INTONATIONAL PHRASING AND ITS ROLE IN SPEECH COMMUNICATION

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ABSTRACT

The theoretical claim of this study is that intonational phrasing /IP/ functions in speech communication as one of language orientation means.

The paper presents the results of a psycholinguistic experiment, whose aim was to examine sense segmentation devices in two different situations: 1/ in a written text having no formal signs of segmentation, whatsoever, 2/ in an oral text based on normally organized written speech sample.

INTRODUCTION

The cognitive background of modern linguistics presupposes the view that language as a means of communication can be adequately analysed only with references to the general principles of human speech behaviour.

It should be noted in this connection that the treatment of IP /i.e. division of an utterance stretch into phonosegments, phrases and more lengthy speech units/i in Russian and Soviet linguistics emphasizes the direct relationship between this phenomenon and human speaking activity, viewing the former as inseparable from speech production and comprehension process.

This view is based on the works of the prominent Russian scholar - academician L.V. Sochorba, who defined the minimal IP unit - phonosegments - as a phonoic unit conveying a semantic whole in the speaking-thinking process. Recent studies on IP are aimed at providing further evidence for the general idea of IP's relationship with speech activity. It seems that problems concerned with IP can't be solved without investigating the general principles of processing and verbalization of conceptual information as they carried out by the speaker. Therefore we think it useful to consider some ideas emerging in the framework of current theories of speech acts.

One of the most widely-known attempts to formulate the general rules governing speech behaviour belongs to the American scientist H.P. Grice /1/. He advanced an idea that speech communication is based on the Cooperative Principle in accordance with which participants of the communicative process interested in its successful realization, perform cooperative efforts to achieve understanding at minimal conceptual and linguistic expense.

The Cooperative Principle implies that the act of verbalization as any other component of the speech act must be oriented towards the recipient in advance. In the process of language coding the speaker must provide the addressee with the effective cues for semantic text interpretation and thus facilitate the assimilation of its content by the listener.

It is supposed that any language has special means which function as orientation devices in the process of verbal decoding. These devices may not be relevant for expressing the informational content as much, but serve to organize it properly, giving it point and precision and thus contributing to its adequate understanding.

In comparison with other language functions the function of orientation has at least two peculiarities. The first one derives from the fact that the linguistic form of a speech utterance depends on the general communicative intention of the speaker and the speech situation.

As early as in 1920-30's some Soviet scholars pointed out, in particular, that monologue as a form of speech communication presupposing more or less prolonged speech impact on the listener typically conveys complicated conceptual information. As a result, monologue is bound to some greater degree to the act of verbalization than dialogue. In connection with this a well-known Soviet scientist L.P. Jakubinsky wrote: "Монолог не только подразумевает адекватность выражаемых средств данному психологическому состоянию, но выделяет как нечто самостоятельное именно расположение, компонирование речевых единиц .... Здесь сами речевые отношения становятся ... источниками возникающих в сознании по поводу них переживаний .... На этой же почве возникает всеобщее явление синтаксического парадоксализма и симметрии, т.к. сложность естественно вызывает какую-то организацию, построенную" /2, p. 37/.

The second peculiarity consists in the fact that the use of language orientation means depends on the speaker's cooperative effort and on his evaluation of the intelligibility of his own utterance. As a consequence, orientation means are not subject to grammaticalization to the same extent as the means expressing the propositi-
The text on the page discusses the role of linguistic devices in speech processing and the use of speech recognition systems. It mentions the importance of understanding the complexity of information transmitted through speech, and the role of context and background information. The text also refers to the concept of 'intensional phonetics' and the idea that speech recognition systems need to be able to understand the meaning behind words, not just their sound. The text concludes with a discussion of the role of speech recognition in automated systems and the challenges of accurately interpreting spoken language.
lating the relative number of coining frag-
ments for each pair of experimental text copi-
es. It seemed useful to value the stabil-
ty of such coining locations /i.e., boundaries of
selected fragments/. Numerically it can be
represented in the form of the absolute num-
ber of the subjects which have distinguished the
given boundary. Again, the frequency dis-
tributions of boundaries with different stability can serve as a measure of
behavioral homogeneity of the whole group
of subjects having analyzed the same text.

Results and analysis

The conducted experiment has exposed many
interesting peculiarities in the subjects' be-
havior. Here we have to discuss them in a bri-
fef and conciseful form.

First of all it is necessary to note that
the rewriting of the MT /text with no formal
segmentation marks/ was admitted by all the
subjects as a rather complicated task which
required a great intellectual and psychological
effort. According to the theory of text re-
writing, the psychological processes are subdivided into
two groups. The main distinctive feature of
these processes is the referential length and syn-
tactic properties of the fragments having been
singletated out. It seems that the basis of this
distinction is the difference in the volume of
subjects' short-term memory. It should be noted
that all the subjects were approximately of
the same age /25-35 years old/ and the same social
rank /collaborators of the Moscow University
philological department/. From the whole
92 persons the majority of subjects MT /MT/
prefaced to select rather short fragments, 3 per-
sons, on the contrary, singled out rather long
stretches and the behaviour of 2 persons was
inconsistent. The results of the latter group
were not considered later.

I'll denote further the first group of
subjects as I-G and the second one as II-G.
The ordered set of fragments, i.e. the co-
pied text written down by every subject, was
analyzed from the point of view of the formal
characteristics described above. Table I pres-
ents the results of this analysis.

Table I shows that the change of the text
presentation form from MT to NTT provokes the
following modifications of SP characteristics:
1. The length of SP decreases at an average rate
and a half longer, what causes decreasing the
total number of SP in subjects' NTT copies on
37.9%.
2. The time expended on fragment selection shas
shortened twice.
3. The number of fragments singled out with the
character 'subject' was substantially diminished;
it is seen that for the subjects having used
this strategy in writing down the MT the
number of SP /with 'looking ahead'/ makes 4.3% of
the total. In writing down the NTT text the
same subjects used this strategy only in 2.5% of all
the cases.
4. The need of current correction of SP bound-
aries drops utterly.
5. The number of SP with word alteration is
rather small in both cases I-G and II-G.

Table I. Characteristics of selected fragments

<table>
<thead>
<tr>
<th>MT</th>
<th>NTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-G</td>
<td>II-G</td>
</tr>
<tr>
<td>1-4</td>
<td>1-10</td>
</tr>
<tr>
<td>Length of SP</td>
<td>3.1</td>
</tr>
<tr>
<td>Time of selection</td>
<td>9.2</td>
</tr>
<tr>
<td>The total SP number</td>
<td>65</td>
</tr>
<tr>
<td>Number of SP selected with 'looking ahead'</td>
<td>0.5%</td>
</tr>
<tr>
<td>Number of SP with correction</td>
<td>0.5%</td>
</tr>
<tr>
<td>Number of word alteration</td>
<td>8.5%</td>
</tr>
<tr>
<td>Number of incomplete SP</td>
<td>41.5%</td>
</tr>
<tr>
<td>Number of complete SP</td>
<td>14.5%</td>
</tr>
<tr>
<td>Number of partly incomplete SP</td>
<td>41.5%</td>
</tr>
<tr>
<td>Number of autonomic SP</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

2/3 for II-G, the greater value for the latter
clearly correlated with more lengthy NTT.
As for the syntactic indicators the autonomic
modification is the most in NTT copies the
number of autonomic SP increases essentially /at
an average 55%/. For some subjects up to 90%.
The coherence and completeness indicators chan-
ge insignificantly.

The character of the syntactic indicators
modifications and also that of the SP modi-
fication allows to conclude that the diversity in
the same subject's behaviour as MT and NTT is
not based on distinctions in text only
rehearsal by the speaker and by the subject
himself as most likely, the truth is that the
speaker in his producing the text sets the higher
level of syntactic structure of an argument,
I.e., the level being nearer to the entire scene
frame of a message.

Let's now discuss the homogeneity of sub-
jects' behaviour. As an illustration, the data
concerning the relative number of coining

FRAGMENTS IN TEXT COPIES FOR SOME SUBJECTS ARE PRESENTED IN TABLE II.

Table II. The number of coining fragments in text copies of different subjects /in % of the
total number of P in each pair of copies/ 2/3

<table>
<thead>
<tr>
<th>MT</th>
<th>NTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-G</td>
<td>II-G</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>38.6</td>
</tr>
<tr>
<td>2</td>
<td>63.9</td>
</tr>
<tr>
<td>3</td>
<td>70.1</td>
</tr>
<tr>
<td>4</td>
<td>68.3</td>
</tr>
</tbody>
</table>

In table II the diagonal corresponds to
the same subject in case of MT and NTT. Above
the diagonal there are results for the different
subjects in MT case, under it - the results in
NTT case.

Table II shows that in NTT case the homo-
egeneity of selecting the fragments increases
significantly. It is expressed by the difference
situation between two groups of subjects and
especially between various subjects in the same
group. For example, the analysis reveals that
in I-G the relative number of coining fragments
is about 55% for a pair of subjects in MT case, but about 72% in NTT case. At the
same time in different text copies MT and NTT/ text written by the same subject there are only
7.5% of coining fragments.

Ie, the stability of augmentation loca-
tions the data concerning this problem are re-
ported on fig. 1.

CONCLUSION

In this study we proceeded from the fol-
lowing assumptions:
1. The process of piece-by-piece rewriting of a
text realising under some control reflects to
some extent the real process of sense decoding.
2. A "written" text with no segmentation marks
is equivalent to its pronounced copy from the
point of view of sound information included
and the only difference between the copies is the
absence of prosodic cues in MT.

If these assumptions are reasonable to
some degree, then the obtained results permit us
to make the following conclusion: I-P, being the
main determining factor of prosodic character-
istics of the analysed text, controls the
strategy of sense processing, unifies it and
makes it more optimal. From the side point - de-
coding of the entire sense frame of a message.
It is scarcely probable that the diversity of
subjects' behaviour in MT and NTT cases is
explained only by different argumentation modes and
in no connection with IP cues.

It stands to reason that further research
is necessary. In particular, it is interesting to
uncover our results with the analysis of sub-
jects' behaviour in case of both a normally
organized written text and a text pronounced
monotonically word-by-word.

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/2/ Новчакова Е.Н. Направления работы. Лит и его функционирование. М., 1986.
/3/ Новчакова Е.Н. О способах представле-

The reference numbers are not present in the original text.

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