) logical formulae capture in a revealing manner relations between multiply negative sentences and their positive paraphrases,
e) and last but not least, the simplicity of logically based analyses is an attribute not to be sneezed at, particularly when it is combined with greater explanatory power than that of analyses renouncing logic as a legitimate basis of linguistic descriptions.

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The perception and imitation of the British English /θ/ and /ð/ by Polish speakers

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The pronunciation and auditory discrimination of the British English dental fricative, i.e. the tense /θ/ and its lax counterpart /ð/ cause significant trouble for Polish learners. Since the Polish language does not contain these sounds in its phonological system, the phenomenon of the so-called phonemic under-differentiation takes place. Namely, two phonemes of a foreign language whose equivalents are not distinguished in the native language are confused, as e.g. /θ/ and /s/ in thin: sin, /θ/ and /ʃ/ in thin: Finn, /θ/ and /t/ in thin: tin, /ð/ and /z/ in bathe: bays, /ð/ and /v/ in thine: vine, or /ð/ and /d/ in thy: die (cf. Weinreich (1963:18); Krzeszowski (1970:41) and Kopozyliski (1977:15)). Consequently, most Polish speakers when speaking English will substitute closest articulatory and acoustic equivalent of the native language for the phoneme of the foreign language which has no equivalent in the native language. Thus, E. /θ/ — a voiceless dental fricative will be rendered by Poles as either /ʃ/ — a labio-dental fricative, or /s/ — a dental sibilant, or /t/ — a dental stop. Likewise, /ð/ will be rendered by them by the voice counterparts of the above mentioned sounds, i.e. by /v/, /z/ or /d/. There also exists a possibility of /θ/ being substituted by P. /ʃs/ and /ð/ by P. /dz/ since the places of articulation of the latter approximate the articulation of the E. /θ/ and /ð/ (cf. Kopoczynski (1977:76)). We, however, have found very few occurrences of substitutions of the kind in the tests to follow. Nor, as a teacher of English, have we noticed a single substitution of /ʃs/ for /θ/, although the pronunciation of /dz/ in the place of /ð/ has been infrequently observed. Nevertheless, we assume that (a) /θ/ in thin /θin/ can be pronounced by Poles as /ʃ, s, t, ʃs/; (b) /ð/ in thy /ðai/ can be pronounced by Poles as /ʃ, z, d, ʃz/.

To investigate experimentally which substitutions prevail, we have carried out a number of perceptual and repetition tests with monolingual Polish
speakers. All subjects were fifteen-year-old grammar school students, native speakers of Polish, with no previous knowledge of English. The experimenter deliberately chose this age group, as in the majority of schools in Poland teaching English formally commences in the first grade of the grammar school. The informants had undergone general screening and no speech defects were noticed.

Three tests were constructed with the purpose of investigating the interpretation of English dental fricatives by native speakers of Polish. In order to obtain information on the perception of these phonemes discrimination and identification tests were designed, the imitation test elicited information on both the perception and production of the sounds.

PERCEPTION

The Discrimination, Identification and Imitation Tests had been prepared according to a model common to them all. Namely, /θ/ Discrimination and Identification Tests utilized the same list of minimal pairs in all the trials, the order of the pairs, however, was changed for each trial. The Discrimination Test consisted of three trials each of which had been recorded by different phoneticians. The same recordings were used in the Identification Test which consisted also of three trials in which the informants transcribed the minimal pairs perceived. In this test, however, an additional procedure was applied, i.e., the second listening to the whole test (three trials) with the purpose of comparing definite segments indicated by the experimenter with respect to their sameness or dissimilarity. The segments which sounded 'foreign' to the students were encircled. The writer considered this procedure to be indispensable as many segments, although rendered by the same value in the transcription, did not 'sound the same' to the subjects. Special answer sheets were prepared and supplied to the subjects, who were the same group throughout all the trials, their number, however, slightly varying in particular trials due to the absence of some members of the group (the experiment was extended over a few days). /ð/ Discrimination and Identification Tests were carried out according to the above-mentioned pattern, the only difference being a change of one phonetician (a different voice) and a comparatively shorter list of minimal pairs in the tests (21 versus 10). The limited number of minimal pairs in the /ð/ test was merely due to the scarceness of contrasts between /θ/ and /v, z, d/, especially in the medial and final positions. We realize that due to the differences in the number of minimal pairs between the /θ/ and /ð/ Perception Tests the comparison of the results may not be satisfactory.

The recorded test lists had been presented to a few native speakers of English and also native speakers of Polish — all phoneticians. They assessed the recordings to be adequate.
DISCRIMINATION TEST

Procedure:

I. /θ/ 

This test consisted of three trials and was administered to a group of 25 informants. In trials 2 and 3, however, this group was smaller by 4 informants due to their absence. The examples to which the subjects listened had been tape-recorded by three trained phoneticians and teachers of English — two males and a female. The phoneticians were native speakers of Polish since no native RP speakers of English were available at the time of the experiment. The subjects were not informed that the examples they were going to listen to were English (they were not familiar with the language anyway).

The test comprised 21 minimal pairs in which /θ/ was contrasted with either the apical stop, the groove sibilant or the labio-dental fricative — the sounds assumed to be most likely confused with the interdental fricative. The distribution of the phonemes was mostly initial prevocalic #_V (13 pairs), 5 pairs were distributed in the #_r context and 3 in the final postvocalic position V_#. Other possible distributions such as initial preconsonantal, medial and final postconsonantal were not examined.

The subjects were instructed to concentrate on the pairs to follow and state whether they were the same or different and mark their answers on the answer sheets. The time spacing between subsequent pairs was eight seconds. The following are the pairs:

1. bath — buff* [ba:θ] — [b θ]
2. bus — bath* [b θ] — [ba:θ]
3. but — bath* [b θ] — [ba:θ]
4. sin — thin [sm] — [θm]
5. thin — fin [θm] — [fm]
6. tin — thin [fm] — [θm]
7. fresh — thresh [θreʃ] — [θreʃ]
8. thug — fug [θ θ] — [θ θ]
9. sill — thill [sɪl] — [θl]
10. thaw — saw [θa:] — [so:] 
11. till — fill [θl] — [fl]
12. fill — thill [fl] — [θl]
13. thick — sick [θIk] — [sIk]
14. tar — thar [tə:] — [θə]
15. theme — feme [θI:m] — [fi:m]
16. through — true [θru:] — [tru:] 
17. through — true [θru:] — [tru:] 
18. thinner — sinner [θnə] — [sIə]
D. Wolfram-Romanowska

(19) wink (thinker) [t'inkær] — [θinkær]
(20) trill — thrill [tril] — [θril]
(21) frill — thrilling [frɪlɪŋ] — [θrɪlɪŋ]

* Note that pairs 1, 2 and 3 are not minimal pairs. However, due to the scarcity of contrasts between /f, s, t/ and /θ/ in the final position, the writer included them in the list. The subjects were instructed to compare the final sounds only in those three pairs.

Results:

Tables 1, 2, 3, 4 and 5 contain the results of the /θ/ Discrimination Test in numbers and percentages.

<table>
<thead>
<tr>
<th>Correct answers</th>
<th>Incorrect answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trial 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>371</td>
<td>164</td>
<td>525</td>
</tr>
<tr>
<td><strong>Trial 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>111</td>
<td>441</td>
</tr>
<tr>
<td><strong>Trial 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>363</td>
<td>78</td>
<td>441</td>
</tr>
<tr>
<td><strong>Trials 1, 2 and 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1064</td>
<td>343</td>
<td>1407</td>
</tr>
</tbody>
</table>

Table 1. Number of correct and incorrect answers given by the subjects in trials 1, 2 and 3 of the /θ/ Discrimination Test.

(Note that the results of the three trials cannot be treated jointly as has been revealed by the appropriate statistical tests applied. This procedure is to be treated jointly or not. Our hypothesis was that the means in the trials were equal, i.e. $H_0 : \bar{x}_1 = \bar{x}_2 = \bar{x}_3$. This was calculated according to the formula $\delta_1^2 = \frac{\sum (x_i - \bar{x}_i)^2 + \sum (x_j - \bar{x}_j)^2 - \sum (x_k - \bar{x}_k)^2}{N-k}$ (variations within the groups). The second hypothesis made was that the variations between the groups were equal, i.e. $\delta_1^2 = \delta_2^2 = \delta_3^2$ and so we applied the formula $\delta^2 = \frac{\sum n_i (\bar{x}_i - \bar{x})^2}{k-1}$ (cf. Puolialski (1971: 170–173)).

\[ \bar{x}_i \] — mean number of correct answers given by a subject in particular trials.
\[ n_i \] — number of subjects participating in particular trials.
\[ N \] — number of subjects participating in all three trials.
\[ k \] — number of trials.

Since in the /θ/ Discrimination Test $F=10.90>F_{0.05}=3.15$, we cannot treat the results of trials 1, 2 and 3 jointly.
used throughout the paper with reference to all tests. For detailed information on the statistics utilized here see note 1.

<table>
<thead>
<tr>
<th>Correct answers</th>
<th>Incorrect answers</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>71%</td>
<td>29%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>76%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Table 2. The results from Table 1 in percentages.

The mean values of correct answers given by the subjects are presented in numbers and percentages below:

<table>
<thead>
<tr>
<th>Mean in numbers</th>
<th>Mean in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>14.84</td>
</tr>
<tr>
<td>Trial 2</td>
<td>15.71</td>
</tr>
<tr>
<td>Trial 3</td>
<td>17.29</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>15.89</td>
</tr>
</tbody>
</table>

Table 3. Mean values of correct answers given by the subjects in trials 1, 2 and 3 of the /θ/ Discrimination Test.

In particular contexts, i.e. prevocalic initial, postvocalic final and before /r/ the results are somewhat different from the ones shown in Tables 1, 2 and 3, especially for [θ] distributed finally after a vowel, where the percentage of correct discriminations is very high.

<table>
<thead>
<tr>
<th># <em>V</em></th>
<th>TOTAL</th>
<th># _r</th>
<th>TOTAL</th>
<th>V_ #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>233</td>
<td>117</td>
<td>350</td>
<td>68</td>
</tr>
<tr>
<td>Trial 2</td>
<td>212</td>
<td>82</td>
<td>294</td>
<td>60</td>
</tr>
<tr>
<td>Trial 3</td>
<td>238</td>
<td>66</td>
<td>294</td>
<td>67</td>
</tr>
<tr>
<td>Trials 1, 2, and 3</td>
<td>683</td>
<td>255</td>
<td>938</td>
<td>106</td>
</tr>
</tbody>
</table>

Table 4. Numbers of correct answers given by the subjects in particular context groups.
The /ð/ Discrimination Test was given three times to the same group of 24, 23 and 24 students (again, some persons were absent during the second trial). The principles of administering the tests were the same as in the previous experiment. However, this time the recorded voices of the phoneticians were different — there were one male and two female voices.

The test consisted of 10 minimal pairs in which /ð/ was contrasted with /d/, /z/, and /v/. Again, the distribution of the contrasting phonemes was largely initial prevocalic (7 pairs), in 2 pairs the distribution was medial intervocalic, and in one — final postvocalic. Here is the list of the minimal pairs under investigation:

1. bays — bathe
2. lesser — leather
3. die — thy
4. thy — sigh
5. sign — thine
6. vow — thou
7. lather — larder
8. thine — dine
9. these — vs (letters v)
10. vine — thine

Results:
The results of the /ð/ Discrimination Test are contained in the Tables 6, 7, 8, 9 and 10.

<table>
<thead>
<tr>
<th>Correct discriminations</th>
<th>Incorrect discriminations</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>169</td>
<td>71</td>
</tr>
<tr>
<td>Trial 2</td>
<td>164</td>
<td>56</td>
</tr>
<tr>
<td>Trial 3</td>
<td>101</td>
<td>45</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>524</td>
<td>176</td>
</tr>
</tbody>
</table>

Table 6. Number of correct and incorrect discriminations given by the subjects in the /ð/ Discrimination test.

* F₀.₀₅ = 3.15 < F = 6.00
The British English /θ/ and /ð/

<table>
<thead>
<tr>
<th>Correct discriminations</th>
<th>Incorrect discriminations</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>75%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 7. The results from Table 6 in percentages.

Table 8 presents mean values in numbers and percentages of correct answers given by the subjects in particular trials throughout the /θ/ Discrimination Test.

<table>
<thead>
<tr>
<th>Mean in numbers</th>
<th>Mean in percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>7.04</td>
</tr>
<tr>
<td>Trial 2</td>
<td>7.5</td>
</tr>
<tr>
<td>Trial 3</td>
<td>8.00</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Table 8. Mean values of correct discriminations given by the subjects in trials 1, 2 and 3.

In context groups results are the following:

<table>
<thead>
<tr>
<th>#- V</th>
<th>TOTAL</th>
<th>V-V</th>
<th>TOTAL</th>
<th>V-#</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cor.</td>
<td>Inc.</td>
<td></td>
<td>Cor.</td>
<td>Inc.</td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>106</td>
<td>02</td>
<td>168</td>
<td>39</td>
<td>9</td>
</tr>
<tr>
<td>Trial 2</td>
<td>101</td>
<td>53</td>
<td>154</td>
<td>41</td>
<td>3</td>
</tr>
<tr>
<td>Trial 3</td>
<td>122</td>
<td>40</td>
<td>162</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>329</td>
<td>101</td>
<td>490</td>
<td>125</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 9. Number of correct discriminations given by the subjects in particular context groups.

<table>
<thead>
<tr>
<th>#- V</th>
<th>TOTAL</th>
<th>V-V</th>
<th>TOTAL</th>
<th>V-#</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cor.</td>
<td>Inc.</td>
<td></td>
<td>Cor.</td>
<td>Inc.</td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>63%</td>
<td>37%</td>
<td>100%</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>85%</td>
<td>35%</td>
<td>100%</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>72%</td>
<td>28%</td>
<td>100%</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>67%</td>
<td>33%</td>
<td>100%</td>
<td>89%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Table 10. Percentages of correct and incorrect discriminations in particular context groups given by the subjects.
It should be noted that the percentages of the initial position distribution are slightly lower than those of the 'comprehensive' distribution, while the percentages in the medial and final distributions are much higher.

**IDENTIFICATION TEST**

Procedure:

1. /0/

   This test utilized the same examples and the same recordings as in the Discrimination Test. It was administered three times to a group of 25, 25 and 20 informants respectively (it was the same group of people as in the /0/ Discrimination Test, however, 5 of them were absent during the last trial). The subjects were instructed to write down the examples according to the norms of the Polish orthography. If, however, they encountered a sound which they considered unfamiliar and did not know how to render, they were told to use an X sign. Time spacing was longer than in the Discrimination Test, i.e., the tape was stopped after each pair and the experimenter made sure that everyone had finished before proceeding to the next pair. In the cases of doubt on the part of the informants, the example was played back again. After the transcriptions had been written the subjects were exposed to another round of listening to the same three tests. They were instructed to compare definite consonants in given pairs, e.g., the two final consonants in bath — bus or the two initial consonants in thrilling — frilling, etc., and mark with a circle the 'less Polish' sounding one. This additional procedure allowed the writer to establish more contrasts, e.g. to investigate whether the /f/ transcriptions in the minimal pair thin — Fin (rendered both as /fin — fin/) sounded exactly the same to the listener or if the /s/ transcriptions of the final consonants in the pair bath — bus (both rendered as /bas/) sounded 'Polish' or 'non-Polish'.

Results:

The Polish orthography Identification Test revealed that contrasts between the minimal pairs were noticed by the subjects as follows:

<table>
<thead>
<tr>
<th></th>
<th>Contrast</th>
<th>No contrast</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>483</td>
<td>42</td>
<td>525</td>
</tr>
<tr>
<td>Trial 2</td>
<td>491</td>
<td>34</td>
<td>525</td>
</tr>
<tr>
<td>Trial 3</td>
<td>339</td>
<td>81</td>
<td>420</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>1313</td>
<td>157</td>
<td>1470*</td>
</tr>
</tbody>
</table>

Table 11. Number of contrasts perceived by the subjects in trials 1, 2 and 3.

\[ F_{w1}\approx 3.15 < F = 11.01 \]
The British English /θ/ and /ð/ 145

<table>
<thead>
<tr>
<th></th>
<th>Contrast</th>
<th>No contrast</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>92%</td>
<td>8%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>93%</td>
<td>7%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>81%</td>
<td>19%</td>
<td>100%</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>89%</td>
<td>11%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 12. The results from Table 11 in percentages.

The mean values of contrasts noticed by the subjects are:

<table>
<thead>
<tr>
<th></th>
<th>Mean in numbers</th>
<th>TOTAL</th>
<th>Mean in percentages</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>19.32</td>
<td>21</td>
<td>92%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>19.64</td>
<td>21</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>16.95</td>
<td>21</td>
<td>81%</td>
<td>100%</td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>18.76</td>
<td>21</td>
<td>89%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 13. Mean values in numbers and percentages of contrasts perceived by the subjects in the /θ/ Identification Test.

Presented below are the actual transcriptions of the words containing /θ/ as written by the students in all three trials in the order from most to least frequent (note that the segments perceived as ‘non-Polish’ have been presented here by bold type):

bath — baX, baf, bau, bof, bot, bat, bat, bat, bat
thin — fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn
thresh — fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz, fresz
thug — fag, fag, fag, fag, fag, fag, fag, fag, fag, fag, fag, fag, fag, fag, fag, fag
thill — fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl
thaw — fou, fou, fou, fou, fou, fou, fou, fou, fou, fou, fou, fou
thick — fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl
thar — fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl, fyl
theme — fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn, fyn

Papers and studies...15
thigh — faj, faj, faj'n, fal, fale, faly, fany, faji, fajly, fajle, flajn, fancj, falt, faXe, sau, sany, salf, waj.
through — fru, frc, friu, friou, frul, fu, fyu, fryl, fou, fau, fil, flu, fX, fnu, fou, foul, tfu, thu, toul, plu, X.
thinner — fyna, fyln, fyn, fyna, fynor, fynen, fyjke, syne, synen, tyne, pfyna.
thinker — finke, finka, finker, fynke, fynen, fyke, fyjke, fynke, fynker, fynter, fXe, feka, fy'rea, fike, fiker, synke, synker, synta, syka, tynke, tynke, tinker, tynker, tynkeX, pynke.
thrill — frel, fyl, fel, fyl, ful, frXl, freyl, fro, frou, flu, flyX, flol, fryj, feul, fyjt, fryX, trul, trXol, tyl, tuol, tfrull, tryl, tyle, tXol, czer, czyl, czXl, pyll, klyl, X.
thrilling — fylym, fyl, fyn, flyn, fil, fyl, fynm, fir, fylyijm, frylin, fyerjn, fiejn, fiejn, fjyn, fyjm, fyn, fejen, fyl, fij, fryj, fej, fXlin, tlyling, Xejn, Xyn.

A distributional analysis has revealed the following substitutions made by the students:

<table>
<thead>
<tr>
<th># -</th>
<th>&lt;X&gt;</th>
<th>&lt;F&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;w&gt;</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>1</td>
<td>184</td>
<td>141</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>T2</td>
<td>1</td>
<td>225</td>
<td>45</td>
<td>24</td>
<td>9</td>
<td>4</td>
<td>23</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>T3</td>
<td>20</td>
<td>120</td>
<td>43</td>
<td>71</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Ts 1, 2, 3</td>
<td>22</td>
<td>529</td>
<td>229</td>
<td>90</td>
<td>19</td>
<td>24</td>
<td>11</td>
<td>23</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&lt;o&gt;</th>
<th>&lt;g&gt;</th>
<th>&lt;m&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;z&gt;</th>
<th>&lt;sz&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>360</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>360</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>280</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>980</td>
</tr>
</tbody>
</table>

Table 14. Substitutions of /θ/ in the initial provocal position transcribed by the subjects in trials 1, 2 and 3 of the /θ/ Identification Test.

<table>
<thead>
<tr>
<th># -</th>
<th>&lt;X&gt;</th>
<th>&lt;F&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;W&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;k&gt;</th>
<th>&lt;ch&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>-</td>
<td>42</td>
<td>53</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>T2</td>
<td>2</td>
<td>40</td>
<td>9</td>
<td>24</td>
<td>7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>T3</td>
<td>6</td>
<td>32</td>
<td>13</td>
<td>2</td>
<td>15</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ts 1, 2, 3</td>
<td>8</td>
<td>120</td>
<td>75</td>
<td>28</td>
<td>10</td>
<td>15</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 15. Substitutions of /θ/ in the initial position before /r/ transcribed by the subjects in trials 1, 2 and 3 of the /θ/ Identification Test.
In the final postvocalic distribution /θ/ was rendered by the letters:

<table>
<thead>
<tr>
<th>V-#</th>
<th>&lt;X&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;k&gt;</th>
<th>&lt;k&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td></td>
<td>37</td>
<td>27</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>T2</td>
<td>5</td>
<td>43</td>
<td>14</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>T3</td>
<td>18</td>
<td>10</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ts 1</td>
<td>21</td>
<td>50</td>
<td>54</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 16. Substitutions of /θ/ in the final postvocalic positions transcribed by the subjects in trials 1, 2 and 3 of the /θ/ Identification Test.

<table>
<thead>
<tr>
<th>θ →</th>
<th>&lt;X&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;g&gt;</th>
<th>&lt;g&gt;</th>
<th>&lt;l&gt;</th>
<th>&lt;fr&gt;</th>
<th>&lt;n&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>1</td>
<td>263</td>
<td>221</td>
<td>4</td>
<td>6</td>
<td>11</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>T2</td>
<td>8</td>
<td>314</td>
<td>68</td>
<td>9</td>
<td>37</td>
<td>12</td>
<td>26</td>
<td>2</td>
<td>-</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>T3</td>
<td>42</td>
<td>162</td>
<td>69</td>
<td>10</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Ts 1</td>
<td>51</td>
<td>730</td>
<td>358</td>
<td>115</td>
<td>25</td>
<td>60</td>
<td>24</td>
<td>25</td>
<td>2</td>
<td>21</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 17. Substitutions of /θ/ in the initial prevocalic, initial before /r/ and final postvocalic positions transcribed by the subjects in trials 1, 2 and 3 of the /θ/ Identification Test.
In percentages the structure of the substitutions is the following:

<table>
<thead>
<tr>
<th>#.</th>
<th>&lt;X&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;v&gt;</th>
<th>&lt;a&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;o&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>0.3%</td>
<td>53%</td>
<td>40%</td>
<td>1%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1%</td>
<td>-</td>
<td>.5%</td>
</tr>
<tr>
<td>T2</td>
<td>0.3%</td>
<td>64%</td>
<td>39%</td>
<td>6%</td>
<td>2%</td>
<td>2.5%</td>
<td>1.5%</td>
<td>6.5%</td>
<td>.7%</td>
</tr>
<tr>
<td>T3</td>
<td>7.0%</td>
<td>43%</td>
<td>15%</td>
<td>2%</td>
<td>3.5%</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Table 18. The structure of substitutions in the initial prevocalic position transcribed by the subjects in trials 1, 2, and 3 in percentages.

<table>
<thead>
<tr>
<th>#.</th>
<th>&lt;g&gt;</th>
<th>&lt;m&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;x&gt;</th>
<th>&lt;sz&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>-</td>
<td>-</td>
<td>.3%</td>
<td>-</td>
<td>.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>T2</td>
<td>-</td>
<td>-</td>
<td>.3%</td>
<td>-</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>T3</td>
<td>-</td>
<td>.5%</td>
<td>-</td>
<td>.5%</td>
<td>-</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 19. The structure of substitutions in the initial position before /r/ transcribed by the subjects in trials 1, 2, and 3 in percentages.
Table 20. The structure of substitutions in the final postvocalic position transcribed by the students in trials 1, 2 and 3 in percentages.

<table>
<thead>
<tr>
<th></th>
<th>&lt;k&gt;</th>
<th>&lt;f/fr&gt;</th>
<th>&lt;l&gt;</th>
<th>&lt;n&gt;</th>
<th>&lt;g&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>1.5%</td>
<td></td>
<td>2.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>100%</td>
</tr>
<tr>
<td>T2</td>
<td></td>
<td></td>
<td></td>
<td>1.5%</td>
<td>1.5%</td>
<td>100%</td>
</tr>
<tr>
<td>T3</td>
<td></td>
<td></td>
<td></td>
<td>1.5%</td>
<td>1.5%</td>
<td>100%</td>
</tr>
<tr>
<td>T1, 2, 3</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>.5%</td>
<td>.5%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 21. Percentage of substitutions transcribed by the subjects in all contexts in trials 1, 2 and 3.

<table>
<thead>
<tr>
<th></th>
<th>&lt;X&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;e&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;e&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;w&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>.1%</td>
<td>50%</td>
<td>42%</td>
<td>1%</td>
<td>1.3%</td>
<td>2%</td>
<td></td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2</td>
<td>1.5%</td>
<td>60%</td>
<td>13%</td>
<td>4.5%</td>
<td>2%</td>
<td>7%</td>
<td>2.3%</td>
<td>5%</td>
<td>.3%</td>
<td>1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>T3</td>
<td>10%</td>
<td>38.5%</td>
<td>16.1%</td>
<td>21%</td>
<td>2%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
<td>3.5%</td>
<td>1%</td>
<td>.5%</td>
</tr>
<tr>
<td>T1, 2, 3</td>
<td>3%</td>
<td>50%</td>
<td>24%</td>
<td>8%</td>
<td>2%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>.1%</td>
<td>1.4</td>
<td>.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>&lt;d&gt;</th>
<th>&lt;dz&gt;</th>
<th>&lt;g&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;k&gt;</th>
<th>&lt;k&gt;</th>
<th>&lt;oz&gt;</th>
<th>&lt;oz&gt;</th>
<th>&lt;e&gt;</th>
<th>&lt;z&gt;</th>
<th>&lt;m&gt;</th>
<th>&lt;n&gt;</th>
<th>&lt;l&gt;</th>
<th>&lt;ch&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>.1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>1.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1, 2, 3</td>
<td>.5%</td>
<td>.1%</td>
<td>.1%</td>
<td>.2%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
<td>.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>&lt;f/fr&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>T2</td>
<td>.3%</td>
<td>100%</td>
</tr>
<tr>
<td>T3</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 21. Percentage of substitutions transcribed by the subjects in all contexts in trials 1, 2 and 3.

II. /θ/  

In three trials in this experiment participated 24, 21 and 24 subjects respectively (it was the same group of students). The test given was that of the /θ/ Discrimination one, the principles of administering the test and the instructions were exactly the same as in the previously discussed /θ/ Discrimination Polish orthography experiment.

Results:

The tables below illustrate to what degree the informants perceived contrasts between consonants in the minimal pairs and how they rendered the
contrasting qualities. Statistics will be provided in numbers and percentages. The substitutions in the transcriptions will be also analysed according to the distribution of analysed sounds in the words.

<table>
<thead>
<tr>
<th></th>
<th>Contrast</th>
<th>No contrast</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>201</td>
<td>39</td>
<td>240</td>
</tr>
<tr>
<td>Trial 2</td>
<td>179</td>
<td>31</td>
<td>210</td>
</tr>
<tr>
<td>Trial 3</td>
<td>216</td>
<td>24</td>
<td>240</td>
</tr>
<tr>
<td>Trials 1 and 3</td>
<td>596</td>
<td>94</td>
<td>690</td>
</tr>
</tbody>
</table>

Table 22. Number of contrasts transcribed by the subjects in trials 1, 2 and 3 of the /š/ Identification Test.

<table>
<thead>
<tr>
<th></th>
<th>Contrast</th>
<th>No contrast</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>84%</td>
<td>16%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>85%</td>
<td>15%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>90%</td>
<td>10%</td>
<td>100%</td>
</tr>
<tr>
<td>Trials 1 and 3</td>
<td>86%</td>
<td>14%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 23. Percentage of contrasts in the minimal pairs transcribed by the subjects in trials 1, 2 and 3 of the /š/ Identification Test.

<table>
<thead>
<tr>
<th></th>
<th>Mean in numbers</th>
<th>TOTAL</th>
<th>Mean in percentages</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>8.4</td>
<td>10</td>
<td>84%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>8.5</td>
<td>10</td>
<td>85%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 3</td>
<td>9.0</td>
<td>10</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Trials 1 and 3</td>
<td>8.6</td>
<td>10</td>
<td>88%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 24. Mean values of contrasts transcribed by the subjects in trials 1, 2 and 3 of the /š/ Identification Test.

Presented are below the transcriptions given by the subjects in the order from most frequent to least frequent:

bathe — bojw, bejw, beiw, bej, beji, bejfi, bejfn, bojn, bojbf, bojmf, bajf, fej, fef, fefyf, wejdz, bejr, wyjë, pej, bajf, vaj, flejs, wijoz, tej.
thy — waj, waj, wal, faj, taj, vaj, fajn, faik, vajn, paf, dal, daj.
thinë — wal, wajn, wain, wain, fajn, val, dajn, dajn, way, way, faj, baj, bay, tajn, tan, bajn, pajn, tajm, fan.

* F_{av} = 19.48 > 8.66
The British English /ə/ and /ø/

rather — lawe, lawe, lave, lawe, lawer, laver, lazer, pawa, lawa, lacha, lavXa
flawa, flada, flawa.

thine — wajn, wajn, wal, wal, val, wain, wain, waj, tajn, fain, fain, fajn
tan, sij, dajn, sajn.

these — wyjź, wyjź, wyjs, wyjX, wyjdz, wyjdz, wyjź, wejź, wejź wejźź,
wajź, wyjź, wiź, wiz, wiz, wiz, wyj, wej, dizes, dizes, bejź, bejź,
wajź, wajź, liz, lisx, pejź, thiz.

thou — wal, wał, wał, wał, wał, wał, waun, waun, waun, waun, fał, fol, fał, fall, task,
traj, sał, soł, pal, tal.

thine — wal, wajn, wajn, dajn, dajn, fajn, tajm, tajn, Xajn, dain,
wain, pajn, fan, bfaźn, tajm.

thy — waj, waj, way, way, waj, taj, saj, sajn, daj, daj, taj, tawa, san, van,
vajn, wał.

leather — leve, lave, lewa, lewa, lewa, lewa, lewa, lewa, lewa, lewa,
lewa, lewa, lewa, lewa, lewa, lewa.

In the three contexts under examination in the present paper, the informants used the following substitutions in their transcriptions:

<table>
<thead>
<tr>
<th># — V</th>
<th>&lt;X&gt;</th>
<th>2</th>
<th>&lt;w/v&gt;</th>
<th>4</th>
<th>&lt;t&gt;</th>
<th>4</th>
<th>&lt;t&gt;</th>
<th>4</th>
<th>&lt;t&gt;</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1</td>
<td>128</td>
<td>34</td>
<td>—</td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
</tr>
<tr>
<td>T 2</td>
<td>64</td>
<td>54</td>
<td>1</td>
<td>2</td>
<td>39</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T 3</td>
<td>33</td>
<td>10</td>
<td>50</td>
<td>2</td>
<td>39</td>
<td>2</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 25. Transcriptions of /ø/ in the initial prevocalic position written by the subjects in trials 1, 2 and 3 of the /ø/ Identification Test.

<table>
<thead>
<tr>
<th>V — V</th>
<th>&lt;X&gt;</th>
<th>1</th>
<th>&lt;w/v&gt;</th>
<th>1</th>
<th>&lt;w/v&gt;</th>
<th>1</th>
<th>&lt;z&gt;</th>
<th>1</th>
<th>&lt;d&gt;</th>
<th>1</th>
<th>&lt;ch&gt;</th>
<th>1</th>
<th>&lt;n&gt;</th>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>1</td>
<td>38</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td>48</td>
</tr>
<tr>
<td>Trial 2</td>
<td>1</td>
<td>27</td>
<td>13</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Trial 3</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
<td>48</td>
</tr>
</tbody>
</table>

Table 26. Transcriptions of /ø/ in the medial intervocalic position written by the subjects in trials 1, 2 and 3 of the /ø/ Identification Test.
Table 27. Transcriptions of /5/ in the final postvocalic position written by the subjects in trials 1, 2 and 3 of the /5/ Identification Test.

<table>
<thead>
<tr>
<th>V-#</th>
<th>/X/</th>
<th>/e/</th>
<th>/w/</th>
<th>/w/</th>
<th>/n/</th>
<th>/n/</th>
<th>/f/</th>
<th>/d/</th>
<th>/t/</th>
<th>/m/</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>1</td>
<td>18</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>T2</td>
<td>-</td>
<td>2</td>
<td>11</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>T3</td>
<td>-</td>
<td>14</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>T1, 2, 3</td>
<td>1</td>
<td>34</td>
<td>13</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/m/</th>
<th>/b/</th>
<th>/dz/</th>
<th>/dz/</th>
<th>/z/</th>
<th>/e/</th>
<th>/ez/</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>24</td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>21</td>
</tr>
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<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>69</td>
</tr>
</tbody>
</table>

Table 28. Transcriptions of /6/ in initial prevocalic, medial intervocalic and final postvocalic positions written by the subjects in trials 1, 2 and 3 of the /6/ Identification Test.

<table>
<thead>
<tr>
<th>/6/</th>
<th>/X/</th>
<th>/w/</th>
<th>/w/</th>
<th>/f/</th>
<th>/f/</th>
<th>/t/</th>
<th>/t/</th>
<th>/d/</th>
<th>/d/</th>
<th>/s/</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>2</td>
<td>166</td>
<td>38</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>18</td>
</tr>
<tr>
<td>T2</td>
<td>2</td>
<td>102</td>
<td>69</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>T3</td>
<td>-</td>
<td>73</td>
<td>16</td>
<td>52</td>
<td>2</td>
<td>40</td>
<td>2</td>
<td>8</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>T1, 2, 3</td>
<td>4</td>
<td>341</td>
<td>123</td>
<td>54</td>
<td>2</td>
<td>40</td>
<td>2</td>
<td>24</td>
<td>11</td>
<td>34</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/b/</th>
<th>/b/</th>
<th>/a/</th>
<th>/p/</th>
<th>/n/</th>
<th>/n/</th>
<th>/l/</th>
<th>/l/</th>
<th>/m/</th>
<th>/m/</th>
<th>/zh/</th>
<th>/zh/</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>7</td>
<td>6</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/e/</th>
<th>/ez/</th>
<th>/dz/</th>
<th>/dz/</th>
<th>/th/</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>240</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>210</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>240</td>
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<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>600</td>
</tr>
</tbody>
</table>

Table 28. Transcriptions of /6/ in initial prevocalic, medial intervocalic and final postvocalic positions written by the subjects in trials 1, 2 and 3 of the /6/ Identification Test.
These numbers have the following values in percentages:

<table>
<thead>
<tr>
<th>#</th>
<th>V</th>
<th>&lt;X&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;h&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;z&gt;</th>
<th>&lt;t&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>-</td>
<td>70%</td>
<td>20%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>T2</td>
<td>.5%</td>
<td>44%</td>
<td>37%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0%</td>
<td>7%</td>
<td>-</td>
<td>.5%</td>
<td>-</td>
</tr>
<tr>
<td>T3</td>
<td>-</td>
<td>20%</td>
<td>6%</td>
<td>30%</td>
<td>1%</td>
<td>23%</td>
<td>1%</td>
<td>4%</td>
<td>-</td>
<td>6%</td>
<td>.5%</td>
</tr>
<tr>
<td>T3, 2, 3</td>
<td>.5%</td>
<td>47%</td>
<td>20%</td>
<td>10%</td>
<td>.5%</td>
<td>8%</td>
<td>.5%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>&lt;d&gt;</th>
<th>th</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>79%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>.5%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>.5%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 29. Transcriptions of /θ/ in the initial prevocalic position in percentages.

<table>
<thead>
<tr>
<th>V</th>
<th>&lt;X&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;F&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;h&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;z&gt;</th>
<th>&lt;t&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>2.5%</td>
<td>79%</td>
<td>8%</td>
<td>8%</td>
<td>2.5%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 2</td>
<td>2.5%</td>
<td>64%</td>
<td>31%</td>
<td>-</td>
<td>-</td>
<td>2.5%</td>
<td>-</td>
<td>-</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 3</td>
<td>-</td>
<td>79%</td>
<td>13%</td>
<td>-</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trials 1, 2 and 3</td>
<td>2%</td>
<td>76%</td>
<td>17%</td>
<td>3%</td>
<td>1%</td>
<td>.5%</td>
<td>1%</td>
<td>.5%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 30. Transcriptions of /θ/ in the medial intervocalic position in percentages.

<table>
<thead>
<tr>
<th>V</th>
<th>&lt;X&gt;</th>
<th>&lt;w&gt;</th>
<th>&lt;f&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;h&gt;</th>
<th>&lt;s&gt;</th>
<th>&lt;p&gt;</th>
<th>&lt;z&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;m&gt;</th>
<th>&lt;m&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>4%</td>
<td>75%</td>
<td>-</td>
<td>-</td>
<td>4%</td>
<td>-</td>
<td>9%</td>
<td>4%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>T2</td>
<td>-</td>
<td>9.5%</td>
<td>52%</td>
<td>9.5%</td>
<td>9.5%</td>
<td>9.5%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>-</td>
<td>59%</td>
<td>8.5%</td>
<td>-</td>
<td>-</td>
<td>8.5%</td>
<td>-</td>
<td>-</td>
<td>4%</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Ts 1, 2, 3</td>
<td>1.5%</td>
<td>50%</td>
<td>10%</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
<td>6%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>&lt;b&gt;</th>
<th>&lt;dz&gt;</th>
<th>&lt;d&gt;</th>
<th>&lt;z&gt;</th>
<th>&lt;t&gt;</th>
<th>&lt;ez&gt;</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>-</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Table 31. Transcriptions of /θ/ in the final postvocalic position in percentages.
PERCEPTION AND PRODUCTION

Imitation Test

Procedure:

This test investigated both the tense and lax qualities of the English interdental fricative. The test was administered to one group of informants and consisted of two trials. The informants were a new group of students (not the one participating in the Discrimination and Identification Tests). Nineteen subjects participated in trial 1 and 21 in trial 2. They listened twice to the same list of English words which was first read by a female (trial 1) and then by a male (trial 2). The order of the items was the same in both trials. The speakers as in the previous tests were Polish natives — both trained phoneticians, as well as teachers of English. The test (two trials) was carried out in one recording session — one informant at a time (it was difficult to hold two separate recording sessions with each informant due to the fact that they were not available on other days). The recordings took place in a sound-proof studio equipped with instruments of reasonable quality. Each informant had 8 seconds to repeat the word he had heard. A list of ten English short words — 9 monosyllables and one disyllable — had been tape recorded for the experiment. The distribution of the /θ/ and /ʃ/ sounds in these words was mostly prevocalic initial, e.g. thumb (3 words), then (4), intervocalic for /θ/, e.g. either (1), and...
postvocalic final for /θ/, e.g. faith (2). /ð/ was not included in the postvocalic final distribution in the test because of the additional interference of devoicing that takes place in the Polish language and which surely influences perception and hence production as well. The following is the list designed for the Repetition test.

1. moth [mɔθ]
2. then [ðen]
3. faith [feɪθ]
4. those [ðəuz]
5. thumb [θʌm]
6. either [æθə]
7. this [ðɪs]
8. thame [θæm]
9. though [ðəʊ]
10. theme [θiːm]

The analysis of the recordings was mainly auditory, although in some doubtful cases supported by spectrogrammes. The reasonable hypothesis was, however, that none of the informants would be able to articulate either /θ/ or /ð/ correctly, as none of the informants had undergone any formal or informal training of English, none of the informants had been informed that the language they were imitating was English, the repetition took place from tape recordings and thus none of the informants had a possibility to watch the articulatory movements of the phoneticians and later imitate them. Hence, the writer's primary interest was the approximations that the subjects made, i.e. which of the approximations prevailed in the subjects' renditions of /θ/ and /ð/.

Results:

Tables 33, 34, 35, 36 and 37 render the number of correct and incorrect imitations of the sounds /θ/ and /ð/ made by the subjects in trials 1 and 2. The results, presented in numbers and percentages, will consider overall values as well as those in the appropriate context groups.

\[
\begin{array}{ccccccc}
\text{Trial} & & & & & & \\
\text{TOTAL} \\
1 & - & 91 & 2 & - & 2 & 95 \\
2 & - & 99 & 5 & - & 1 & 105 \\
1, 2 & - & 190 & 7 & - & 3 & 200 \ast \\
\end{array}
\]

\[
(* \text{ Other imitations are } [s\ddagger] \text{ and } [g\ddagger])
\]

* When examining the structure of the answers of trials 1 and 2, a comparison of the percentages obtained is sufficient (Table 33a). As the results do not reveal any significant disparity, we can treat trials 1 and 2 jointly.
<table>
<thead>
<tr>
<th></th>
<th>[θ]</th>
<th>[v]</th>
<th>[d]</th>
<th>[z]</th>
<th>[dz]</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>70</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>105</td>
</tr>
<tr>
<td>Trial 2</td>
<td>94</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>105</td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>164</td>
<td>14</td>
<td>7</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>200</td>
</tr>
</tbody>
</table>

(* Other single imitations are [æ], [t], [l], [b], and [s])

Tables 33 (a) (b). The imitations given by the subjects in trials 1 and 2 of the Imitation test.

<table>
<thead>
<tr>
<th></th>
<th>[θ]</th>
<th>[f]</th>
<th>[s]</th>
<th>[t]</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>96%</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>2%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>94%</td>
<td>5%</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>100%</td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>95%</td>
<td>4%</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>[θ]</th>
<th>[v]</th>
<th>[d]</th>
<th>[o]</th>
<th>[f]</th>
<th>[z]</th>
<th>[dz]</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>74%</td>
<td>5%</td>
<td>8%</td>
<td>5%</td>
<td>1%</td>
<td>2%</td>
<td>5%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Trial 2</td>
<td>89%</td>
<td>9%</td>
<td>-</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>82%</td>
<td>7%</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Tables 34 (a) (b). The percentage of particular imitations given by the subjects in trials 1 and 2 of the Imitation test.

<table>
<thead>
<tr>
<th></th>
<th>Means /θ/</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[f]</td>
<td>[s]</td>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>4.8</td>
<td>96%</td>
<td>.1</td>
<td>2%</td>
<td>.1</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 2</td>
<td>4.7</td>
<td>94%</td>
<td>.2</td>
<td>4%</td>
<td>.1</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>4.8</td>
<td>96%</td>
<td>.1</td>
<td>2%</td>
<td>.1</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Means /θ/</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[v]</td>
<td>[d]</td>
<td>[o]</td>
<td>[f]</td>
<td>[z]</td>
<td>[dz]</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>3.7</td>
<td>74%</td>
<td>.2</td>
<td>5%</td>
<td>.4</td>
<td>8%</td>
<td>.2</td>
<td>5%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>4.4</td>
<td>89%</td>
<td>.4</td>
<td>9%</td>
<td>-</td>
<td>-</td>
<td>.1</td>
<td>1%</td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>4.1</td>
<td>82%</td>
<td>.3</td>
<td>7%</td>
<td>.2</td>
<td>4%</td>
<td>.1</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Means /θ/</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>.3</td>
<td>5%</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>.1</td>
<td>2%</td>
</tr>
</tbody>
</table>

Tables 35 (a) (b). Mean values of particular imitations of both /θ/ and /z/ produced by the subjects, presented first in numbers (total = 5) and percentages (total = 100%). *The percentages of trials 1 and 2 in Table 33(b) differ considerably and we cannot treat the results of these two trials jointly.
A context analysis of the oral renditions of /θ/ and /ð/ is given below in Tables 36 and 37 in numbers and percentages respectively.

### (a) /θ/

<table>
<thead>
<tr>
<th></th>
<th># - V</th>
<th>TOTAL</th>
<th></th>
<th>V - #</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[f]</td>
<td>[s]</td>
<td>[t]</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>55</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>57</td>
</tr>
<tr>
<td>Trial 2</td>
<td>66</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>63</td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>115</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>120</td>
</tr>
</tbody>
</table>

### (b) /ð/ 

<table>
<thead>
<tr>
<th></th>
<th># - V</th>
<th>TOTAL</th>
<th></th>
<th>V - V</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[v]</td>
<td>[d]</td>
<td>[o]</td>
<td>[f]</td>
<td>[dz]</td>
</tr>
<tr>
<td>Trial 1</td>
<td>61</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Trial 2</td>
<td>73</td>
<td>9</td>
<td>-1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>134</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Tables 36 (a) (b). The number of sound substitutions for /θ/ and /ð/ in particular contexts produced by the subjects in trials 1 and 2 of the Imitation test.

The percentages of the above-given number are manifested in the tables below:

### (a) /θ/ 

<table>
<thead>
<tr>
<th></th>
<th># - V</th>
<th>TOTAL</th>
<th></th>
<th>V - #</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[f]</td>
<td>[s]</td>
<td>[t]</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>96%</td>
<td>2%</td>
<td>-</td>
<td>2%</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>95%</td>
<td>5%</td>
<td>-</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 1, 2</td>
<td>96%</td>
<td>3%</td>
<td>-</td>
<td>1%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### (b) /ð/ 

<table>
<thead>
<tr>
<th></th>
<th># - V</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[v]</td>
<td>[d]</td>
</tr>
<tr>
<td>Trial 1</td>
<td>80%</td>
<td>3%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>87%</td>
<td>11%</td>
</tr>
<tr>
<td>Trials 1, 2</td>
<td>84%</td>
<td>7%</td>
</tr>
</tbody>
</table>

### V - V

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>47%</td>
</tr>
<tr>
<td>Trial 2</td>
<td>100%</td>
</tr>
<tr>
<td>Trial 1, 2</td>
<td>75%</td>
</tr>
</tbody>
</table>

Tables 37 (a) (b). The percentage of substitutions for /θ/ and /ð/ in particular contexts in trials 1 and 2 of the Imitation test.
DISCUSSION AND CONCLUSIONS

(1) The Polish subjects were quite successful in discriminating between minimal pairs in the Discrimination Test. 71–82 per cent of them correctly differentiated /θ/ from /f, s, t/. In context groups the highest percentage of correct discriminations can be noticed in the final position (93 per cent) against 67–81 and 68–80 per cent in the initial position and before /r/ respectively. The results, however, seem to be slightly misleading, as a close analysis of the minimal pairs in which /θ/ is distributed finally gives the following information. (a) the examples were not numerous, (b) the pairs with the contrasts /s/ — /θ/ — bus — bath and /t/ — /θ/ — but — bath had been differentiated easily and correctly in 100 per cent of the cases, (c) it was the contrast /f/ — /θ/ that caused trouble to the listeners and the average of correct answers for this pair was 86 per cent. Therefore, we can conclude that to the subjects participating in the experiment the /f/ — /θ/ contrast was confusing, whereas the other two contrasts, easy to detect. The same pattern has been discovered during the analysis of all the remaining contrasts in this test. We can even attempt a conclusion that having been given more examples with the /f/ — /θ/ contrast the subjects would have probably given approximately 73 per cent of correct identifications. Thus, under the conditions of the experiment, it seems that context does not affect the perception of the English fricative /θ/.

(2) The subjects were able to discriminate 70–80 per cent of the contrasts in the /θ/ Discrimination Test correctly, in the initial position — 63–72 per cent, in the intervocalic position — 81–93 per cent, and in the final position 97 per cent. Similarly to (1) the result of the initial position discriminations seems to be most reliable, as again, due to the difficulty of finding /θ/ — /v/ minimal pairs contrasts in the intervocalic and final positions in the English language, such contrasts were not presented to the listeners. The analysis of the answers confirmed once again that /θ/ is most often confused with /v/, less likely with /z/ or /d/.

(3) The /θ/ Identification Test — another test on perception — rendered a mean of 81–93 per cent contrasts perceived. Only 3 per cent of the students identified /θ/ as a sound completely alien to them (marked by X) which they could not match with any of the sounds of Polish. The majority, i.e. 50 per cent identified /θ/ as the Polish /θ/, 24 per cent — as a non Polish /θ/, 8 per cent — as the Polish /s/, 4 per cent — as the Polish /t/, 2 per cent as a non-Polish /s/, 2 per cent as a non-Polish /t/, and also 2 per cent as the Polish /p/. The remaining numerous other identifications due to the extremely low percentage should be regarded as accidental.

The distribution of the identified phonemes in the analysed contexts does not considerably differ from the general results presented above, i.e. in the initial position 2 per cent of the subjects said the sounds were not Polish, 54
per cent considered them to be the Polish /f/, 23 per cent identified /θ/ as the Polish /s/, 2.5 per cent — as the Polish /t/, 2.5 per cent — as the Polish /p/, and 2 per cent — as a non-Polish /s/. The identifications made in the context before /r/ are the following: 3 per cent — unidentified foreign sound, 43 per cent — the Polish /f/; 27 per cent — a non-Polish /f/; 10 per cent — the Polish /t/; 5 per cent — the Polish /s/; and 4 per cent — a non-Polish /t/. 3 per cent of the informers did not identify any consonant to be present before /r/. In the final position 10 per cent of the respondents considered the sound to be unknown to them, 43 per cent heard it as the Polish /f/; 25.5 per cent — as a non-Polish /f/; 4 per cent — as the Polish /t/; 3 per cent — as the Polish, /d/; and 2 per cent did not hear a consonant in this position at all. It seems that whenever /θ/ is distributed before /r/ or in the final position, /t/ ranks second after /f/ as far as the perception of /θ/ is concerned, whereas in the initial position it is /s/ that follows the prevalent /f/.

An overwhelming number of identifications in the three contexts under consideration is the labial fricative /f/; the percentage differences between other identifications are insignificant and may have been caused by non-linguistic factors, such as, e.g. fatigue, distraction, boredom, slightly worse hearing, etc. Therefore, we may conclude that the contexts used in the present experiment do not affect the process of /θ/ perception by Polish speakers.

(4) The mean percentage of the contrasts perceived in the /θ/ Identification Test is 86. Extremely few informants (only 0.5 per cent) perceived /θ/ as a sound alien to the Polish language. Most of them heard the English lax dental fricative as the Polish /v/ — 49 per cent, or a non-Polish /v/ — 18 per cent. 8 per cent of the subjects identified it as the Polish /f/, 6 per cent as the Polish /t/, and 3 per cent — as the Polish /d/. The remaining renditions are insignificant due to the low percentage with the exception of /θ/ (zero) identification (5 per cent) which will be later accounted for in the discussion of the contexts.

In the three contexts examined the identifications were the following: in the initial position the Polish /v/ — 47 per cent (the discrepancies in the percentages obtained in particular trials may be due to the duration of voice in the final lax labial fricative in the examples recorded by the phoneticians); a non-Polish variety of /v/ — 20 per cent; the Polish /d/ — 4 per cent; a non-Polish /d/ — 2 per cent; and the Polish /b/ — 2 per cent. The /f/ and /t/ identifications, although significant because of the percentage, occur only in trial 3 (cf. Table 28) and therefore can be considered to have been influenced.
by the idiosyncratic pronunciation of the phonetician, i.e. a longer voice onset time. Since initial voiced consonants in Polish are always fully voiced, a relatively shorter voicing of the initial English consonants in trial 3 had been perceived by the Poles as no voicing — hence /f/ and /t/. In the intervocalic position /θ/ was overwhelmingly identified as the Polish /v/ - 75 per cent or a non-Polish /v/ - 17 per cent. Another possible identification was the Polish /z/ - 3 per cent (occurring, however, only in trial 1). In the final position a very large number of the subjects did not hear any consonant there — 50 per cent; 19 per cent of them perceived it as the Polish /γ/; 6 per cent — as /θ/, 4 per cent as /n/, 3 per cent as a non-Polish /v/ and also 3 per cent as a non-Polish /n/. The fact that the English lax consonants are identified by the native speakers of English by the length of the preceding vowel even if not perceptually audible, which cannot be the case with the present subjects, may be an explanation of such a high percentage of zero phonemes in this position. The substitution of /n/ and others may also be the results of the difficulties the subjects were having hearing the final sound. Finally, the identification of the Polish /θ/ is the influence of the devoicing rule operating in the Polish language whenever a voiced consonant is distributed finally.

(5) The analysis of the recordings of the Imitation Test confirmed the writer's hypothesis that none of the informants was able to produce /θ/ or /δ/. Apparently, we realize that this kind of test causes difficulty on two levels — perception and articulation — an interfering factor of the former cannot be excluded.

/θ/ in the initial prevocalic and final postvocalic positions was most readily replaced by /f/ (96 per cent and 94 per cent respectively). /s/ was produced in very few instances. It is worth emphasizing that no substitution of /t/ for /θ/ occurred.

As concerns /δ/, which was tested in two distributions, i.e. initial prevocalic and intervocalic, the results are somewhat different. Although, again, a labial fricative /v/ is predominant, (74 per cent and 75 per cent), the closest second substitution is /d/ (8 per cent and 5 per cent) — an alveolar stop. /z/ substitutions are marginal (1 per cent and 3.5 per cent).

/θ/  # -V  F  S
     V - #  F  S
/δ/  # -V  V  D
     V-V  V  D  (F)
In summary, we can assume that Poles in their perception and production of the tense and lax British English interdental fricatives make approximations according to the locus of articulation, not its mode. Only in the case of the English lax fricative slight preference for /d/ — a different mode of articulation — rather than /z/ can be noticed in the Imitation Test, or /t/ rather than /s/ in the /θ/ Identification Test.

The overwhelming number of the laxial fricative selection as a substitute for the interdental one seems to be justified by the similarity of the noise produced during the articulation of both sounds. Its 'dull' quality very much differs from the hissing of the grooved sibilant or aspiration of the apical stop.

So far, there have been carried out very few experimental studies on the perception and production of English sounds by Polish native speakers. Many teachers, however, have reported some observations from their teaching experience (e.g. Komorowska (1974); Krzeszowski (1970); Smolska (1978)). A. Kopczyński's (1977) contrastive study of Polish and American English consonant phonemes presents more detailed experimental data. In his production tests the subjects read previously learned dialogues and sentences into a tape recorder. The informants varied as to age and knowledge of English (one beginning and one advanced group) — the number of years of formal and informal training also varying. The distributional contexts of /θ/ and /ð/ were primarily initial prevocalic with a few instances of final postvocalic and one occurrence of /θ/ in the intervocalic position. In his study, stops predominated in the substitutions made by the informants; grooved sibilants were the second preferred choice; not a single substitution of labial fricatives was noted. This fact is rather surprising, because as he himself mentions, many teachers have reported the substitution of /f, v/. Furthermore, studies other than Polish reveal that /f, v/ substitutions are rather common (e.g. Jones (1947), Nemser (1971)). W. J. Nemser carried out a very meticulous experimental study of the phonological interference in the English of Hungarians. He designed a number of lengthy tests administered to 4 Hungarians whose knowledge of English ranged from poor to advanced. The tests checked both receptive and productive abilities of the informants. In the tests /θ/ and /ð/ were distributed in all possible contexts. Nemser found /f, v/ in conspicuous prevalence over other possible approximations although in some tests labial fricatives were on a par with alveolar stops. He also revealed a very important fact that in the contexts V_s, V_z and #_r there is a shift to the preference of the apical stop. The phenomenon of context influence (also briefly mentioned by Kopczyński (1977)) seems very crucial for such analysis. Another factor which may influence the quality of substitutions is stress. Therefore, it seems indispensable to carry out further investigation on the subject taking into consideration other contexts and also stress variations left out of the analysis in the present work.
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186


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PL ISSN 0137-2459

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