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Authors	Bing, Janet Mueller
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The Given/New Distinction and the Unmarked Stress Pattern

Janet Mueller Bing

Princeton, N. J.

If one accepts the widely held assumption that the unmarked stress pattern in sentences is the sentence or clause with a single focus, a considerable amount of data cannot be accounted for. In this paper I would like to argue that certain sentences with multiple foci rather than a single focus have the unmarked stress pattern.

There is little evidence either for or against the single focus hypothesis; the evidence which does exist does not support it. Crystal (1969:257 ff) did a statistical investigation of the domain of the tone group, and his results indicated that it was not the clause, but a unit smaller than the clause which is typically the domain of the tone group. However, in spite of the evidence to the contrary, the assumption of one focus per clause persists. The reason may be that no clear distinction has been made between the unmarked case for sentence grammar and the unmarked case for discourse.

The need to distinguish between sentence and discourse grammar should be obvious, as it has been in studies of pronominalization. For example, in (1) it is clear that pronominalization must be due to factors outside the sentence.

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(1) He killed the judge.

What is less obvious is that factors outside the sentence might be affecting the stress pattern. Examples such as (1), supposedly taken out of context, cannot really be considered context-free, for in order to interpret these examples, a reader or listener must supply an appropriate context. Rather than attempt to find so-called "context free" examples for which readers must supply the context, it would be better to agree on an unambiguous context which is both discourse-initial and brand new. I would suggest that the first item of a news story might be the type of context appropriate for investigating the unmarked stress pattern. Obviously, certain sentences will not fit this particular context for reasons not relevant to the stress pattern, but it is possible that other sentences will not fit the context because of their stress patterns.

The well-known hypothesis against which I am arguing, that in the unmarked case a sentence has one focus and that additional foci are added by rule, is stated explicitly in Jackendoff (1972). The alternative which I am proposing is that in the unmarked case a focus occurs not only near the end of the clause--the traditional "sentence stress"--but also on each discourse entity which is "new information." The important grammatical process in this model is not the process of adding stress, as Jackendoff (1972:241) does with his Emphatic Stress Rule, but the process of destressing elements in the sentence to indicate that they are "given" or "old information." I will call Jackendoff's approach the Emphatic Stress Hypothesis, and will call the alternative which I am arguing for the Destressing Hypothesis. Not surprisingly, the two hypotheses make different predictions.

In labeling items as "given" or "old information", I will be assuming the discussion by Prince (1979) and will use her paper as a basis for defining the terms I use. Discourse entities (which are always noun phrases, although not all noun phrases are discourse entities) can be considered new information only if they are "brand new" or "unused" as defined by Prince. Discourse entities are old information if they are "evoked" or already "on the counter" either textually or situationally; discourse entities are also old information if they are "inferrable."

Consider sentences (2) and (3), which are marked for stress using Jackendoff's (1972) notation and for

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intonation using Pike's (1945) notation.

(2) Maxwell killed the judge with a HAMMER.

(3) In TRENTON, a courtroom SPECTATOR killed a Mercer County JUDGE with a HAMMER.

For a number of reasons, sentence (3) rather than (2) would be more appropriate as the lead item of a news story. Notice that (2), with a single focus is a sentence which, according to Jackendoff, has the unmarked stress pattern. The other foci which occur on the noun phrases in (3) must be added to the unmarked pattern by the Emphatic Stress Rule, which can add stress to any phrase. By shortening (3), it is possible to give it the same stress pattern as (2). This shortened version would be (4).

(4) In TRENTON, a spectator killed a judge with a HAMMER.

Interestingly, sentence (4), with the putative unmarked stress pattern, is still less appropriate than (3) as the initial item of a newscast, although it is more appropriate than (2). In (2), the use of the definite article and the use of a first name suggest that both the judge and Maxwell are somehow being evoked, having been introduced earlier in the discourse.

If we assume that (4) rather than (3) has the unmarked stress pattern, there are a number of unsolved problems. First, if (4) is the unmarked case, with no dependence on context, why is it inappropriate as the initial item of a news story? Second, if emphatic stress can be added to any element of a sentence, why does (3) seem lacking in any particular emphasis, in contrast to (5) in which certain words seem decidedly emphatic?

(5) In TRENTON, a COURTROOM spectator KILLED a Mercer County judge with a HAMMER.

Finally, if (4) is the unmarked case, but if for some reason the speaker wished to indicate that the judge in question had already been introduced into the discourse, how would it be possible to destress this old information, since a judge is not prominent in the first place?

If we make the opposite assumption, that the pattern of stress in (3) is the unmarked case and that in (2)

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and in (4) there has been destressing of two of the noun phrases, it is clear that (4) is only one member of a paradigm which is completed by the (B) examples in (6)-(12). In order to show that these sentences need not be emphatic nor contrastive, I have put them into appropriate contexts.

(6) A: What happened?

B: A/SPECTATOR killed a JUDGE with a HAMMER.

(7) A: What did he say that a spectator did?

B: A/spectator killed a JUDGE with a HAMMER.

(8) A: Have they found out who killed that judge from Trenton?

B: A/SPECTATOR killed the judge with a HAMMER.

(9) A: What was he saying about a hammer?

B: A/SPECTATOR killed a JUDGE with a hammer.

(10) A: Who was the guy who did that courtroom hammer killing in Trenton?

B: MAXWELL killed the judge with a hammer.

(11) A: Did Maxwell really kill someone with a hammer?

B: Maxwell killed a JUDGE with a hammer.

(12) A: What weapon did the spectator use in that courtroom murder?

B: The/spectator killed the judge with a HAMMER.

An examination of the contexts, or A sentences, and the responses, or B sentences, shows that in most cases, the responses are not interchangeable. For example, (9B) is not an appropriate response to (7A).

(7A) What did he say that a spectator did?

(9B) \* A/SPECTATOR killed a JUDGE with a hammer.

The only exceptions are that most of the B responses can occur in the context of (6a), "What happened?". What this indicates is that this neutral question does not need to be discourse-initial. For example:

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(6A) What happened?

(5B) A/SPECTATOR killed the judge with a/HAMMER.

This exchange would be odd, unless we assumed a context in which a particular judge is already part of the discourse. Both the destressing of the judge and the use of the definite article make this interpretation probable.

By assuming that (6B) is the unmarked stress pattern, the remainder of the examples can easily be accounted for, for in each case, the discourse entities which are destressed are old information. If we were to assume that (12B) were the unmarked stress pattern, it would be necessary to motivate the fact that emphatic stress has been placed on certain words, but not others. In (9B) it would be necessary to explain both the destressing on hammer and the stress on spectator and judge.

(9B) A/SPECTATOR killed a/JUDGE with a hammer.

Although the Destressing Hypothesis seems to account for the facts better than the Emphatic Stress Hypothesis, I believe that it is worth speculating about why the idea of a single focus has such intuitive appeal. The answer lies, I believe, with the fact that it is very easy to confuse stress with intonation. It is true that the word spectator has greater salience in (7B) than in (6B), but it is also true that the word hammer has more salience than the word judge in (6B). Bolinger, in articles collected in Bolinger (1965) and Fry (1958) have shown that differences which have traditionally been attributed to stress are based on perceptions of differences in fundamental frequency. It is true that hammer has greater salience than judge in (6B), but this is due to the fact that hammer has a long falling contour, a characteristic sentence-final contour, whereas judge has a short fall, a characteristic non-final contour. Referring to sentence-final contours as sentence stress would be just a harmless notational variant if it weren't so misleading. With the use of the more accurate term, sentence-final contour, it is no longer difficult to identify hammer as more salient than judge in (6B) due to a difference in intonation, and spectator in (6B) as more salient than spectator in (7B) due to a difference in stress.

In addition to the fact that the Destressing Hypothesis accounts for facts unexplained by the Emphatic Stress Hypothesis, there are also empirical differences between the two. Fortunately for purposes of comparison,

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Jackendoff's (1972:230) working definitions of focus and presupposition are roughly equivalent to the terms new information and old information as I have been using them.

As working definitions, we will use "focus of a sentence" to denote the information in the sentence that is assumed by the speaker not to be shared by him and the hearer, and "presupposition of a sentence" to denote the information in the sentence that is assumed by the speaker to be shared by him and the hearer.

Consider the differences in presuppositions between (6B) and (8B).

(6B) A SPECTATOR killed a JUDGE with a HAMMER.

(8B) A SPECTATOR killed the judge with a HAMMER.

Assuming the Destressing Hypothesis, I would claim that in (8B) the presupposition (or old information) indicated by the stress pattern would be the judge, since it is destressed. I would claim that no presuppositions are indicated by the stress pattern in (6B) since nothing is destressed. By contrast, Jackendoff's hypothesis would allow the two sentences to have the following presuppositions:

(6B) a. no presuppositions

b. Someone killed someone (with something):  
(x killed y (with z) is under discussion)

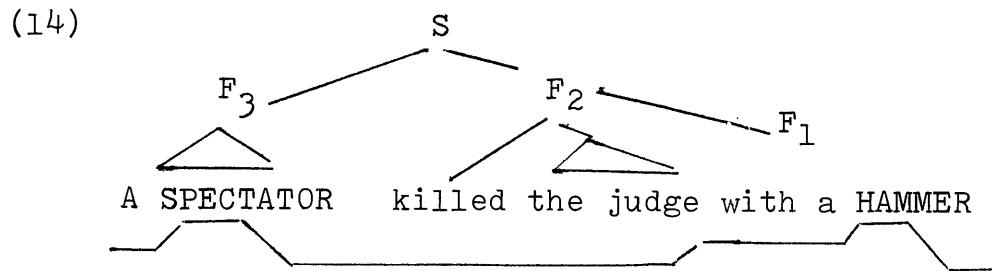
(8B) a. No presuppositions

b. Someone killed someone (with something).

c. Someone killed the judge with something.  
(x killed the judge with z is under discussion)

The claim that it is possible to interpret (8B) as having no presuppositions is based on arguments in Chomsky (1970) that final focus may be interpreted as either  $F_1$  or  $F_2$  in sentences such as (14).

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If Jackendoff's claims are correct, there is no explanation for why either (6B) or (8B) could not be the initial item of a news story (or by similar reasoning, why (7B) or (12B) could not be the initial items of a news story).

The fact is that the stress pattern in (8B) does indicate a presupposition, that is, the presupposition that judge is old information, or is under discussion. The Destressing Hypothesis correctly predicts that the stress pattern indicates no presupposition in (6B), but that the judge is presupposed in (8B).

In addition to the fact that the Emphatic Stress Hypothesis makes the wrong predictions, it is also less constrained than the Destressing Hypothesis. The Destressing Hypothesis claims that entities which are new information will always have prominence in the unmarked case. The Emphatic Stress Hypothesis claims that additional prominence is added to whatever element the speaker wishes to receive focus. The Destressing Hypothesis predicts that (16) will be more highly marked than (15), since a Mercer County judge has been de-stressed in (16).

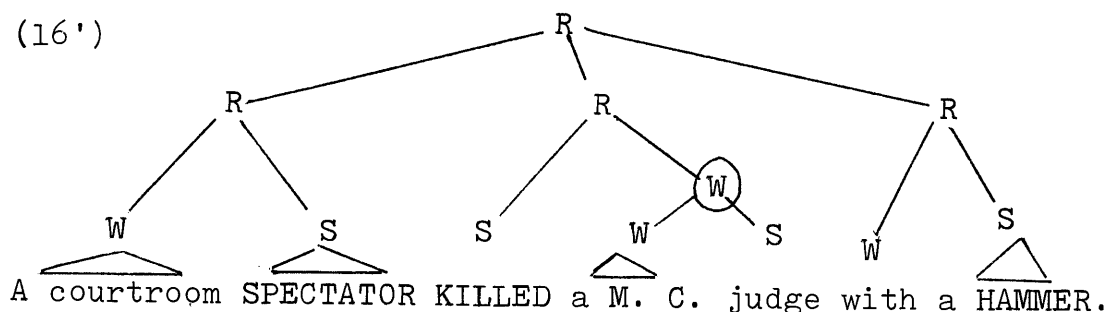
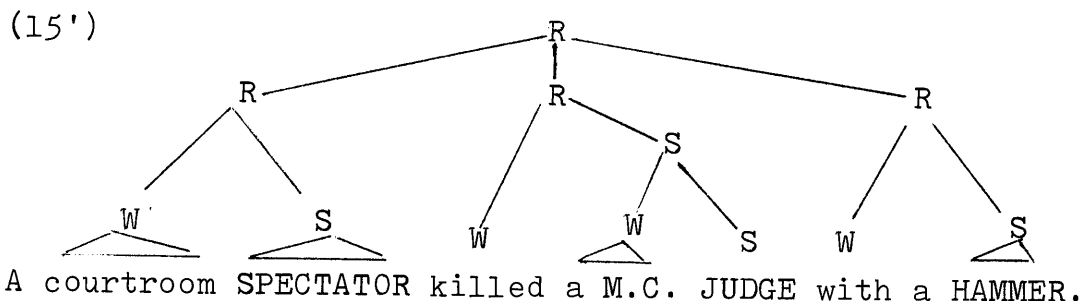
(15) A courtroom SPECTATOR killed a Mercer County JUDGE with a HAMMER.

(16) A courtroom SPECTATOR KILLED a Mercer County judge with a HAMMER.

Simplified metrical trees based on Liberman and Prince (1977) and Bing (1979a) show the underlying patterns of prominence for (15) and (16) in (15') and (16') respectively.

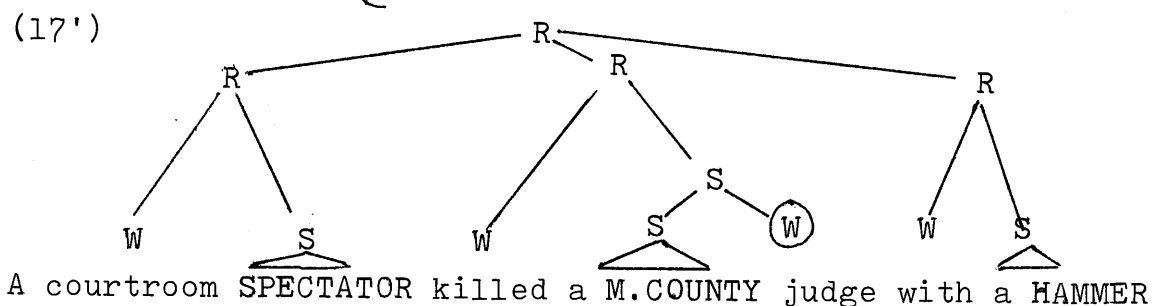


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Similarly, (17) will be judged as more highly marked than (15) because of the destressing of judge in (17); the metrical tree is shown in (17'). The Emphatic Stress Hypothesis does not distinguish between (15) and (17).

(17) A courtroom SPECTATOR killed a Mercer COUNTY judge with a HAMMER.



The Destressing Hypothesis is not new; it has frequently been noted in the literature that old information is destressed. It can be formalized fairly easily as proposed in Bing (1979b). The Destressing Hypothesis is more constrained, and accounts for more data than the Emphatic Stress Hypothesis. Finally, the predictions made by the Destressing Hypothesis about presuppositions or old information are more accurate than those made by the Emphatic Stress Hypothesis.

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