Wide Focus Object Fronting*

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German sentences with fronted object like *Ein Bíer haben wir getrunken* 'We drank a beer' (Wide Focus Object Fronting, WFOF) can have a wide focus reading, despite a marked word order. Crucially, they have a restricted prosody: only one accent may be realized, which is located on the fronted element, and a single prosodic phrase is formed on the entire sentence. Production and perception experiments are reported, which showed that German speakers readily pronounced and accepted these sentences, as long as the amount of deaccented material remained within acceptable limits. In acceptability judgment tasks, it could also be demonstrated that spoken material was attributed high scores, even when several unaccented constituents interfered between the accent and the end of the sentence. With WFOF sentences presented in a written form, acceptability decreased significantly with longer sentences, showing that providing a prosodic structure may be necessary for a controlled elicitation of grammaticality judgments. An OT analysis of the prosody of these sentences is offered in the last section. The ambiguity of WFOF sentences is provided a theoretical foundation. And the marked word order is explained, as well. An initial accent in a sentence consisting of only one prosodic phrase is advantageous form the perception point of view: the unique accent is unambiguously a focus accent.

Keywords: Prosody, syntax, experimental linguistics

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* This paper is part of the project A1 of the SFB 632 on Information Structure at the University of Potsdam. For insightful discussions, I am grateful to the members of this project, Shinichiro Ishihara, Ingo Feldhausen and especially Gisbert Fanselow, who also helped in the preparation of the material for the experiments, and provided altogether many insights that helped to clarify the issues in this paper. Many thanks are also due to Kirsten Brock, Matthias Koch Frank Kügler, Anja Mietz, Anja Kuschmann and Esther Sommerfeld for technical assistance. The usual disclaimers apply.

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1 Introduction and background

Sentences with object fronting like those in (1) are optimal in two contexts. First as Wide Focus Object Fronting (WFOF), and second in a context inducing an initial narrow focus. They consist of a single intonation phrase, and have a unique, early falling pitch accent on the fronted object. For the sake of clarity, an intonation phrase is called an 'i-phrase'. In all in examples of this paper, an i-phrase is indicated with a subscripted I, a focus with a subscripted F and a topic with a subscripted T. The question of the phrasing of these sentences in prosodic phrases (p-phrases, with subscripted P) is addressed in section 3. Small caps indicate pitch accents and unaccented words are written in lower case. The sentences in curly brackets in (1) preceding the target sentences show thinkable contexts for the occurrence of the sentences in their wide focus readings. The term 'wide focus' is used for sentences with at least VP-focus, with a given or inferable subject. The term 'all-new' denotes sentences which are entirely new, including the subject.

(1) a. {What did you do after I left?}
[$_I$ [Ein BIER haben wir getrunken]$_F$]
a-ACC bier have we drunk
'We drank a beer.'

b. {How was your evening?}
[$_I$ [FERNSEHEN habe ich geguckt]$_F$]
television have I looked
'I watched television.'

c. {Why was she away so long?}
[$_I$ [Das KIND hat sie ins Bett gebracht]$_F$]
the-ACC child has she in-the bed brought
'She brought the child to bed.'

d. {Why was the class cancelled?}
[$_I$ [Den EINGANSSCHLÜSSEL haben sie verloren]$_F$]

the-ACC front door key have they lost
'They lost the front door key.'

e. {What did he do then?'}
[$_I$ [Die KÜCHE hat er gestrichen]$_F$]
the-ACC kitchen has he painted
'He painted the kitchen.' (Krifka 1994)

Even though the object is fronted in these sentences, resulting in a marked word order, they are perfect in a wide-focused context, in contradistinction to other structures with marked word orders.[1] A crucial condition for the wide focus reading of the sentences in (1) is that a single accent is realized, as illustrated in (2) and in Fig.1. This unique accent is located very early in the sentence, on the fronted object, and the remainder of the sentence is unaccented (see Fanselow & Lenertová 2006 for this observation, as well as Büring 1997). The nuclear accent on *die Miete* 'the rent' is a bitonal falling tone H*L. A boundary tone L_I is aligned with the last syllable of the sentence. Between the postnuclear L tone and the low boundary tone, the melody of the phrase is low throughout, which can be analyzed as alignment of the low boundary tone to both the end of the i-phrase and the position immediately following the pitch accent (see Gussenhoven 2004 for a proposal along these lines). The result is a low contour throughout.

H* L L_I
(2) [$_I$ [Die MIETE haben sie wieder mal erhöht]$_F$]
the rent have they again once raised
'They have raised the rent again.

[1] See Lenerz (1977) showed explicitly that marked word orders are paired with marked discourse contexts.

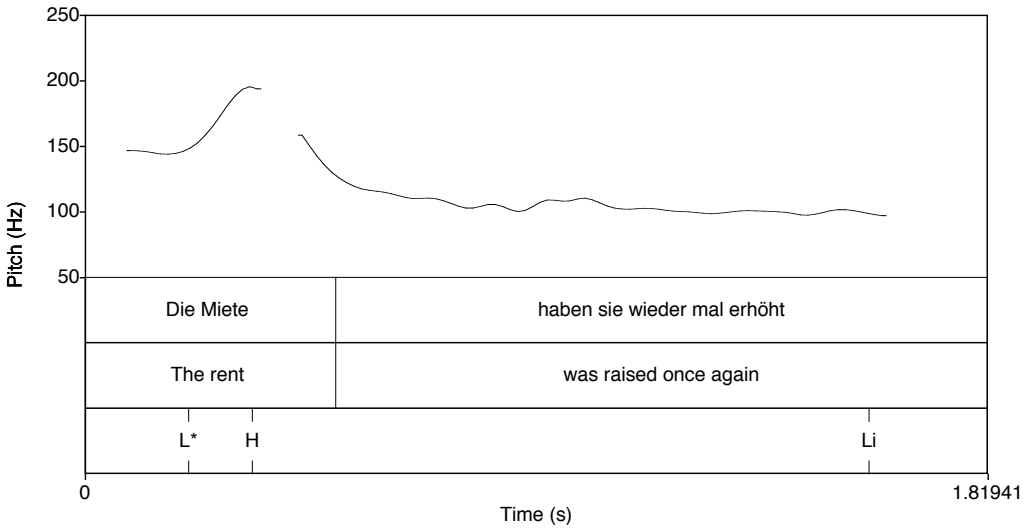


Fig.1 Pitch track of *Die MIETE haben sie wieder mal erhöht*

The examples in (1) and (2) have a pronominal subject, located in the postverbal position, but, as shown in (3a), the subject can also be a full DP.

(3) {Warum kommst du so spät?} 'Why do you come so late?'
a. $[_I$ [Eine ALKOHOLKONTROLLE hat die Polizei gemacht$]_F$]
an alcohol control has the police done
b. #$[_I$ $[_P$ [Eine ALKOHOLKONTROLLE$]_T$ $[_P$ hat die POLIZEI gemacht$]_F$]]
c. $[_I$ $[[_P$ die POLIZEI] $[_P$ hat eine ALKOHOLKONTROLLE gemacht]]$_F$]
.
'The police were stopping drivers to test for alcohol consumption.'

This sentence, though, cannot fulfill its task as a presentational wide focus when the subject *die Polizei* is accented, as in (3b). In such a case, *Alkoholkontrolle* is the topic of the sentence and *die Polizei* is the focus: it is predicated about an alcohol testing that it was done by the police. (3c), with normal word order, is again possible in the context indicated. The fronted constituent *die Polizei* can be an aboutness topic, but does not have to be. Since it is the subject of the sentence, its initial position is unmarked. The difference between a topical and an unmarked subject is rendered by the

prosodic structure. A true topic is separated from the remainder of the sentence by an i-phrase boundary (see Féry 2006).

(3a) differs from (3c) not only in accent pattern and word order, but also in interpretation. (3a) does not predicate anything about an alcohol testing, in the same way as sentence (1c) does not predicate anything about a child. The whole sentence is an explanation for the preceding question, which asks for the reason for a delay. It evokes an event extending over some period of time, like being checked by the police and putting a child to bed. In these sentences, *alcohol testing* or *child* is the bearer of the accent just 'by accident'. As shown by Fanselow & Lenertová (2006), it is this formal property that allows fronting of the accented part of the focused constituent.[2] Müller (2002) shows that other elements can be fronted, as well, without being a topic or a narrow focus. In (4a), it is a verb particle. Jacobs (1996) and Fanselow & Lenertová (2006) list examples in which part of an idiom may be fronted (4b–d). The latter authors show that meaningless words, in the sense that the parts of an idiom cannot be understood in their literal meaning, can be fronted (to Spec,CP in their analysis).

(4) a. Vor haben wir das nicht gehabt (Müller 2002)
PTL have we that not had
'We did not intend to.'

b. Auf die Pelle ist sie mir gerückt.
on the skin is she me-DAT moved
'She is crowding me'

[2] See also Lenertová & Junghanns (2006) for similar remarks for Czech.

c. Den Garaus denke ich nicht dass er ihr gemacht hat
the-ACC out think I not that he her-DAT made has
'I do not think he finished her off'

The upshot of this short discussion is that the prosodic difference between (3a) and (3c) lies in the presence of an additional accent on the postverbal subject in (3c). In a VP-focus context, (3a) has unambiguously only one accent, and thus unambiguously contains only a focus (and no topic), whereas in (3c), the additional accent on the subject renders the information structure less straightforward.

As mentioned at the outset of this section, the same sentences, with exactly the same prosodic pattern are also answers to questions asking only for the object, as shown in (5). The object can be analyzed as having been moved to the sentence-initial position as a consequence of focus fronting.

(5) a. {What did you drink?}
[$_{I}$ [Ein BIER]$_{F}$ haben wir getrunken]

b. {What did you do?}
[$_{I}$ [FERNSEHEN]$_{F}$ habe ich geguckt]

c. {Who did she bring to bed?}
[$_{I}$ [Das KIND]$_{F}$ hat sie ins Bett gebracht]

d. {What did they lose?}
[$_{I}$ Den [EINGANGSSCHLÜSSEL]$_{F}$ haben sie verloren]

e. {What did the police do?}
[$_{I}$ [Eine ALKOHOLKONTROLLE]$_{F}$ hat die Polizei gemacht]

In the examples in (5), accent, prosodic phrasing and tonal structure are identical to the ones shown in (3). There is only one initial accent and the remainder of the sentence is unaccented. In these cases, too, only one i-phrase (and one p-phrase) are formed. The narrow focus on the fronted

element is clearly enhanced by its initial position, not only because of the pitch accent on the narrowly accented word, but also because of the deaccenting of the remainder of the sentence. I assume that the key to understanding the WFOF construction is to be found in this property. The initial accent is rendered more prominent by the deaccenting of the postnuclear part of the sentence. This aspect is discussed in section 3.3 where it is shown that the similarity between WFOF and narrow focus on the fronted object is motivated from the point of view of the prosodic theory.

The remainder of this paper first presents some experiments which tested the production and acceptability of WFOF sentences in a wide focus context, both in written and in spoken versions. This is the subject of section 2. Section 3 presents a prosodic analysis. Section 4 concludes the paper.

2 Experiments

In this section, results of both production and perception experiments are discussed in turn.

2.1 Production

2.1.1 First production experiment

The first production experiment was designed to answer the following questions:

1. Do native speakers of German readily realize the prosody just described?
2. Is there a difference in the production of these sentences in a VP focus context (called wide focus in the following) and in a narrow

focus context? More specifically, is the accent higher in the narrow focus context than in the wide focus context?

We know from other experiments that a narrow focus raises the high part of a pitch accent in German, at least when further accents are following. But if WFOF and narrow focus on a fronted object (NFOF) have an identical prosody, it may be expected that there is no difference in the height of their accent.

Method: Thirty students read sentences as answers to context sentences presented both acoustically and visually. Fillers were plentiful (approximately 10 between each sentence). In this first experiment, sentences like those in (7) were targeted. These sentences were inserted into two contexts: one inducing wide focus, and another inducing narrow focus on the object: see (6). Moreover the object was generic or specific. The sentences were recorded with two different syntactic structures: with a fronted object (7a), with a canonical word order SVO (7b).[3]

(6) a. Wide focus: { Did you go out afterwards?}
b. Narrow focus: {What did you drink?}

(7) a. Ein Bier haben wir getrunken./ Ein Jever haben wir getrunken.
a beer/a Jever have we drunk 'We drank a beer/a Jever.'
b. Wir haben ein Bier getrunken./ Wir haben ein Jever getrunken.

The first question (do German speakers readily realize this prosodic schema?) could be answered in the affirmative. In all sentences of type (7a) with a fronted object (altogether 360 realizations: 12 sentences x 30

[3] The complete list of examples used in the experiments is listed in the appendix.

subjects), a falling pitch accent was realized on the object and no other accent was present.

The experiment also delivered a clear answer to the second question: in the sentences with a fronted object, there is no difference in pitch between the narrow and the wide focus realization. All instances of the sentences of type (7a) were realized with a single accent on the object. There were some differences in the average fundamental frequency (F_0) of the objects and the verbs (see Fig.2). In the wide focus condition, the specific objects always had a lower pitch than the generic ones, but the difference is not significant (according to t-test: 0.768) and does not touch the difference in focus context of interest here.[4]

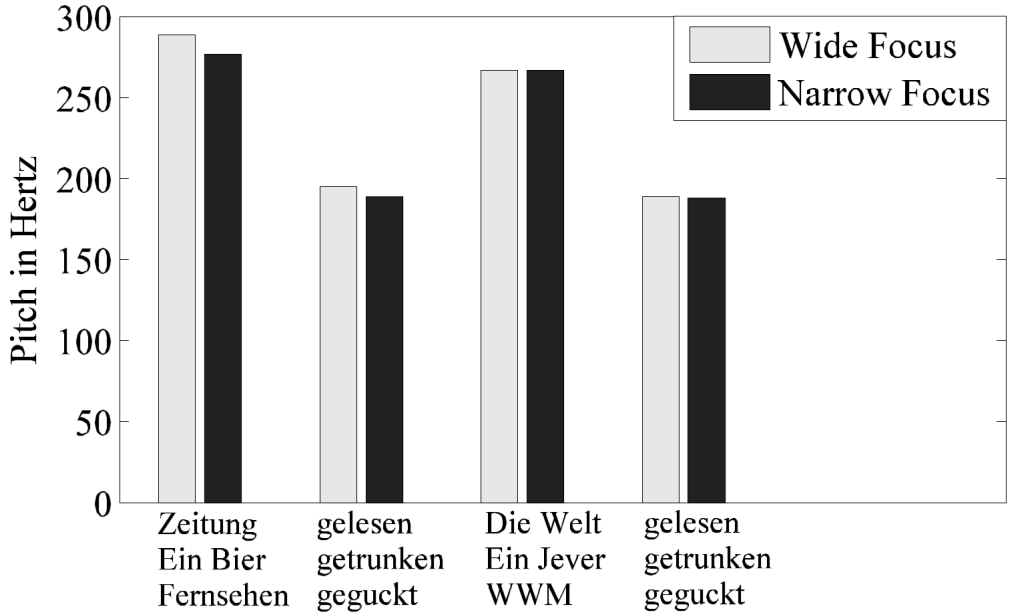


Fig.2 Pitch accents in F_0 on the fronted objects of experiment 1

[4] The remaining values of the t-tests are 0.608 for the verbs in the wide focus condition, 0.649 for the objects in the narrow focus and 0.660 for the verbs in the narrow focus condition.

The results of the first experiment lead to the conclusion that German utter WFOF sentences without any problem (question 1) and that there is no prosodic difference between an accent on the fronted object in a wide focus context and an accent on the same fronted object in a narrow focus context (question 2).

2.1.2 Second production experiment

The second experiment investigated the following question:

> 3. Does an increase in the number of arguments in the (intended) deaccented part of the sentence impede the readiness of speakers to produce a prosodic pattern with only one early falling accent, and the remainder of the sentence deaccented?

An answer to this question helps to understand whether WFOF is insensitive to prosody and length of sentences, or whether, alternatively, their occurrences decrease when more p-phrases are to be realized.

The second series of sentences, tested in a production experiment similar to the first one, again compared wide and narrow focus contexts. They were longer sentences with two non-subject arguments and a pronominalized 1st pers. sg. subject.

Examples are shown in (8) to (10) (see the appendix for the remaining sentences). In (8) three versions of the sentence as an answer in a context asking for a wide focus sentence are listed: (8a) is the canonical word order, (8b) has a fronted object, and (8c) a fronted second argument – a prepositional phrase. (9) and (10) show the same sentences as possible answers to a question asking for a narrow focus. (9) asks for the object, and

(10) for the prepositional phrase. Again the object came in two versions, a non-specific (*Wagen* 'car') and a specific noun (*Jaguar*).

(8) {Why were you away so long?}
a. Ich habe den Wagen/den Jaguar in die Garage gefahren.
I have the-ACC car/ the-ACC Jaguar into the garage driven
'I drove the car/the Jaguar into the garage.'
b. Den Wagen/Den Jaguar habe ich in die Garage gefahren.
c. In die Garage habe ich den Wagen/den Jaguar gefahren.

(9) {What did you drive into the garage?}
a. Ich habe den Wagen/den Jaguar in die Garage gefahren.
b. Den Wagen/Den Jaguar habe ich in die Garage gefahren.

(10) {Where did you drive the car to?}
a. Ich habe den Wagen/den Jaguar in die Garage gefahren.
b. In die Garage habe ich den Wagen/den Jaguar gefahren.

The answer (8a) to the question asking for a wide focus was usually realized with a neutral prosodic structure, thus a main accent on the preverbal argument and a secondary accent on the preceding argument, though there was a very small amount of variation in the accent pattern (some speakers added an accent on the verb): in the majority of the cases, both the object and the PP were accented. This is not discussed further and not illustrated in the figures below.

Fig.3 compares the accent patterns of sentences with a fronted object in a wide focus context (8b) with those in a narrow focus context (9b) in form of percentages.[5] Fronted object as a narrow focus carries the unique accent in

[5] (9a), a sentence in the canonical word order with a narrow focus on the object, was always realized with an accent on the object.

96% of the cases, whereas the same accent pattern arises in only 44% of the cases in a wide focus context.[6]

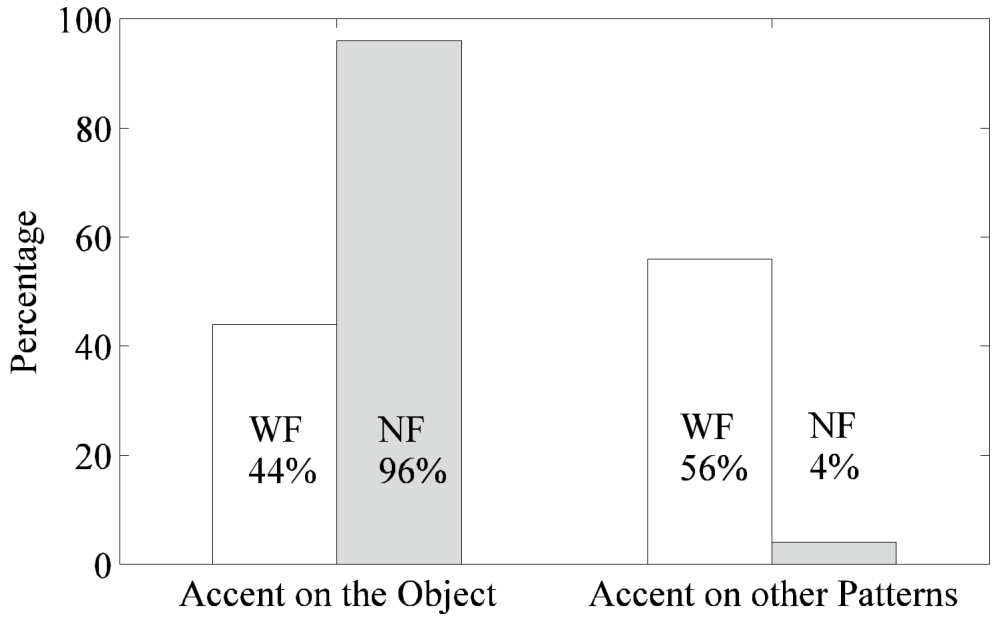


Fig.3 Accents on the fronted object in sentences with wide (8b) and narrow focus (9b)

As for a fronted prepositional phrase, the accent pattern is similar to the one in Fig.4 for the narrow focus, with 94% of the realizations with a single accent on the narrowly focused PP, decreasing to 5% in the wide focus condition – a highly significant result.[7]

[6] The other realizations comprises those with additional accents on the PP, on the verb, or on both.

[7] Again the SVO sentence (10a), with narrow focus on the PP, was realized as expected, with a single accent on the head of the PP (*Garage* in the example).

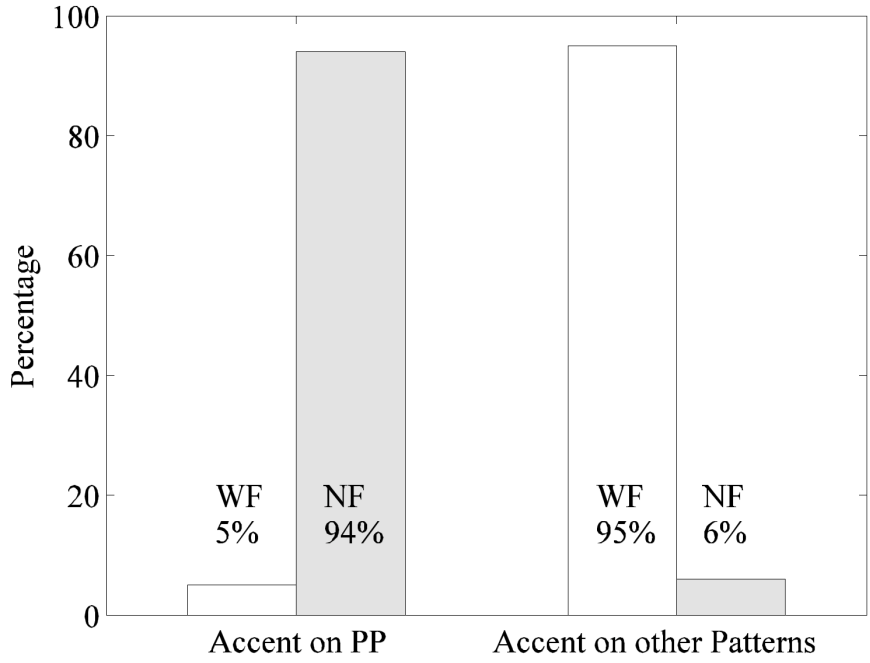


Fig.4 Accents on the fronted PP in sentences with wide (8c) and narrow focus (10b)

To sum up, the addition of accentable constituents after a fronted object renders the sentence less apt to be realized with only one accent on the fronted argument (question 3).

At the same time, a comparison between the 44% of the intended realizations in the case of fronted object as compared to the 5% in the case of fronted PP is very revealing. It is more natural for speakers to realize a unique accent if the fronted constituent is the direct object than if it is the prepositional object, a clear confirmation of Fanselow & Lenertová's (2006) claims.

2.1.3 Third production experiment

The third and last production experiment addressed three questions.

4. Does the presence of a full DP instead of a pronominal subject have an effect on the accent pattern?

5. Is there any difference between the height of the pitch accent on the object in a wide focus when the subject is a pronoun or a full DP?

6. Does the replacement of an all-new instead of a VP focus have an effect on the accent pattern?

These questions are relevant for a better understanding of the prosodic structure of WFOF sentences. In particular a question arises about postnuclear phrasing: Do deaccented postnuclear arguments form extra p-phrases, or are they included into the p-phrase of the accented subject? According to my knowledge about prosodic structure, the former case could induce a higher pitch when the subject is a full DP. The last question is a methodological one. Is it licit to use VP focus to test wide focus prosody?

In order to answer these questions, sentences like those in (11) were tested. The subject was either a pronoun (11a) or a full DP (11b), and in each case, the focus encompassed the entire sentence, including the subject. Focus on the whole sentence is called 'all-new', but I occasionally use the term wide focus, since, as we will see below, VP focus and all-new focus are equivalent, as far as WFOF sentences are concerned.

(11) {All-new: Why was the talk cancelled? }
{Narrow focus: What did he/they/the doorman lose?}

a. Den Eingangsschlüssel haben sie/hat er verloren.
'They/he lost the front door key.'

b. Den Eingangsschlüssel hat der Pförtner verloren.
'The doorman lost the front door key.'

The experimental method was identical to the preceding ones. A new set of thirty students from the University of Potsdam read the sentences in two contexts, one inducing an all-new focus and one inducing a narrow focus. The informants produced both variants in one session. Six such sentences were constructed, but only 5 were analyzed because, in the remaining one, the constituents were ambiguous as to their status as subject or object, a property which was discovered only after completion of the elicitation.[8] Altogether 300 (2 x 5 x 30) utterances were used and analyzed for the results.

Fig.5 shows the distribution of accents in the individual items in the all-new condition: when the subject is pronominalized (11a) and when the subject is a full DP (11b). The sentences with a narrow focus on the fronted object are not shown here, because they do not bring any new insight.

[8] The sentences are

{why did the reporter have to run?}

die Deutsche Bank haben sie überfallen 'They attacked the Deutsche Bank.'

die Deutsche Bank haben die Russenmafia überfallen 'The Russian Mafia attacked the DB.'

It is rather implausible that the Deutsche Bank would attack the Russian Mafia, but still, many things happen in this world, and it is not possible to exclude that some of the speakers understood exactly that.

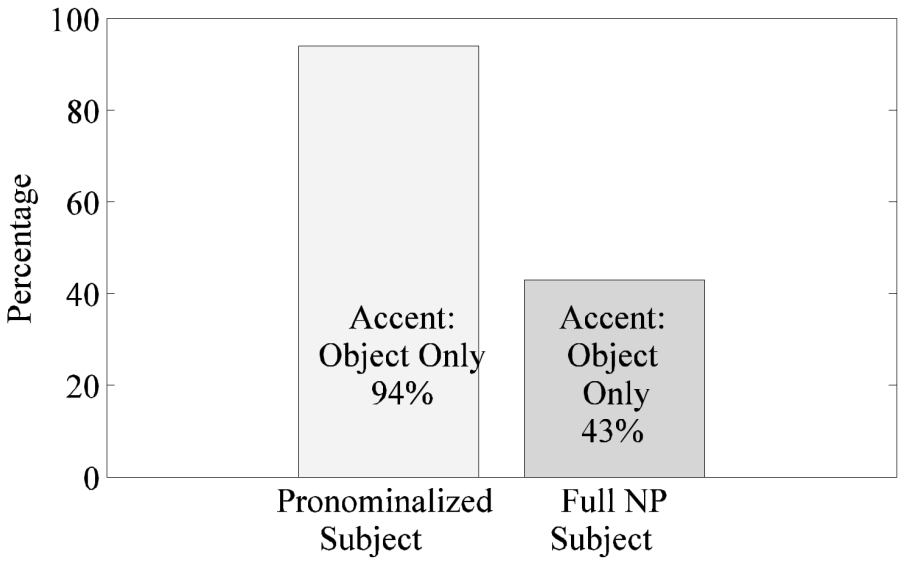


Fig.5 Accent pattern in all-new sentences

In the first case, only 10 of 150 realizations had an accent on the verb (6%). All other instances (94%) had a single accent on the object. In the second case, 65 realizations (43%) had a single accent on the object, and the remainder of the sentence, even the new subject, was deaccented. 37% had an additional accent on the subject. In 19% of the realizations, the verb was accented as well, either with or without an accent on the subject. In Fig.5, no difference is made between these two latter categories.

Question 4 is thus answered in the affirmative: the addition of a full subject has a clear influence on the accent pattern of these sentences.

As far as the preposed object's accent height is concerned, no significant difference could be found between the sentences with pronominal subject and those with full DP. In Table 1, the averaged F_0 values of the accented syllable for all speakers are indicated. * t-Test for dependent samples were executed with *SPSS*; the F_0 values of the objects of sentences with pronominal subject were tested against the values of those with full DP subject.

	Pronominal Subject	Full DP Subject	Significance Values*
Eingangsschlüssel	262 Hz	264 Hz	0.720
Alkoholkontrolle	289 Hz	284 Hz	0.598
Miete	286 Hz	287 Hz	0.891
Damm	294 Hz	297 Hz	0.609
Löhne	276 Hz	270 Hz	0.249

Table 1 Average highest F_0 value of the preposed object in sentences with a pronominal object (second column) and with a full subject (third column), and significance of the difference

Question 5 gets a negative answer. The height of the fronted object is not influenced by the kind of post verbal subject.

An important result of the third production experiment is that a unique accent on the fronted object always arises when the remaining constituents consist exclusively of a pronoun, a verb and an auxiliary, at least in a context asking for an all-new reading. As soon as the postverbal subject is a full DP, only less than half the realizations have a unique accent on the fronted object. Interestingly, this number is nearly identical to the one obtained in the second experiment, when the object was fronted, but an accentable postverbal argument was present. The difference between the two experiments lies in the size of the focused part, which is the VP in the second experiment, and the whole sentence in the third one. Thus the answer to question 6 is negative: VP and all-new focus do not lead to different WFOF accent structures.

2.2 Perception

The sentences in (11), repeated in (12) and (13), were used in both the first perception experiment, using spoken material, and in the second one, which used written material.

(12) {All-new focus: Why didn't the talk take place?}

a. Den Eingangsschlüssel hat er verloren.
'He lost the front door key.'

b. Den Eingangsschlüssel hat der Pförtner verloren.
'The doorman lost the front door key.'

(13) {Narrow focus: What did the doorman lose?}

a. Den Eingangsschlüssel hat er verloren.

b. Den Eingangsschlüssel hat der Pförtner verloren.

2.2.1 First perception experiment

Acceptability judgment tasks were conducted with spoken material to answer the following questions:

7. How acceptable is a sentence with a fronted argument/object and a unique accent in an all-new environment as compared to a narrow focus context?

8. Is the acceptability affected by the kind of subject (pronoun vs. full DP)?

9. Does an accent on a full DP subject affect the acceptability of WFOF sentences?

Method: Dialogues were pre-recorded. Two native speakers of German read the sentences in a natural way: one of them read the questions, and the other one, a trained phonetician, read the answers.

The sentences were integrated into a larger PowerPoint presentation containing a numerous distractors, which was presented individually to each informant. 30 students, a different group from those who participated in the production experiments, delivered the auditory grammaticality judgments.

There were 6 conditions (2 x 2 x 2). First the questions, which induced an all-new or a narrow focus (see (14Q) and (15Q)). Second, the subject, which could be pronominal (14a) and (15a) or a full DP (all others). The last condition was an accented or an unaccented subject, but only in the sentences with a full DP (14b–c) and (15b–c). The pronoun was always deaccented.

(14) {Q: Why are your neighbors complaining?}

a. Die MIETE haben sie wieder mal erhöht.

b. Die MIETE hat der Hauswirt wieder mal erhöht.

c. Die MIETE hat der HAUSWIRT wieder mal erhöht.
the rent has the landlord again once raised
'The landlord/he raised the rent again.'

(15) {Q: What did the landlord raise again?}

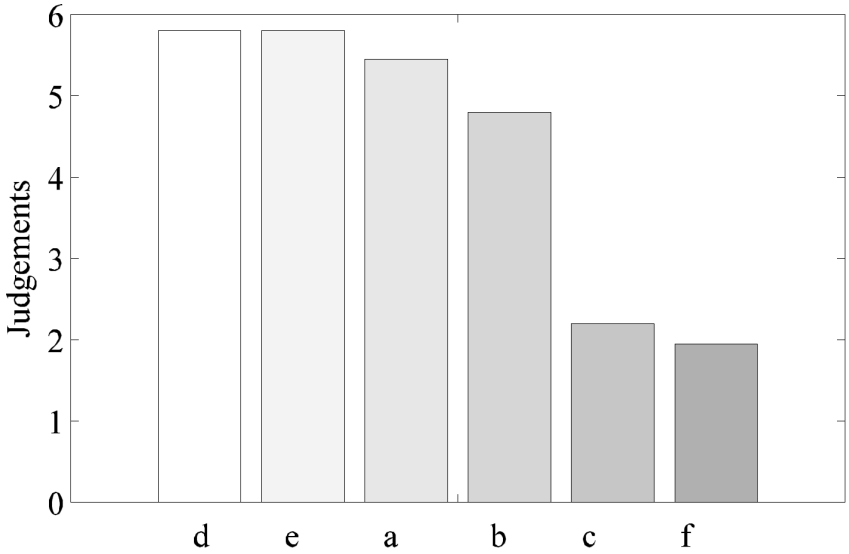
a. Die MIETE hat er wieder mal erhöht.

b. Die MIETE hat der Hauswirt wieder mal erhöht.

c. Die MIETE hat der HAUSWIRT wieder mal erhöht.

'The landlord/he raised the rent again.'

The results appear in Fig.6, in which the scale was the inverse of the German school grading system: 1 is the worst and 6 the best.



a. All-new focus: Pronoun: 5.45
b. All-new focus: Unaccented subject DP: 4.8
c. All-new focus: Accented subject DP: 2.2
d. Narrow focus on the object: Pronoun: 5.8
e. Narrow focus on the object: Unaccented subject DP: 5.8
f. Narrow focus on the object: Accented subject DP: 1.95

Fig.6 Judgments of the question/answer pairs in spoken form

When the subject was a pronoun, the sentence always got high scores, both in an all-new (5.45) and in a narrow focus context (5.8), though the sentences were judged slightly better in a narrow focus context. Sentences with a full but deaccented subject got higher scores in a narrow focus context (asking for the object) than in an all-new one (5.8 vs. 4.8). Both scores are well above the mid level. The accented subject DP got a very low score (1.95) when the context asked for a narrow focus on the object. This question/answer pair contained an accent in the wrong place, and it has been shown several times in the literature that listeners are sensitive to this kind of

mismatches (see for instance, Gussenhoven 1983, Birch & Clifton 1995, Hruska et al. 2001 and Féry & Stoel 2006).

An interesting result is the low score obtained in a sentence with an accented subject when the question asks for an all-new focus (2.2). Nothing in the prosody prevents the accenting of the subject in such a sentence. In fact, theories of phrasing formations predict a phrase on the subject because it should form its own phrase, by virtue of not being integrated in the domain of the verb (see Gussenhoven 1992 and Truckenbrodt 2005 among others).

In models of word order that take the prosody into account, the reason for the low scores is clear. Accented object fronting always meets a need. As shown in section 1, it takes place either in a narrow focus context, or because it is topicalized, or by virtue of being the head of a WFOF sentence. But the question asked for a wide focus with a new subject, and a pattern with a fronted object and deaccented subject is not optimal in this context (see section 3, where an OT account of this mismatch is provided).

Question 7 can only be answered together with questions 8 and 9. Both wide focus and narrow focus are nearly equally good when a pronominal subject is involved, but when an unaccented full DP is present, the acceptability of such a sentence in a wide focus diminishes considerably. Both sentences are equally bad again when the full DP subject is accented.

2.2.2 Second perception experiment

The second perception experiment was a grammaticality judgment task using written material inserted in standard questionnaires. An answer to the following question was aimed at.

> 10. Is there a difference in the presentation of the material in a written and in an oral form? In other words, does it matter for the

acceptability judgments whether the accent pattern is presented together with the sentences?

The same five sentences were presented to a total of 120 informants, in the form of written dialogues. Informants had to evaluate only one version of each sentence. There were 4 versions of each sentence, as illustrated in (16) and (17), and six different questionnaires, so that in each questionnaire only 4 such dialogues were present. The sentences were separated from each other by numerous distractors.

(16) {Q: Why are your neighbors complaining?}
a. Die Miete haben sie wieder mal erhöht.

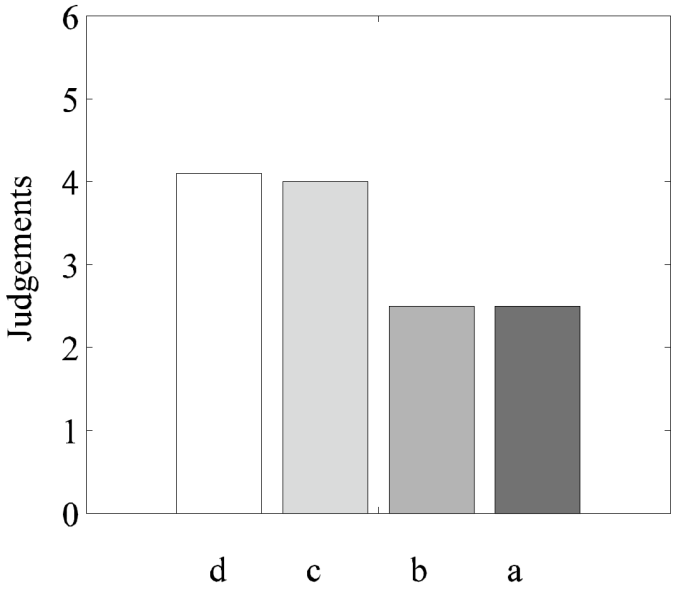
b. Die Miete hat der Hauswirt wieder mal erhöht.

(17) {Q: What did the landlord raise again?}
a. Die Miete hat er wieder mal erhöht.

b. Die Miete hat der Hauswirt wieder mal erhöht.
'The landlord/he raised the rent again.'

The most obvious difference between the spoken and the written material is the accent pattern which was not present in the second experiment. The other four conditions (2 x 2) were the questions, which elicited an all-new or a narrow focus ((16) vs. (17)), and the two versions of the subject, a pronoun or a full DP (a versions vs. b versions).

The expectations were that both conditions would play a role in the judgments. Fig.7 presents a summary of the results, using the same scale as in Fig.6.



a. All-new focus Pronoun: 2.4
b. All-new focus Full DP: 2.5
c. Narrow focus Pronoun: 4
d. Narrow focus Full DP: 4.1

Fig.7 Judgments of the question/answer pairs in written form

Altogether judgments are lower than in the spoken presentation. The results show a clear effect of focus, since the sentences got higher scores when presented in a narrow focus, but they show no effect of pronoun vs. full DP subject. This is especially interesting when one compares these results with those obtained in the spoken presentation. In this latter modus, the accent had a crucial effect on the acceptability, since a deaccented subject had a considerable positive effect on scores. It can be safely assumed that in the written version, informants did not always project the intended prosodic pattern, onto the sentences they read. Instead they probably very often projected an 'unmarked' prosodic pattern, like the one in (18), which is not optimal in a wide focus context (see the next section).

(18) [[$_{I}$ [$_{P}$ Eine ALKOHOLKONTROLLE]$_{T}$ [$_{P}$ hat die POLIZEI gemacht]]$_{F}$]

The answer to question 10 is thus easily answered: the prosodic pattern helps listeners to judge sentences in their contexts. I assume that the results obtained with spoken material are considerably more reliable than those obtained with written

2.3 Discussion

The experiments show that WFOF sentences are readily pronounced (Question 1 = Q1), as well as accepted by German speakers (Q7), at least when heard with the correct prosodic pattern. A unique accent on the fronted object is easier to realize and more readily accepted when the subject is pronominalized than when it is a full DP (Q4, Q8). An intervening accented constituent, be it a subject or another verbal argument (or any accentable constituent), blocks the reading of the sentences as a WFOF altogether (Q9), speaking for a negative influence of additional p-phrases. This was clearly shown in the first perception experiment, and in the production experiment 2, with longer sentences (Q3). The perception experiments also showed that adding the intended prosodic structure increases acceptability, an observation which has been made by several authors, more forcefully by Fodor (2002) and Kitagawa & Fodor (2006), (Q10). In the present case, when sentences with two arguments, and thus potentially two accents, are presented visually in a wide focus context, informants may have had difficulties in mentally creating mentally the right prosodic pattern. Presenting prosody simultaneously with the lexical and syntactic material may be crucial for other types of sentences, as well.

It could be shown that WFOF sentences have a very similar accent pattern in a VP-focus pattern and an all-new pattern (Q6). And finally, the

height of the pitch accent on a fronted object was shown to be indistinguishable in a VP focus and in a narrow object focus (Q2). The same was true in a comparison between the F_0 of the accents in an all-new sentences in which the subject is a pronoun or a full DP (Q5).

3 Analysis

The experimental results do not bear on the question of the role and interpretation of WFOF sentences. This point is instead addressed in this section. First, in section 3.1, a comparison is made with the so-called thetic sentences which present a strong similarity with the WFOF sentences in their prosodic structure and in one of their interpretation patterns. The syntax is briefly looked at in section 3.2, based on Fanselow & Lenertová (2006), and a prosodic analysis is proposed in section 3.3. In this last section, the role of the unique accent in the prosodic structure itself is taken up again, this time in the light of a comparison of similar sentences with more than one accent.

3.1 WFOF and theticity

A type of sentences called 'all-eventive' or 'thetic' have been extensively discussed in the literature from the point of view of both its pragmatic interpretation and its formal syntactic and phonological properties (see Marty 1918, Kuroda 1984, Schmerling 1976 and Sasse 1987 among others). These sentences are contrasted with 'categorical' sentences, prototypically divided into a topic and a comment. Thetic utterances consist only of a predication and describe a single event without separating it into a theme and a comment about the theme (a rheme), as categorical sentences do. Some

examples from the literature are listed in (19), and the reader is referred to the cited articles (especially Sasse 1987) for a survey of theticity.

(19) a. My HOUSE is on fire.
b. Your EYES are red.
c. My WALLET has disappeared
d. JOHNSON died (Schmerling 1976)

Thetic sentences have a unique accent on the subject, both in English and in German. They arise in a situation in which a motivation for an emotion, an accident, a riot, a delay, etc is asked for. In this sense they lack an aboutness topic typical of most sentences. They also lack information on time or location.[9] Taking (19c) as an example (with this prosodic pattern), it is not predicated about my wallet that it has disappeared, as opposed to another action that my wallet could perform, or about other objects that can disappear, but rather it is communicated that a very unpleasant event just happened, and that I have good reason to be upset.

As has been demonstrated in section 2, WFOF sentences have a similar interpretation, and a similar prosodic structure, but they differ on the crucial accented constituent, since an object and not a subject carries the accent. We have seen examples with direct and oblique objects above. This is readily explained when one becomes aware that thetic sentences like those in (19) do not have any object and are instead accented on the only available argument, namely on the subject. In these types of sentences, the action denoted by the verb is prototypical for the object. Replacing the verbs in (1)

[9] See, however Erteschik-Shir (1997), for instance, who assumes that all sentences have a topic which can be left unrealized.

with those in (20) destroys the WFOF preference of the following expressions and forces the emergence of an additional accent on the verb or on another constituent.[10]

(20) a. {'What did you do after I left?'}
[$_P$ [Ein BIER haben wir neu ZUSAMMENGEBRAUT]$_F$]
'We brewed a new beer.'

b. {Why was she away so long?'}
[$_P$ [Das KIND hat sie zur NOTAUFNAHME fahren müssen]$_F$]
'She had to drive the child to the emergency room.'

WFOF sentences also arise in readings other than all-new or wide focus ones. As shown by Fanselow & Lenertová (2006), indirect objects may be fronted and accented when the direct object is given, as shown in (21). In their example, a narrower focus is induced by the question which mentions more than just the subject.

(21) {What did you do with the book?}
Meiner FREUNDIN hab ich's geschenkt
my.DAT friend have I it given 'I gave it to my friend as a present'

In this case, the thetic flavor is lacking entirely, and the sentence is categorical: it consists of a topic or a theme and a comment on this topic. (21) is a statement about the book asked for by the context. In this example, the 'topic' is the element which the sentence comments about. In syntactic terms, the question asks for a VP, but some part of the VP, the direct object in (21), has been previously mentioned. Still the accented part of the sentences may be fronted and the verb remains in situ (see also (22)).

[10] In Katalin É. Kiss's terms (p.c.), in order for WFOF to arise, it should be possible to accommodate the meaning of the verb as soon as the object has been pronounced.

3.2 A syntactic analysis: Partial Focus Fronting

Fanselow & Lenertová (2006) propose a purely syntactic account of constructions like those discussed in the present paper as well as those in (21) in terms of A-bar movement attracting the closest accent in the clause, and fulfilling in this way the Minimal Link Condition (MLC), (see Chomsky 1995). This operation, called 'Partial Focus Fronting,' is triggered by a formal property, viz. accent, and is sensitive to island and pied-piping restrictions. A constituent which may be larger than just a word and which carries an accent is attracted by a special feature located in Spec,CP. In Partial Focus Fronting, the only constraint on this movement is the presence of an intervening accented element, in violation of the Minimal Link Condition (see Chomsky 1995). Fanselow & Lenertová show in a second step that an unaccented subject or any other unaccented constituent may intervene between the fronted accented constituent and the end of the sentence. The unaccentedness of these intervening constituents may be achieved in different ways. It may be a consequence of its status as discourse-given in case if it has been mentioned previously, or a consequence of its being part of the background, or because it may be accommodated from the discourse, as in (22), where *mother* is accommodated from *parents*.

(22) {What did your parents do after they won in the lottery?}
Ein AUTO haben sie meiner Mutter gekauft
a car have they my.DAT mother bought
'They bought a car for my mother.'

However, in Partial Focus Fronting, non-intervening accents may also arise freely. Thus in the idiom *vom Regen in die Traufe kommen* 'to jump out of the frying pan into the fire', see (23a), it is possible to front *vom Regen* and

accent *in die Traufe* and still achieve an idiom interpretation (23b). The order of the accents has not been changed. The wide focus reading necessary for the idiom interpretation is, however, not possible if *in die Traufe* is fronted, as shown in (23c). In this case, *in die Traufe* gets a contrastive topic interpretation and *vom Regen* is now the bearer of the nuclear stress, expressing focus. The word order in (23c) can, because of this change in the accent pattern, only have its literal meaning. Notice that this can be true in (23b), as well, but it is not necessary.

(23) a. Wir sind vom REGEN in die TRAUFE gekommen
we are from rain in the eaves come
'We've jumped out of the frying pan into the fire.'

b. Vom REGEN sind wir in die TRAUFE gekommen.

c. In die TRAUFE sind wir vom REGEN gekommen.

In sum, in Partial Focus Fronting, a formal operation targets the closest accent, which is attracted to Spec,CP by a special feature, and leaves all other accents untouched.[11]

In the following, the syntactic analysis proposed by Fanselow & Lenertová (2006) is taken for granted. In the next section, the prosodic analysis is restricted to WFOF, a subset of sentences underlying Partial Focus Fronting, in which the emergence of accents is restricted to a single one.

[11] In a prosodic analysis of Partial Focus Fronting, like the one presented in section 3.3, one has to guarantee that the prosodic phrasing is kept intact in spite of the fronting operation. Both in (23a) and in (23b), the first p-phrase consists of the same material {*vom Regen, wir, sind*}, and it does not matter in which order these elements are linearized. Unaccented material can occur freely, as long as it is included in the same p-phrase.

3.3 Prosodic analysis of WFOF

This section presents an OT account of the prosodic properties of the WFOF construction and investigates which properties can explain accented object fronting. The task is not necessarily trivial since object fronting goes together with a marked word order, which can be avoided by keeping the sentence in its canonical word order. To sum up the solution in a nutshell: in some contexts, sentences containing exactly one accent are prosodically optimal. The early accent is unambiguously the last one, and is at the same time the nuclear stress. The realization of the nuclear accent very early in a sentences correlates with unambiguous deaccenting of the remainder of the sentence.

This section starts with the best accent patterns of sentence (3), repeated in (27), in two word orders and in different information structural contexts. In a second step, it is shown that WFOF are optimal in a wide focus environment.

In an OT framework relating syntax and prosody, constraint (25a) has been used in a number of studies (Truckenbrodt 1999, Samek-Lodovici 2006, Féry 2006) and is relevant here, as well. STRESSXP forces the emergence of a head on every lexically headed XP, and is at the same time responsible for integration of a verb and the most embedded object (see Gussenhoven 1992, Cinque 1993, and Tableau (26) for motivation). A p-phrase emerges on this constituent, since an accent serves as the head of a p-phrase. The second constraint, DESTRESS-GIVEN in (25b) is adapted from Féry & Samek-Lodovici (2006) and blocks the assignment of a phrasal stress to a given constituent in the postnuclear position. As a consequence there is also no head of a p-phrase, and the formation of a p-phrase is impeded. *P-

PHRASE in (25c) is responsible for restricting the number of p-phrases to a minimum, in adding a violation mark to every p-phrase.

(25) a. STRESSXP (STRXP):
Each lexically headed XP must contain a phrasal stress (where 'phrasal stress' refers to the head of a p-phrase)

b. DESTRESS-GIVEN $(DG)_{postnuclear}$
A given XP in the postnuclear position is prosodically non-prominent.

c. *P-phrase
No p-phrases

In the case of (1a), illustrated in (26), the constraints in (25) apply straightforwardly. Candidate b is optimal because it has less accents and thus less p-phrases than candidate a. Since everything is new, DG is inactive. It must be observed that adding an accent on the verb does not constitute a violation of STRESSXP. As a result, this latter constraint cannot decide between the candidates. As the readers can work out by themselves, the same sentence in a canonical word order delivers the same result. The candidate with a unique accent on *Bier* wins the competition.

(26) OT analysis of (1a) with object fronting and wide focus

	$[\text{Ein Bier haben wir getrunken}]_F$	DG	STRXP	*P-PHRASE
a.	$[\text{ Ein BIER}]_P$ $[\text{haben wir GETRUNKEN }]_P$			**!
☞ b.	$[\text{ Ein BIER haben wir getrunken }]_P$			*

In a next step, let us examine again the examples in (27), adapted from (3), with the p-phrase structure added.

(27) a. $[_I\ [_P$ die POLIZEI$]$ $[_P$ hat eine ALKOHOLKONTROLLE gemacht$]]$
b. $[_I\ [_P$ [die POLIZEI $]_F$ hat eine Alkoholkontrolle gemacht$]]$

c. $[_I\ [_P$ Eine ALKOHOLKONTROLLE hat die Polizei gemacht$]]]_F$
d. $[_I\ [_P$ Eine ALKOHOLKONTROLLE$]\ [_P$ hat die POLIZEI gemacht$]]$
'The police were stopping drivers to test for alcohol consumption.'

Examine first the effect of the constraints in (25) on an SVO sentence like (27a), when this sentence is all-new. In the optimal candidate a. in Tableau (28), two p-phrases are created, one on the subject *die Polizei*, and another one on the entire VP *hat eine Alkoholkontrolle gemacht*. The accent on the object fulfills the accent requirement of the DP object, as well as those of the VP. Candidate b. is suboptimal because it does not form a p-phrase on the subject, and thus violates STRXP. Since *P-PHRASE is lower ranking, it can not decide between the relevant candidates, and from now on, this constraint is not shown in the tableaux anymore since it never takes the decision in these longer sentences.

(28) OT analysis of (27a) with canonical word order and wide focus

	[Die Polizei hat eine Alkoholkontrolle gemacht]$_F$	DG	STRXP
☞ a.	[Die POLIZEI]$_P$ [hat eine ALKOHOLKONTROLLE gemacht]$_P$		
b.	[Die Polizei hat eine ALKOHOLKONTROLLE gemacht]$_P$		*!

The next two tableaux show the same word order, but in (29) the subject is given, and in (30) the object is given. When the subject is given, a p-phrase is formed all the same on this constituent, because it is prenuclear, and is not affected by DG. Thus, in Tableau (29), candidate a. is optimal, and candidate b. is not because it again violates STRXP. The prosodic structure of the optimal candidate is equivalent to that seen above in the all-new context.[12]

[12] There is a difference in the pitch accent of a given subject and a new one. In the latter case, the height of the accent is higher. The phrasing is nevertheless unaffected.

(29) OT analysis of (27a) with canonical word order and and givenness of the subject

	[Die Polizei]$_G$ [hat eine Alkoholkontrolle gemacht]$_F$	DG	STRXP
☞ a.	[Die POLIZEI]$_P$ [hat eine ALKOHOLKONTROLLE gemacht]$_P$		
b.	[Die Polizei hat eine ALKOHOLKONTROLLE gemacht]$_P$		*!

When the object is given, since it is postnuclear, it underlies DG and the best candidate in (30) has only one p-phrase on the whole sentence. Candidate b., with two p-phrases, violates DG which requires that the given postnuclear object not be phrased separately. Givenness is indicated in the input by subscript G.

(30) OT analysis of (27b) with canonical word order and object givenness

	[Die Polizei hat [eine Alkoholkontrolle]$_G$ gemacht]$_F$	DG	STRXP
☞ a.	[Die POLIZEI hat eine Alkoholkontrolle gemacht]$_P$		*
b.	[Die POLIZEI]$_P$ [hat eine ALKOHOLKONTROLLE gemacht]$_P$	*!	

Let us now examine the same discourse conditions in a sentence with a fronted object, as in (27c) and (d). First, (31) shows the phrasing in an all-new context. Again, two accents are necessary to satisfy STRXP, and two p-phrases are formed. Candidate b. is eliminated because it violates STRXP. It may be observed that candidate (31a), even though it is the winner of the competition, is not an ideal word order in a wide focus context. Recall the poor performance of this sentence in the acceptability tasks (Fig.6c). This point is taken up again briefly below.

(31) OT analysis of (27c) with fronted object order and wide focus

	[Eine Alkoholkontrolle hat die Polizei gemacht]$_F$	DG	STRXP
☞ a.	[Eine ALKOHOLKONTROLLE]$_P$ [hat die POLIZEI gemacht]$_P$		
b.	[Eine Alkoholkontrolle hat die POLIZEI gemacht]$_P$		*!

The WFOF pattern is illustrated in (32). In order to achieve deaccenting of the subject, it must be assumed that this constituent is given, or at least that it is part of the background or that it is inferable from the context (and can be accommodated). The subscript G in the input is necessary to force deaccenting of the subject. DG relates unaccentedness to the property of givenness, and does not distinguish between different sources of deaccenting.[13] Notice that in this word order, the subject is postnuclear, and that assigning it an accent violates DG, as shown in candidate b. Candidate a. which forms only one p-phrase on the whole sentence is optimal.

(32) OT analysis of (27c) with fronted object order and given subject

	[Eine Alkoholkontrolle hat [die Polizei]$_G$ gemacht]$_F$	DG	STRXP
☞	a. [Eine ALKOHOLKONTROLLE hat die Polizei gemacht]$_P$		*
	b. [Eine ALKOHOLKONTROLLE]$_P$ [hat die POLIZEI gemacht]$_P$	*!	

The last case, illustrated in (33), shows the same word order with a given object. But since the object is prenuclear, DG is inactive, and a p-phrase is formed on this constituent all the same. The optimal candidate has two accents, and two p-phrases.

(33) OT analysis of (27d) with fronted object order and wide focus

	[Eine Alkoholkontrolle]$_G$ [hat die Polizei gemacht]$_F$	DG	STRXP
☞	a. [Eine ALKOHOLKONTROLLE]$_P$ [hat die POLIZEI gemacht]$_P$		
	b. [Eine Alkoholkontrolle hat die POLIZEI gemacht]$_F$		*!

The pattern is not completed if narrow focus is left out of consideration. Let us only examine the case of a narrow focus on the fronted object, since it is

[13] In a pragmatically more elaborate model of information structure, givenness has to be decomposed in 'pre-mentioned', 'recoverable', 'inferable', 'accomodated', etc (for definitions, see Prince 1981 and Lambrecht 1994 among others). For the sake of prosodic structure, the exact nature of G does not matter, as long as it guarantees deaccenting of the subject.

directly relevant to our concern. Selkirk (2002) and Féry & Samek-Lodovici (2006) show that a narrow, contrastive focus can be embedded into a larger information focus, or alternatively, it can also be the complement of a given backgrounded part of sentence. It is the last case which interests us here. The Tableau (34) reveals that the competition is identical to (32), the tableau responsible for WFOF. No new constraint is needed to single out Candidate a. as the winner.

(34) OT analysis of (27d) with fronted and narrowly focused object

		[Eine Alkoholkontrolle]$_F$ [hat die Polizei gemacht]$_G$	DG	STRXP
☞	a.	[Eine ALKOHOLKONTROLLE hat die Polizei gemacht]$_P$		*
	b.	[Eine ALKOHOLKONTROLLE]$_P$ [hat die POLIZEI gemacht]$_P$	*!	

Of particular interest is the observation that the discourse contexts examined here always have an optimal candidate in both word orders. This is because the sole task of the OT computation is to choose between candidates phrased and accented in a certain way. It has been shown in the literature that interpretation constraints are needed which select among the winners the best one in every context. Even if candidate a. of Tableau (31) wins the local competition, it is not so felicitous in a wide focus context as candidate a of Tableau (28).[14]

In the VP focus condition, when the subject is given, two optimal candidates are in competition, as well, namely the candidates a. of Tableaux (29) and (32), equivalent to (27a) and (27c) respectively. Candidate (29a), with SVO word order, has two accents, and thus resembles the optimal candidate of (28), in which the whole sentence is new. Candidate (32a), with OSV word order, with a unique accent on the fronted object, resembles the

[14] Candidate (31a) is optimal in a context in which a topic on *Alkoholkontrolle* is asked for.

prosodic structure of a sentence with narrow focus on the object, shown in (34a). We saw in section 2 that WFOF sentences are indistinguishable from sentences with a narrowly focused fronted object, and this ambiguity is very well tolerated. The OT analysis confirms the identity of these patterns. Both are obtained with the same constraints.

The candidate with marked word order must have an advantage over its competitor (29a), something which renders it as attractive, or even more attractive than (32a). I assume that it is the initiality of the unique accent, and its enhanced perceptivity as compared to an accent later in the sentence, as well as the unambiguously deaccented status of the verb and subject, now in the postnuclear region.

At first sight, it may seem that the accent pattern of the WFOF construction is in blatant contradiction to the generally accepted view that the i-phrase in German is right-headed, as a consequence of Nuclear Stress Rule (NSR) (Chomsky & Halle 1968 for English). However, the contradiction is an illusion. The kind of sentences which have been used to support the NSR have several p-phrases, each which a single pitch accent, as illustrated in (36b). Höhle (1982) finds that *Buch* has the 'normal' accent, because this constituent bears the last accent of the sentence, and because it can answer most questions, for instance those listed in (35). In fact, the 'nuclear stress' is just the last one in a series of p-phrases grouped in a single i-phrase, and does not have any particular prominence (see Gussenhoven 1992 and Selkirk 2002, 2006 for this view). The ambiguous focus structure is shown in (36a) and the unambiguous prosodic phrasing in (36b). *Karl* and *Kind* have a prenuclear accent in all conditions.

(35) a. Was hat Karl dem Kind geschenkt? 'What did Karl give to the child?'
b. Was hat Karl hinsichtlich des Kindes gemacht? 'What did Karl do with regard to the child?'
c. Was hat Karl getan? 'What did Karl do?'

(36) a. Karl [hat dem Kind [[das Buch]$_F$ geschenkt]$_F$]$_F$
Karl has the-DAT child the-ACC book given
b. [KARL]$_P$ [hat dem KIND]$_P$ [das BUCH geschenkt]$_P$
'Karl gave the book to the child.'

WFOF sentences, by contrast, consist of only one p-phrase and have, as a result, only one accent, which is crucially rightmost in the i-phrase, additionally of being also leftmost. This unique accent is non-final at the level of the p-phrase, but still it fulfills STRXP. In other words, at the level of the i-phrase, this accent is trivially final, and because of its uniqueness (there is no other accent in the phrase), its exact location becomes indifferent for the sake of evaluation. From the perspective of the perception, however, it may be advantageous to place accents in the initial position. It has been shown repeatedly in the literature (Beckman 1997, Alber 2001) that initial positions are, from the point of view of phonology, more prominent than final ones, and the interest in fronting an accented constituent may be explained by such considerations.

The problem of the intervening accent does not arise in WFOF constructions. WFOF characterizes main accent fronting and no subsequent accent whatsoever. The reason why other accents, intervening or not, are not allowed in WFOF sentences is that in a sentence with more than one accent, the first one cannot possibly be the nuclear stress, and thus cannot stand for a wide focus by itself. Only the last accent in an intonation phrase can play this role. As a result, an accented fronted word is not perceived as the

nuclear one if another accent follows. The point may be illustrated with (37), which comes in two variants. (37a) is a WFOF sentence, with a fronted object, and the rest of the sentence is unaccented. (37b), on the other hand also has a fronted accented object, but it has a second one, which has remained in situ, and cannot be counted as an intervening accent. The fronted object gets an interpretation as a topic and the negation *keine* is the focus.

(37) a. {She is a happy woman, only}
[$_{I}$ [[$_{P}$ KINDER hat sie keine]$_{F}$]].
children has she none
b. {she has had two husbands, and many pets but}
[$_{I}$ [[$_{P}$ KINDER]$_{T}$ [$_{P}$ hat sie KEINE]$_{F}$].
'She has no children'

4 Conclusion

German Wide Focus Object Fronting sentences (WFOF), like *Ein BIER haben wir getrunken*, 'We drank a beer', have a rigid prosodic structure characterized by a unique initial falling pitch accent H*L on the fronted object, followed by a flat and low melody until the end of the sentence. The information structure of WFOF sentences is identical to that of a wide focus (modulo a given subject or other given constituents). The falling accent is to be interpreted as the focus exponent, thus the bearer of the accent of the focus and the remaining part of the sentence is integrated into the p-phrase of this accent. The complete deaccenting of the final section of the sentence emphasizes the integrational pattern. Following Fanselow & Lenertová (2006), the marked word order is syntactically explained by a syntactic movement to Spec,CP of the first accentable constituent of the sentence, in agreement with the Minimal Link Condition (Chomsky 1995). The present paper shows that object fronting renders the prosodic structure optimal.

Accent initiality has been shown independently to enhance perception (Beckman 1997, Alber 2001). For the sake of phrasing, a unique p-phrase is formed.

It was possible to show in production experiments that speakers readily pronounce WFOF sentences, as long as the postnuclear material can be integrated into one p-phrase. In perception experiments, a difference in acceptability was found between sentences presented acoustically, and thus displaying the intended accent pattern, and the same sentences presented in a written form, and thus without accents. This difference may point to the importance of integrating prosodic patterns in acceptability judgment tasks in general.

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Appendix

Experiment 1 (production)

1.1 a. Was hast du denn am Sonntag gemacht?
'What did you do on Sunday?'
b. Was hast du denn am Sonntag gelesen?
'What did you read on Sunday?'

Zeitung/Die Welt habe ich gelesen. 'I read the newspaper/Die Welt.'

1.2 a. Seid ihr noch ausgegangen? 'Did you go out afterwards?'
b. Was habt ihr getrunken? 'What did you drink?'

Ein Bier/Ein Jever haben wir getrunken. 'We drank a beer/a Jever.'

1.3 a. Warum bist du so spät ins Bett gegangen?
'Why did you go to bed so late?'
b. Was hast du geguckt? 'What did you watch?'

Fernsehen/“Wer wird Millionär” habe ich geguckt. ‘I watched television/“Who’ll be a millionaire?”’

Experiment 2 (production)

2.1. a. Warum warst du so lange weg?
b. Wohin hast du den Wagen gefahren?
c. Was hast du in die Garage gefahren?

Den Wagen/den Jaguar habe ich in die Garage gefahren.

In die Garage habe ich den Wagen/den Jaguar gefahren.

Ich habe den Wagen/den Jaguar in die Garage gefahren.

2.2 a. Was hast du gestern den ganzen Tag gemacht?
b. Wohin hast du die Bänder/den Roman gestellt?
c. Was hast du ins Regal gestellt?

Die Bänder/den Roman habe ich ins Regal gestellt.

Ins Regal habe ich die Bänder/den Roman gestellt.

Ich habe die Bänder/den Roman ins Regal gestellt.

2.3 a. Warum warst du gestern in der Stadt?
b. Was hast du deiner Oma geschenkt?
c. Wem hast du Blumen/Rosen geschenkt?

Blumen/Rosen habe ich meiner Oma geschenkt.

Meiner Oma habe ich Blumen/Rosen geschenkt.

Ich habe meiner Oma Blumen/Rosen geschenkt.

Experiments 3–5 (production and perception)

3.1 a. Warum hat der Vortrag nicht stattgefunden?
b. Was hat der Pförtner verloren?
c. Was haben sie/was hat er verloren?

Den Eingangsschlüssel haben sie verloren.

Den Eingangsschlüssel hat der Pförtner verloren.

3.2 a. Wieso kommst du so spät?
b. Was haben sie gemacht?
c. Was hat die Polizei gemacht?

Eine Alkoholkontrolle haben sie gemacht.

Eine Alkoholkontrolle hat die Polizei gemacht.

3.3 a. Weswegen beklagen sich deine Nachbarn?
b. Was haben sie wieder mal erhöht?
c. Was hat der Hauswirt wieder mal erhöht?

Die Miete haben sie wieder mal erhöht.

Die Miete hat der Hauswirt wieder mal erhöht.

3.4 a. Wird in China die Natur besonders geschützt?
b. Was haben sie da gebaut?
c. Was hat die Industrie-Lobby da gebaut?

Den größten Damm der Welt haben sie da gebaut.

Den größten Damm der Welt hat die Industrie-Lobby da gebaut.

3.5 a. Warum haben die meisten Lehrer die Linkspartei gewählt?
b. Was haben sie gekürzt?
c. Was hat das Ministerium gekürzt?

Die Löhne haben sie gekürzt.

Die Löhne hat das Ministerium gekürzt.

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