A study investigated the relatively greater frequency of negation in conversation than in written language. It discovered that rejections and explicit denials of previously asserted propositions, two categories of negation postulated to be speech-specific, accounted for only about 16 percent of all negatives. Use of negatives as supports, in direct questions and imperatives, and in repetitions accounted for 37 percent of the negatives. Work in progress suggests that factors such as the degree of interaction and the expression of modality and mental attitudes, which often co-occur with negation, may explain further the use of negation. (Author/MSE)
FROM FUNCTION TO STRUCTURE. SOME PRAGMATIC DETERMINANTS OF SYNTACTIC FREQUENCIES IN IMPROMPTU SPEECH

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From function to structure.
Some pragmatic determinants of syntactic frequencies in impromptu speech

Abstract. To explain why negation is more than twice as frequent in conversation as in written language, a detailed study of 15,000 words of recorded conversation was carried out. It was found that rejections and explicit denials of previously asserted propositions, two functional categories of negation that had been postulated to be speech-specific, accounted for only c. 16 per cent of all negatives. Including negatives as supports, in direct questions and imperatives, as well as the tendency to repetition in spoken language, accounted for 37 per cent in all. Ongoing work seems to indicate that factors such as the degree of interaction, and the expression of modality and mental attitudes, which often cooccurs with the use of negation, will also prove to have explanatory value.

Although there has been at least a certain degree of consensus regarding the goals to be pursued in linguistics (as indeed in other branches of science and scholarship) — observational, descriptive, and explanatory adequacy — there has been little agreement concerning the question of what constitutes explanatory adequacy. The debate has centred largely on the issue of what constitutes a 'permissible' explanation, or, more precisely, on the question where explanatory material may be culled. Structuralists of different persuasions have denied the validity of anything but intra-linguistic argumentation, and it is only in recent years that it has become evident to a large number, perhaps even a majority, of linguists on either side of the Atlantic that explanations of linguistic phenomena can, and often must, be sought outside language proper, in the communicative situation where the linguistic specimen under investigation is produced. Indeed, discourse, or pragmatic, factors often absolutely determine the form as well as the content of what is said or written.

Our purpose in this paper is to investigate some pragmatic determinants of syntactic frequencies in impromptu speech, i.e., conversation. Our examples will concern negation and will be drawn from a subsample from *A Corpus of*
English Conversation (Svartvik & Quirk 1980). Our analytic categories will be based on Tottie, Where do negative sentences come from? Towards a pragmatic theory of negation (In press, 1982). Another purpose of this study is to test the categories postulated in that theory (henceforth PT), as well as its predictive power.1 (Notice, however, that the claims of the theory are modest: it refers only to declaratives and explicitly excludes such constructions as questions, imperatives and counterfactuals.)

As a point of departure we make a formal definition of negation and include the following negative expressions, or negatives for short:

not (including contracted forms), never, no (as a determiner), none, nothing, nobody, nowhere, nor, neither, the proform No, and forms including the negative affixes a-, dis-, in-, non-, un-, and -less.

We thus exclude 'inherent' negatives such as miss, fail, lack etc. for philosophical as well as practical reasons (cf PT for a full discussion of the problem), and also 'incomplete' negatives such as hardly, scarcely, seldom, few, as they sometimes do not confer full sentence negation at all. (Cf. Jespersen 1917:38f. and Tottie 1977.)

In order to make interesting observations concerning syntactic frequencies in conversation, we need a relevant sample of written language with which we can compare our conversational sample, and which will thus provide the necessary contrast. The point of departure of this study consists of some observations on the frequency of negation in two samples of 50 000 words each spoken and written material from the Survey of English Usage at University College London. The distribution of negatives in the two samples is shown in Table 1.

Table 1 shows that there is more than twice as much negation in the spoken material (S) as in the written texts (W): 1381/50 000, or 27.6 negatives per thousand words in S, compared with 643/50 000, or 12.8/1000 words in W. We can also express the ratio of negation in W compared with that in S as a percentage: 643/1381 equals 47%. The use of the reaction signal or sentence pro-form No in S obviously contributes to this discrepancy, but only marginally; even if the 265 instances of No are deducted, there are still 1116 negatives in S. Expressed as a percentage we get 643/1116, or 58%.
Table I. The distribution of negation in two samples of contemporary British English, 50,000 words spoken and 50,000 words written language.

As a step towards accounting for the difference in the frequency of negation between S and W, the fragment of a pragmatic theory — PT — mentioned above was set up. In PT, the following partial classification of negatives was proposed:

I REJECTIONS (including REFUSALS)

II DENIALS

(a) EXPLICIT

(b) IMPLICIT

Category I, REJECTIONS, involve volition and thus have an expressive function. They are independent of language. Thus a dog can refuse to eat its food or to come when called, and humans can convey rejections and refusals by non-linguistic means. (It seems likely that there should also be a further subdivision into EXPLICIT and IMPLICIT REJECTIONS. Cf. below.)

DENIALS are language-dependent. EXPLICIT DENIALS occur in response to explicit assertions of propositions, whereas IMPLICIT DENIALS deny propositions that can be contextually inferred but which have not been explicitly asserted. There is syntactic as well as pragmatic evidence for the establishment of the dichotomy explicit/implicit denial; thus, for instance, elliptic sentences such as He isn't or I don't can only be explicit denials occurring in response to explicit assertions. (For further substantiation of these categories, see PT and, for implicit denials, Shanon 1981:42.)
Implicit denials can of course occur in spoken language as well as in writing, but it seemed not implausible that the difference in the frequency of negation between S and W could be due to the non-occurrence, or at least the much lower frequency of occurrence, of rejections and explicit denials in W.

To test this hypothesis, we made a detailed empirical study of the functions of the negatives occurring in a subsample of 15,000 words from the spoken corpus described above. We included three texts of 5,000 words each, S.1.3, S.1.4, and S.1.5. These texts all form part of the London-Lund Corpus of English Conversation, and are all instances of spontaneous, surreptitiously recorded conversation. The texts are available in print in Svartvik & Quirk 1980, who also supply further information about participants etc.

The distribution of forms in the subsample is shown in Table 2.

<table>
<thead>
<tr>
<th>TEXT</th>
<th>NON-AFFIXAL FORMS</th>
<th>AFFIXAL FORMS</th>
<th>PRO-FORMS NO</th>
<th>TOTALS</th>
<th>NEGS PER 1000 WORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.1.3</td>
<td>80</td>
<td>16</td>
<td>5</td>
<td>101</td>
<td>20.2</td>
</tr>
<tr>
<td>S.1.4</td>
<td>138</td>
<td>6</td>
<td>25</td>
<td>169</td>
<td>33.8</td>
</tr>
<tr>
<td>S.1.5</td>
<td>123</td>
<td>12</td>
<td>30</td>
<td>165</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>341</td>
<td>(78%)</td>
<td>60</td>
<td>435</td>
<td>(29)</td>
</tr>
</tbody>
</table>

Table 2. The distribution of negatives in the 15,000 word sample.

Notice first that the frequency of negation is lower in text S.1.3 than in the other two, 20.2 per 1000 words compared with 33 or more in the other two. This fact will be discussed below. In all, there were 435 negative tokens, 34 of which (8%) were affixal and 60 of which (14%) consisted of the pro-form No. However, eight of the 435 tokens could not be submitted to a pragmatic analysis, for the simple reason that they occur in the first turns of texts, or after intranscribable passages, where it was thus not possible to determine whether they were explicit or implicit negatives. The final sample therefore comprised 427 negatives.
Another problem had to be dealt with before we could make a final analysis of the data. It is a well-known fact that there is not always perfect correspondence between the syntactic form or the normal semantic interpretation of a sentence, and its discourse function. Statements may serve as questions, questions as exclamations, etc. (Cf. e.g. Quirk et al. 1972:387.) In our sample, there were 48/427 (11%) sentences where such discrepancies occurred. One of these, (1) was an explicit denial functioning as an (explicit) rejection. Speaker A offers speaker B some coffee, which B first accepts, but then changes his mind. (Numbers refer to tone units (TUS), asterisks indicate simultaneity, and letters identify speakers. Double parentheses surround 'incomprehensible words'.)

(1)  
\begin{align*}
A & 15 & \text{*that's good*} \\
B & 16 & \text{*I don't know*} \\
 & 17 & \text{I ((don't know whether I'll)) drink coffee} \\
 & & \text{at this time of day (S.1.4)}
\end{align*}

(TUs 16 and 17 illustrate another salient feature of conversation, to which we shall have occasion to return below, viz. repetition.)

By far the largest class of sentences having non-identity of functions was made up of items whose grammatical function was that of implicit denials but which had different discourse functions. There were 47 of these. Five functioned as implicit rejections, as in (2), where the participants are choosing pictures for their offices and where they reject them without previous verbal prompting, as in TU 77:

(2)  
\begin{align*}
B & 71 & ((and)) \text{ then he said well don't bother} \\
 & 72 & [(\text{\emph{\text{\textit{}}} }}(\text{\textit{}}} \text{ you've told me} \\
 & 73 & \text{you know} \\
 & 74 & \text{you just come} \\
A & 75 & \text{that was this term} \\
B & 76 & \text{m} \\
A & 77 & \text{well I don't know} \\
 & 78 & \text{that I want any of ((these)) (S.1.4)}
\end{align*}

Another eight functioned as questions. Cf. TU 510 in (3):
(3) A 506 [ðiam] - this ghastly set-up
508 of a woman's college
509 which is just another world
510 I don't know if you've had any dealings
511 it's just grotesque
512 there's
513 * no *

(S.1.3)

The largest subgroup here, 34/47 tokens, was made up of supports, i.e., listeners' signals that information has been received, accepted and agreed upon. (Cf. Oestrom 1977 and Bald 1980.) A typical example is TU 431 in (4):

(4) A 428 but I left that out
429 * ...cause *
B 430 * yes *
A 429 it wasn't typical
B 431 no

(S.1.4)

After analyzing the items with non-identical grammatical and pragmatic functions, we are now in a position to make a survey of the pragmatic functions of all negative sentences in our subsample.³ This is done in Table 3:

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>DENIALS</th>
<th>REJ</th>
<th>QUESTIONS</th>
<th>HYP</th>
<th>IMP</th>
<th>SUPP</th>
<th>TOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>63</td>
<td>263</td>
<td>10</td>
<td>21</td>
<td>6</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>≠</td>
<td>15</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>63</td>
<td>263</td>
<td>245</td>
<td>21</td>
<td>15</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(14%)</td>
<td>(62%)</td>
<td>(2%)</td>
<td>(8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. The distribution of pragmatic functions over 427 negative sentences taken from 15,000 words of English conversation.

Key: REJ = REJECTIONS, E = EXPLICIT, I = IMPLICIT, T = TAG, HYP = HYPOTHETICALS, IMP = IMPERATIVE, SUPP = SUPPORTS
= indicates identity of grammatical and pragmatic functions,
≠ non-identity
From Table 3, we see that explicit denials amounted to 63/427, or 14% of all negative sentences, and rejections (explicit and implicit) to 7/427, or 2% of the total sample. Together, these two categories thus accounted for 70/427, or 16% of all uses of negative sentences. Our hypothesis that the occurrence of these types might explain the higher frequency of negation in spoken language is thus not supported by the data.

However, a couple of other uses of negation, which are almost exclusively restricted to conversation, are of considerable interest for the explanation of the high incidence of negation in this channel, as supports and in questions (tags and non-tags). (Even without a detailed analysis of the written sample, it seems safe to contend that direct questions are infrequent in written language, having mostly a rhetorical function, while indirect questions may of course be expected to occur.) There were 21 tag questions and 22 non-tags. Seven of the latter were indirect questions, which leaves us with 15 non-tag direct questions. Together with the 21 tags, they account for 8% of the negative sentences. Furthermore, the 34 supports account for another 8% of the total. The hypotheticals are best left out of the discussion here, as they might be expected to occur with at least equal frequency in written texts and we have no data on their frequency at present.

If we sum up the frequencies of occurrence of explicit denials (63), rejections (7), questions (36), supports (34), and the one imperative, we arrive at a total of 141/427 negative sentences used in functions characteristic of conversation, or 38%. Implicit denials remain, by far, the largest category, with 263/427, or 62%, of all tokens. This is still a considerably higher proportion than the 47% total recorded for the written sample discussed above, and which, according to our hypothesis, should consist of mostly implicit denials. However, we still have a couple of cards up our sleeve.

First, it is well known that one characteristic of impromptu speech is repetition. (Cf. e.g. Ochs 1979:70ff.) Explicit denials typically seem to consist of the reaction signal No plus an explanatory statement, as in (5), TUs 423 and 424:

\[(5)\]

<table>
<thead>
<tr>
<th></th>
<th>420</th>
<th>I mean is Marilyn . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>421</td>
<td>I mean is she a lecture:</td>
</tr>
<tr>
<td></td>
<td>422</td>
<td>* or *</td>
</tr>
<tr>
<td>B</td>
<td>423</td>
<td>* no *</td>
</tr>
<tr>
<td></td>
<td>424</td>
<td>Marilyn does no teaching</td>
</tr>
</tbody>
</table>
Repetition for emphasis is exemplified in (6), TUs 1210 and 1211:

(6) A 1205 ... in fact I won't see
1206 the general department
1207 will*I
1208 very*much
D 1209 * oh no*
1210 no
1211 no (S.1.5)

Self-correction, or repair, may also cause repetition, as in (7). (Cf. Schegloff et al 1977.)

(7) A 655 I mean one's never
656 I mean you're making – conclusions
657 which you can never really verify (S.1.5)

Repetitions may also be used as a floorholding device, to prevent another speaker from taking over the turn. When one has access only to a written transcription, this use is hard to distinguish from repetition due to performance factors, when the speaker repeats old material while trying to continue by adding new words and phrases. Example (1), TUs 16-17, above may be an instance of either of these types.

There were, in all, 34 instances of negatives in repetitions (not counting those included among supports). This figure is clearly interesting as a factor contributing to the high total frequency of negatives in spoken language. However, in this context, where we have already deducted explicit denials and rejections among the conversation-specific phenomena, our main concern is to find the number of repetitions among implicit denials. There were only 16 of these in all three texts, or 4%. By adding this to the 141/427 speech-specific functions of negation, we get 157/427, or 37%. Although we have certainly found some pragmatic determinants of the occurrence of negation, there must obviously be other factors at work as well.

We are currently pursuing two lines of inquiry in search of such factors. First, as we observed above in connexion with the data in Table 3, the frequency of negation is much lower in text S.1.3 than in S.1.4 and S.1.5 —
101 compared with 169 and 165, respectively. Text 1.3 is different in character from 1.4 and 1.5 in that it is much less interactive. Only one speaker is recorded surreptitiously, and the other two, who act as prompters, are obviously making a successful effort to say as little as possible. In fact, text 1.3 has many of the characteristics of a monologue. We cannot be sure, of course, that the low frequency of negation in 1.3 is not due to idiosyncratic factors, but we are working on the assumption that this is not the case, trying to relate the frequency of negation to turn length and position of negation in the speakers' turns in the three texts. (Cf. Laureys 1977:168.)

Our second line of investigation has been prompted by the observation that, in our material, many negatives cooccur with the verbs know and think (n = 45). In particular, functional rejections and questions that are cast in the form of (implicit) denials typically have the form I don't know if ... The tendency for negative expressions to collocate with verbs denoting mental processes has been observed in research on Swedish language material by Laureys (1977:168) and Svensson (1981:193ff.). Svensson also points to a tendency for negative sentences to contain modal verbs (almost 25% of his material). We also noticed that, in our material, 'mental verbs' tended to collocate with first and second person pronouns. We are therefore currently comparing the cooccurrence of mental verbs, modals, and first and second person pronouns with negation in our conversation sample with a sample of written language. We hope that when we have obtained these data we shall be in a position to account more completely for the difference in the frequency of negation between spoken and written English. At present, we may perhaps venture an educated guess that it is the emotional and interactive character of conversation that will ultimately provide the explanatory factors. When we speak, we express our feelings and attitudes more than when we write, but we also try to be polite and to avoid unnecessary bluntness, often by means of indirect speech acts or 'conversational mitigation' (cf. Fraser 1980). The use of modals, mental verbs, and negatives in conjunction would seem to be an appropriate means to achieve these ends.
The theory has been shown to work well for Swedish. Cf. Svensson 1981:201.

For a discussion of the choice between affixal and non-affixal negation in S and W, see further Tottie 1980 and Tottie (in press).

There was only one sentence having more than one negative, viz. (1):

(1) A 1 isn't this going to be a strange
    2 and impossible task
    3 for me (S.1.5)

The first negative was obviously classified as a (non-tag) question, and the second as an implicit denial.

Implicit denials functioning as questions are not, of course, a priori equivalent to negative questions. Cf. (3) above. However, it will be expedient to treat them together here, the point being that neither type is likely to occur in written language.

There may of course also be hypothetical constructions. Cf. above.

REFERENCES


