The Discourse Function of Inversion in English

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THE DISCOURSE FUNCTION OF INVERSION IN ENGLISH

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To Andrew
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This dissertation presents a discourse-functional account of English inversion, based on an empirical study of natural language data. The central finding is that inversion is subject to a pragmatic constraint on the information status of its constituents; specifically, the information represented by the preposed constituent must be at least as familiar within the discourse as is that represented by the postposed constituent. Thus, what is relevant for felicitous inversion is the relative, rather than the absolute, status of these two constituents; moreover, the constraint makes reference to the status of this information within the discourse, as opposed to the (assumed) knowledge store of the hearer. Distinguishing among these factors—i.e., familiarity to the hearer vs. familiarity within the discourse, and relative vs. absolute familiarity—makes it possible to formulate a single pragmatic constraint that accounts for all of the data in the corpus. Of more than 1700 tokens in the corpus, in no case does the preposed constituent represent newer information within the discourse than does the postposed constituent. Based on this finding, it is proposed that inversion serves the information-packaging function of allowing the presentation of relatively familiar information before relatively unfamiliar information.

A second finding is that inferrable information—that is, information that has not been explicitly evoked in the prior discourse but which may plausibly be inferred from evoked information—is treated as though it had been explicitly evoked in the discourse; that is, its distribution in inversions is the same as that of explicitly evoked information. Finally, it is shown that the main verb in a felicitous inversion must be 'informationally light' in that it must not represent information that is new to the discourse.

In subsequent work, I have revised and expanded the research originally reported on in this thesis. One important revision has to do with the class of verbs that participate in inversion. In the material in chapter 5, I explicitly accept the findings of previous studies that argue
that the verb in an inversion must be an unaccusative verb of existence or appearance. I then go on to show that the verb is subject to a pragmatic constraint, and argue that the restriction to unaccusative verbs of existence or appearance is directly due to this constraint. Specifically, I show that the main verb in an inversion must not represent information that is new to the discourse (i.e., the verb must be informationally light), after which I suggest that inversion is restricted to unaccusative verbs of existence or appearance precisely because such verbs are the ones that most straightforwardly satisfy this constraint. In Birner 1995a, however, I argue that in fact inversion is not restricted to either unaccusative verbs or verbs of existence or appearance, but rather that the pragmatic constraint alone is sufficient to account for the distribution of verbs seen in inversion. An examination of the data reveals that even such indisputably unergative verbs as work, preach, and march may in fact appear felicitously in inversion, precisely when the context renders them informationally light as discussed in chapter 5. Thus, although it remains true that the preponderance of inversion verbs are indeed unaccusative verbs of existence or appearance, other verbs may also appear in inversion when this constraint is satisfied.

Since the completion of the dissertation, I have expanded on and developed this line of research in a number of directions, particularly toward the development of discourse-functional generalizations both crosslinguistically and across broad classes of constructions within a single language. For example, the study reported in Birner & Mahootian 1996 compares inversion in English with PP inversion in Farsi, and finds that both constructions are subject to the same pragmatic constraint on the relative information status of the preposed constituent and the subject NP, despite differences in linear word order. Farsi is a verb-final, SXV language; thus, the PP canonically appears after the subject and before the verb. Farsi inversion results in XSV word order, retaining the verb in clause-final position. This linear order is analogous to that of English topicalization; however, Farsi inversion and English topicalization are not subject to the same pragmatic constraint. Rather, the PP in a Farsi inversion is required to represent information that is at least as familiar within the discourse as that represented by the subject NP. That is, despite differences in linear word order, the reversal of constituents in Farsi inversion is subject to the same constraint on the relative information status of those constituents as is the reversal of constituents in English inversion.

Birner 1996 presents an analysis of English by-phrase passives, and shows that the same constraint on the relative information status of the reversed constituents holds for this construction as well; that is, the
subject NP of the passive must represent information that is at least as familiar within the discourse as that represented by the NP within the by-phrase. Based on these findings and those for English inversion and Farsi inversion as discussed above, I hypothesize (Birner in prep.) that argument-reversing constructions in general are sensitive to the relative information status of the reversed constituents.

Ward & Birner 1996 compares inversion, existential there-insertion, and presentational there-insertion in English, all of which involve a postposed subject, and finds that in all cases the postposed subject represents information which is new in some sense—either relatively (in the case of inversion) or absolutely, and either new within the discourse (in the case of presentational there) or new to the hearer (in the case of existential there). This constraint is found to not hold, however, for right-dislocation, which differs in that it contains a pronoun coreferential with the dislocated constituent in that constituent’s canonical position. Moreover, this construction would be inappropriate to the function of postposing new information, since that would require the anaphoric pronoun to also represent new information, which in turn would violate the constraint that such pronouns represent information that has been evoked in the prior discourse.

Birner & Ward 1996 expands this study of postposing constructions crosslinguistically, to include Italian subject postposing, Italian ci-sentences, Yiddish es-sentences, and Farsi inversion, as well as English inversion, existential there-sentences, and presentational there-sentences. Again, all are found to postpose information that is new in some sense—either to the hearer or to the discourse, and either relatively (in the case of inversion) or absolutely (in all other cases).

In Birner & Ward in prep., this line of research culminates in a large-scale study of English preposing and postposing constructions, in which it is argued that preposing constructions in English require the preposed constituent to represent information that is given in some sense (again, either to the discourse or to the hearer, and either absolutely or relatively), postposing constructions require the postposed constituent to represent information that is new in some sense, and argument-reversing constructions require the postposed constituent to represent information that is newer than that represented by the preposed constituent.

In this way, the detailed study of constraints on individual constructions, based on the examination of large corpora of natural language data, has led to the development of ever broader crosslinguistic and intralinguistic generalizations regarding the correlation of syntactic form and discourse function. It is to be hoped
that such investigations will eventually lead to the development of a
broad-ranging theory of the correlation between form and function in
discourse.

Parts of this dissertation have appeared elsewhere in revised form. Most notably, the material in chapter 4 has been published, in somewhat revised and reorganized form, as Birner 1994, and portions of chapter 5 relating to the intonation of inversion appear in Birner 1995b.
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The Discourse Function of Inversion in English
1

Introduction

It has long been a primary goal of linguistic research to make explicit the implicit competence possessed by a native speaker of a language, but only in recent years has the relationship between form and function in discourse been recognized as an integral part of this competence. If we hope to adequately model a speaker's linguistic knowledge, it is insufficient merely to investigate the rules governing the grammaticality of linguistic forms; researchers must likewise investigate the circumstances under which these forms may be used, and the influence of context not only on the acceptability or unacceptability of a given syntactic form, but also on the interpretation induced by the use of that form. Without an understanding of the appropriate use of linguistic signs, it will be impossible to fully understand natural-language discourse, and equally impossible to model it computationally.

It is well documented that a speaker may exploit the interaction between discourse context and propositional meaning to give rise to conversational implicatures; that these implicatures are not tied to the form of the utterance is evidenced by their NONDETACHABILITY (Grice 1975). A speaker may also, however, exploit the interaction between the discourse context and the syntactic form itself for the purpose of structuring the information represented by the utterance either internally or with respect to other information believed to be (or desired to be, or soon to be) in the hearer's discourse model. That is, while natural languages provide their speakers with a variety of syntactic forms for conveying a single semantic proposition, the speaker's selection from among the available options may serve an information-packaging function (Chafe 1976, Valduvi 1992, inter alia).
A speaker's use of a syntactic construction with a particular discourse function, then, will license the hearer to infer that the relationship between the information represented by the utterance and other relevant information in the discourse is appropriate to this discourse function. If such a relationship does not hold, the utterance is infelicitous.

Given that the syntactic options available to a speaker are language-specific, we may assume that the mapping of discourse functions to syntactic constructions is similarly language-specific; it has moreover been demonstrated that similar syntactic forms may be used in different languages or dialects for different pragmatic purposes (e.g., Prince 1981a, 1986). Thus, constraints on the appropriate use of syntactic forms are both conventional and (at least to some degree) arbitrary, and represent an important aspect of a native speaker's linguistic competence.

One of the syntactic options available to speakers of English is INVERSION, exemplified in 1:

1. (a) Labor savings are achieved because the crew is put to better use than cleaning belts manually; <also eliminated> is <the expense of buying costly chemicals>.
   [WOODEXTRA, August 1988]

   (b) George, can you do me a favor? <Up in my room, on the nightstand,> is <a pinkish-reddish envelope that has to go out immediately>.
   [T.L., 7/24/89, on the telephone]

   (c) Expressions like "geezer," "codger," "fuddy-duddy," "old goat" obviously disparage the old person. <Not so obvious> are <the euphemisms "umpteen years young" and "Golden Ager">. Meant to be flattering, such terms assume that old age is repugnant.
   ["Let's drop the language of ageism," Chicago Tribune, 3/15/90, sec. 1, p. 25]

   (d) Usually on a Saturday Route 111 is buzzing with shoppers pillaging the malls hacked from the former fields of corn, rye, tomatoes, cabbage, and strawberries. <Across the highway, the four concrete lanes and the median divider of aluminum battered by many forgotten accidents,> stands <a low
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building faced in dark clinker brick that in the years since Harry watched its shell being slapped together of plywood has been a succession of unsuccessful restaurants and now serves as the Chuck Wagon, specializing in barbecued take-outs>. The Chuck Wagon too seems quiet today.

[Updike 1981:7]

(e) You can drive as fast as you like in the outside lane on a West German highway and may feel like the king of the road—until you look in the rear mirror. <Zooming in on you like a guided missile> comes <a rival contender, bullying you to get out of the way>.

“Cars are used as weapons,” says Herbert Schnoor, Interior Minister of the state of North Rhine-Westphalia. “The road has become an arena.”

[“Should Germany brake the world’s fastest highways?”, Chicago Tribune, 8/8/89, sec. 5, p. 1]

What the italicized sentences in 1 have in common is that the NP of which some location, status, or activity is being predicated (i.e., the logical subject) appears to the right of the verb, with some other constituent appearing to the left of the verb, where the subject would canonically appear. These preposed and postposed constituents appear in angled brackets.

While many attempts have been made to ascribe a function to inversion, I will show in chapter 3 that no function yet proposed can adequately account for the distribution of inversions occurring naturally in discourse. Instead, I will demonstrate in chapter 4 that there is a strong correlation between the position of a constituent in an inversion and the familiarity within the discourse of the entity represented by that constituent. It is my goal to show that inversion is basically an information-packaging mechanism, allowing the presentation of relatively familiar information before a comparatively unfamiliar logical subject. In this way, inversion serves in essence what Green (1980) has called a CONNECTIVE FUNCTION, relating the information represented by the inversion to the surrounding context in a coherent manner. The primary advantage of this approach over previous analyses is its emphasis on relative, rather than absolute, information status, and on different types of givenness (Prince 1981b, 1992). Moreover, an analysis of naturally-occurring tokens of inversion
indicates that evoked and inferrable information are treated alike with respect to inversion.

While the corpus also shows a significant asymmetry in terms of the morphological definiteness of the preposed and postposed constituents, this asymmetry is due to the fact that while inversion is sensitive to discourse-familiarity, definiteness is sensitive to hearer-familiarity (Prince 1992). The results of this study further suggest that the restriction of the verb in an inversion to either be or an unaccusative verb of existence or appearance (Firbas 1966b, Levin 1991, inter alia) is due to pragmatic factors; specifically, the verb must not represent new information in the discourse. Finally, a comparison of the results of this research with those reported in Prince 1992 indicates that discourse-familiarity correlates not with subjecthood but rather with relative sentence position.

1.1 METHODOLOGY

Researchers in linguistics have typically adopted one of two possible avenues for investigating native-speaker competence, basing their conclusions either on intuitions (their own or informants') regarding constructed data, or on an examination of naturally-occurring data. Both approaches, however, are imperfect. Intuitions reported by informants (or obtained by the researchers' introspection) may reflect what they believe they would say, or what they have been taught is correct, rather than what they actually produce in natural settings; such processing factors as sentence length and complexity may also interfere with one's ability to accurately report on one's own linguistic competence. A large corpus of naturally-occurring data culled from a variety of linguistic contexts provides the researcher with language as it is actually used; however, naturally-occurring data will inevitably contain performance errors and therefore cannot be considered a perfect reflection of a speaker's competence. The best approach may be a combination of the two, with intuition suggesting directions for research and serving as a check on the naturally-occurring data collected.

The present study is based in part on an examination of a large corpus of non-randomly collected naturally-occurring tokens of English inversion. The corpus contains 1778 tokens, 1661 of which are from written sources and 107 of which are from spoken sources (with the sources of the remaining 10 being indeterminate). The preponderance of written tokens reflects in large part the relative difficulty of collecting spoken tokens, particularly when one is trying to obtain for study not only the inversion itself but also the context in which it
appeared. Although inversions do occur in conversation, by the time the inversion is recognized it is often too late to recall the entire sentence verbatim, much less the preceding context. Thus, while it is entirely possible that inversion is less common in spoken than in written English, the proportions in the corpus should not in themselves be taken as evidence for this.²

The method of collection of the tokens, as noted above, was non-random; the corpus used represents a joint effort by Beth Levin, Gregory Ward and myself, and includes tokens noted by us and donated to us by others. The corpus, therefore, reflects the particular instances of inversion that happened to be both encountered and noticed by its contributors, and hence is not necessarily a representative sample. For this reason, it would be inappropriate to draw conclusions regarding proportions of various types or characteristics of inversion based on their proportions in the corpus. However, conclusions can be drawn concerning what occurs (and, much more tentatively, what does not seem to occur) in inversion in English based on a corpus of this size. In the absence of any evidence to the contrary, for example, it seems reasonable to assume that if some inversion type is both well represented in the corpus and intuitively grammatical, then it is in fact grammatical. This type of argument will be used in chapter 3 to counter several previously made claims regarding what is and is not possible in inversion. Additionally, given the size of the corpus and the variety of sources drawn from, strong patterns evident in such factors as type of verb and relative familiarity of elements can be considered highly suggestive of patterns in English inversion in general. Thus, while a 3:2 ratio in the corpus for some factor cannot and will not be taken as evidence for a 3:2 ratio for this factor among English inversions in general, a 95% or 100% occurrence in the corpus of some characteristic can and will be taken as highly suggestive that this characteristic holds for most or all acceptable inversions in English, respectively. Strong patterns and correlations in the corpus will be offered as supporting evidence for claims made in chapters 4 and 5.

1.2 CODING FACTORS

Each token in the corpus was coded for the following characteristics:
- Canonical word order acceptability.
- Source: Written or spoken.
- Phrasal categories of the preposed and postposed constituents.
Relative information status: The status, in terms of assumed familiarity (Prince 1981b), of the information represented by the preposed and postposed constituents.

New topic: Whether the topic of the next clause is the same as, a subset of, or inferentially related to, the information represented by either the preposed or postposed constituent.

Open proposition: Whether an 'open proposition' (Prince 1986) roughly consisting of the information represented by the preposed constituent and the verb may be assumed to be salient in the discourse at the time the inversion is uttered. (See chapter 5 for discussion.)

Verb: The verbal material appearing between the preposed and postposed constituents—i.e., the main verb or, in cases where the main verb is preposed (VP inversion), auxiliary be.

Transitivity of verb.

Active vs. passive verb.

Locativity of verb: Whether the verb denotes or suggests spatial or temporal location, motion or direction. (See chapter 2 for discussion.)

Verb agreement: Whether the verb agrees with the postposed constituent.

Verb tense.

Morphological definiteness or indefiniteness of the postposed constituent and any NPs appearing in the preposed constituent.

Embeddedness: Whether the inversion is embedded within a higher clause.

Polarity.

Locativity of preposed constituent: Whether the preposed constituent denotes or suggests spatial or temporal location, motion or direction. (See chapter 2 for discussion.)

Formal weight: Whether the preposed or postposed constituent seems clearly 'heavier', or longer and/or more syntactically complex (Hartvigson and Jakobsen 1974).
The relevance of many of these coding factors will become apparent in later chapters. It should be noted that for some of these characteristics, such as topichood, an objective decision could not always be made. Details of the coding process are discussed at length in Appendix A, where the results for all coding factors are presented.

Analysis of the data was facilitated by the use of a database program, PC-File version 5.01, which provided quick access to, and counts of, tokens with selected characteristics and combinations of characteristics. Most of the statistical information presented in this work is the result of calculations performed by PC-File.

### 1.3 ORGANIZATION

This book is organized as follows: In chapter 2, inversion is defined and differentiated from superficially similar constructions, including preposing, subject- auxiliary inversion, quotation inversion, and there-insertion. The different syntactic types of inversion are listed and discussed in turn. In chapter 3, previous accounts of inversion are discussed, with a strong emphasis on functional accounts, and various difficulties with these analyses are presented. Chapter 4 presents and defends the major claims of this work regarding the discourse function of inversion; these claims are situated as an outgrowth of recent work on the functions of syntax, and their implications for current theory are discussed. Chapter 5 presents an investigation into the classes of verbs that appear in various inversion types, and examines pragmatic constraints on these verbs; the chapter ends with an examination of the relationship between intonation and the discourse function of inversion. Chapter 6 contains a summary, a brief discussion of implications for the study of related constructions, and suggestions for further research.

### 1.4 NOTATIONAL CONVENTIONS

Whenever possible, the examples provided in this work represent naturally-occurring instances of inversion culled from the corpus. Such tokens are presented with attribution, given in square brackets at the end of the token. Where the source is a book, the author, year, and page number are given; full bibliographic information is given in “Sources for Tokens” at the end of the book. Where no attribution is presented, the example has been constructed. When context is provided for a token, the inversion itself is italicized. The preposed and postposed constituents are generally given in angled brackets for clarity.
Many constructions in many languages have been termed 'inversion'; but while many researchers have dealt with inversion, few have attempted to define it. Likewise, although much has been written specifically about locative inversion, little has been said regarding its definition or how it is to be distinguished from other inversion types. In this chapter, I propose a definition of inversion and discuss the syntactic types of inversion that occur. Inversion is defined so as to exclude related phenomena such as subject-auxiliary inversion, preposing, and there-insertion, which are discussed below. It should also be noted that, although similar phenomena occur in other languages, this study will be limited to a discussion of English inversion.

2.1 DEFINITION AND TERMS

The term 'inversion' traditionally refers specifically to the appearance of the logical subject to the right of the main verb and its auxiliaries or, in the case of VP inversion, to the right of the auxiliary be, as in 1.

1. <Complicating the picture> is <the widespread antipathy to the formation of political parties, a holdover from the years in which the word “party” meant domination of all by an elite few>. [S. Englerberg, “Poland hits some bumps on the road to democracy”, NYT Week in Review, 6/24/90, p. 2—token provided by Beth Levin]
At the same time, some canonically post-verbal constituent (in 1, the VP complicating the picture) appears in clause-initial position, although such 'preposing' has been variously considered to be everything from a necessary precursor of inversion to an optional or irrelevant factor. In this work I will restrict myself to those inversions which contain some preposed constituent, excluding clauses such as those italicized in 2 (cf. Green 1982).

2. (a) Enter John Smith, a 40-year-old lawyer from Brooklyn.

(b) 'Comes the revolution,' said Misha, 'we'll all eat strawberries and cream.'

[=Green 1982:140, ex. 50b]

As will become clear later, such clauses are both syntactically and functionally distinct from inversion as it is defined here. (The view that inversion is somehow dependent on preposing is discussed below.)

Thus, for the purposes of this study, inversion will be defined as follows:

3. An INVERSION is a sentence in which the logical subject appears in post-verbal position while some other, canonically post-verbal, constituent appears in clause-initial position.

The reason for the lack of parallelism between the terms POST-VERBAL (as opposed to 'clause-final') and CLAUSE-INITIAL (as opposed to 'pre-verbal') in this definition is that, as seen in 1, an inversion may begin with a verb, ruling out reference to the VP as a 'pre-verbal' element, while on the other hand, the logical subject may not necessarily be the clause-final element in an inversion, as illustrated in 4.

4. <In the garden> sat <an old man> unhappily.

While I will discuss below certain syntactic properties of inversion, it is not my goal to present a syntactic analysis. The correct syntactic analysis of inversion remains controversial (see Kuno 1971, Green 1985, Safir 1985, Bresnan and Kanerva 1989, Levine 1989, Coopmans 1989, Rochemont and Culicover 1990, Bresnan 1990, and Hoekstra and Mulder 1990, inter alia), and to the extent that it is possible, I wish to
Definition and Preliminary Taxonomy

remain neutral on this issue. Thus, for example, my use of the term ‘inversion’ is not meant to suggest a multi-stratal, movement-based analysis, but rather to accord with traditional terminology for clarity. Similarly, reference to the PREPOSED or POSTPOSED element in an inversion is not intended to imply a movement-based account, but rather to afford maximal consistency within the literature. (Likewise, I intend the term AUXILIARY VERB to be taken in a strictly traditional sense, comprising modals, progressive be, passive be, perfect have, and auxiliary do.)

Surprisingly, not all inversions have an acceptable canonical-word-order (henceforth CWO) counterpart. In many cases, the non-correspondence can be explained; for example, the failure of the CWO counterparts in 5b and 6b to convey the same understanding as the inversions in 5a and 6a can be accounted for as a case of Gricean implicature.

5. (a) The General Assembly vote was 108-9. <Joining the United States in opposing the resolution> were <Israel and El Salvador and the six eastern Caribbean nations allied with the operation—Antigua, Barbados, Dominica, Jamaica, St. Lucia, and St. Vincent>.

(b) The General Assembly vote was 108-9. #Israel and El Salvador and the six eastern Caribbean nations allied with the operation—Antigua, Barbados, Dominica, Jamaica, St. Lucia, and St. Vincent—were joining the United States in opposing the resolution.

6. (a) The most visually enticing selection is the chocolate “delice”: a hatbox-shaped dessert made of dark chocolate and filled with berries and white chocolate mousse. <Surrounding the creation> is <a mosaic of four fruit sauces>.
[JeanMarie Brownson, “Carlos’ new chef keeps excellence as top menu item,” Chicago Tribune, 7/7/89, sec. 7, p. 29]

(b) The most visually enticing selection is the chocolate “delice”: a hatbox-shaped dessert made of dark
chocolate and filled with berries and white chocolate mousse. *A mosaic of four fruit sauces is surrounding the creation.*

The details of this analysis are presented by Birner and Ward (1992), and are sketched below in the discussion on VP inversion.

Other cases in which the CWO variant is unacceptable, however, are less easily explained. Some, for example, are due to a lack of agreement between the postposed NP and the verb, as in 7 and 8:

7. (a) The office isn’t so big but pretty crowded. Usual things, ledgers, files, and docket books. *<On the wall> is <two Winchester rifles, a Savage high-powered weapon, and a shotgun>....* [Upfield 1950a:179]

    (b) *Two Winchester rifles, a Savage high-powered weapon, and a shotgun is on the wall.

8. (a) *<On the title page of this report of this “Grossaktion”, as the Germans called it,> was inscribed in decorative Gothic lettering <the words, there are no more Jewish dwellings in Warsaw>.* [Hartvigson and Jakobsen 1974:60, ex. 67]

    (b) *In decorative Gothic lettering the words, there are no more Jewish dwellings in Warsaw, was inscribed on the title page of this report. ...

There has been some disagreement in the literature over the subjecthood of the postposed item; thus, it could be argued that examples such as those in 7 and 8 support a view of the preposed constituent as subject. However, only 21 tokens in the corpus showed agreement with the preposed constituent; the vast majority showed agreement with the postposed NP. Bresnan (1990) presents an excellent review of subjecthood tests as applied to English inversion and offers an LFG-based analysis of subjecthood within inversion, concluding that the preposed PP is the subject at the level of functional structure but not at the level of surface structure. See also Levine 1989 for a GPSG-based account of subject-verb agreement in inversion.

Finally, there is a small class of inversions whose CWO variant is ungrammatical for reasons that are still unclear:
9. (a) I saw a Confederate soldier on horseback pause under
my window. He wheeled and fired behind him, rode a
short distance, wheeled and fired again. *Coming up
the street* rode *a body of men in blue*.
[The Civil War, PBS, 9/90]

(b) ?? A body of men in blue rode coming up the street.

10. (a) He could see nothing on it until his gaze extended to
a wide circular patch recently drenched by one of the
sprinklers, and *crossing that patch* went *the
man’s foot-marks and the woman’s shoe imprints*.
[Upfield 1940:119]

(b) ?? . . . the man’s foot-marks and the woman’s shoe
imprints went crossing that patch.

I have no explanation for these data, other than to note that in each case
the verb seems not to subcategorize for the particular VP in question;
i.e., rode cannot take coming up the street as a complement, nor can
went take crossing that patch as a complement. Notice, however, that
the CWO variant of 9a becomes flawless when the verbs are switched:

11. A body of men in blue came riding up the street.

And, not surprisingly, the inverted variant of 11 is perfectly
grammatical:

12. Riding up the street came a body of men in blue.

However, switching the verbs in the CWO variant of 10a results in the
ungrammatical 13:

13. * . . . the man’s foot-marks and the woman’s shoe imprints
crossed going that patch.

Obviously, 13 violates subcategorization restrictions on the verb cross.

2.2 RELATED CONSTRUCTIONS

The inversions being considered in this work have often been classed
together with, or viewed as derived from, constructions as diverse as
preposing and *there*-insertion. Before going on to consider the various
types of inversion to be discussed, therefore, it is worthwhile to
consider first the constructions with which inversion has been
connected in the literature, and the reasons for rejecting the proposed
connections.

2.2.1 Preposing. Inversion differs from preposing, exemplified in
14a, in that preposing involves only the fronting of some constituent,
while the verb and its auxiliaries remain to the right of the subject.

14. (a) The point of transformations is to change a base form
into a specific structure. *Into this derived structure then, lexical items are inserted.*
[=Ward 1988:156, ex. 313]

(b) Into this derived structure, then, are inserted lexical items.

The inverted variant of 14a is 14b, in which the logical subject *lexical items* appears post-verbally.

Many researchers (e.g., Aissen and Hankamer 1972, Hartvigson
and Jakobsen 1974, Emonds 1976, Green 1980, Coopmans 1989, and
Rochemont and Culicover 1990) have claimed that inversion
(minimally, locative/directional inversion) is triggered by, or otherwise
preceded by and dependent on, preposing (or ‘topicalization’ in
Rochemont and Culicover 1990). The claim is that, given a preposed
constituent, inversion of the subject and verb will occur in some
circumstances and not in others, which in turn determines whether the
sentence will be a preposing (no subject-verb inversion) or an inversion
(preposing plus subject-verb inversion). If such a view is adopted,
however, it will be necessary to explain the fact that the preposing in
14a and the inversion in 14b are equally grammatical and equally
felicitous in context, as well as why inversion is required in 15 and 16
but impossible in 17 and 18:

15. (a) Michael puts loose papers like class outlines in the
large file-size pocket. He keeps his checkbook handy
in one of the three compact pockets. The six pen and
pencil pockets are always full. And *<in the outside pocket> go <his schedule book, chap stick, gum, contact lens solution and hair brush>*.
[Lands' End March 1989 catalog, p. 95]
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16. (a) <Coming over the wire> are <some comments on judicial retentions>.
[National Public Radio, 11/8/88]

(b) ?? Coming over the wire some comments on judicial retentions are.

17. (a) Col. Potter: ‘M*A*S*H’ means ‘mobile’ and mobile you shall be!
[=Ward 1988:60, ex. 119]

(b) ?? . . . and mobile shall be you!

18. (a) One factor is the Irani belief that there is no greater deed than to die for Iran. And dying they are, by the thousands.
[=Ward 1988:192, ex. 409]

(b) ?? . . . And dying are they, by the thousands.

That is, if preposing triggers inversion, we must be able to explain why this triggering occurs optionally in some cases (14), obligatorily in others (15-16), and is not permissible at all in others (17-18). Coopmans 1989 attempts to provide a syntactic account of the optionality of locative inversion, but in 15-18 the (b) examples seem pragmatically, rather than syntactically, unacceptable. For example, while the PP preposing in 15b is infelicitous in the context given, the syntactically parallel preposing in 19 shows that the form itself is not ungrammatical.

19. A: I'd like you to put my schedule book, chap stick, gum, contact lens solution and hair brush in the outside pocket.
B: No problem; in the outside pocket they go.

Thus, it is unlikely that a preposing-based analysis will be able to fully account for the occurrence or non-occurrence of inversion. (See also
Levine 1989 for syntactic arguments that inversion is not “a species of topicalization” (1989:1029).)

Moreover, if inversion is in fact triggered by and dependent on preposing, it follows that the function of inversion should subsume the function of preposing. If, for example, as Hartvigson and Jakobsen (1974) propose, preposing occurs and inversion may then be triggered or not, depending on the relative syntactic and informational ‘weight’ of the subject and verb (see chapter 3), the function of a given inversion should be composed of the function of the incorporated preposing plus the additional function of postposing the relatively ‘heavy’ subject.

This correlation, however, is not supported by the data. Ward (1988) demonstrates that preposing serves to mark the referent of the preposed constituent as a backward looking center (Grosz, Joshi, and Weinstein 1983). A backward looking center is defined as “a discourse entity which is related to the set of previously evoked discourse entities . . . via a SCALAR relation, where a SCALE is defined as any partially ordered set” (Ward 1988:4). Thus, a preposed PP such as that in 14a functions as a bridge between the NP it contains and previously evoked salient entities (1988:157).5

If Hartvigson and Jakobsen are correct, an inversion such as 20a should be the product of the preposing in 20b and subsequent inversion due to two rabbits being syntactically and/or informationally heavier than lived.

20. (a) In a little white house lived two rabbits.

[=Green 1980:589, ex. 15a]

(b) In a little white house two rabbits lived.

The discourse function of 20a should then subsume that of 20b; that is, 20a should mark the NP a little white house as a backward looking center, related by some scalar relation to a set of previously evoked discourse entities. But 20a is discourse-initial, the first sentence of a story; consequently, it is unlikely that there exists a salient set of (mutually believed to be) previously evoked discourse entities to which a little white house is being related. (For this reason, 20b is infelicitous as the first sentence of a story.) Thus, the function of preposing does not apply consistently to inversion, and inversion cannot, therefore, be considered to be the sum of preposing and subsequent weight inversion.6

2.2.2 Subject-auxiliary inversion. Inversion as defined here and subject-auxiliary inversion, exemplified in 21, have sometimes been
classified together under the rubric of 'inversion' (e.g., N. McCawley 1977; Green 1980, 1982), since both involve the appearance of the subject after some portion of the verbal complex composed of the main verb plus its auxiliaries.

21. (a) Am I ever tired!
   (b) Was John at the fair?
   (c) Never have I seen such cowardice.
   (d) Had I eaten the peanut, I would have been poisoned.

However, in subject-auxiliary inversion (hereafter SAI), only the first auxiliary verb appears before the subject (as in 21c-d), whereas in inversion all auxiliaries plus the main verb (except when the main verb itself is preposed in VP inversion) appear before the subject:

22. *With the fever* had come *the stiffness in his neck and back*, but when the fever broke and he stopped vomiting—when the headaches were over and the shaking chills were gone, and he wasn't even nauseous anymore—that was when he noticed the paralysis.
   [Irving 1985:411]

In a sentence like 21b, where there is only be, there may seem to be no difference between the two cases, but adding another auxiliary verb distinguishes between them:

23. (a) Will John be at the fair?
   (b) Had John been at the fair?
   (c) *Will be John at the fair?
   (d) *Had been John at the fair?

Also, in SAI there may or may not be a preposed constituent before the auxiliary, as illustrated in 21; inversion as defined here, on the other hand, always involves a fronted constituent (Penhallurick 1984). The definition of inversion assumed here is more restricted than that presented in Green 1982, where inversions are defined as "declarative constructions where the subject follows part or all of its verb phrase" (1982:120). Such a definition, however, could—depending on the analysis—include not only SAI, but also existential and presentational there-insertion, right-dislocation, and extraposition, all of which are arguably distinct from inversion on both syntactic and functional grounds. In later work, Green (1985) treats inversion and
She notes a number of syntactic and semantic differences between the two, including the fact that while inversion occurs with only a limited class of verbs (see chapter 5), SAI is not similarly constrained.

Penhallurick (1984) also describes a wide range of distinctions between SAI and inversion, including the infelicity of postposed pronouns in most inversions and the fact that inversion requires an intransitive or passive verb (see chapter 5). Similarly, Hooper and Thompson (1973) list a number of syntactic, semantic and functional factors distinguishing SAI from other constructions, including inversion. Certainly SAI can be seen to be functionally distinct from inversion; for example, the SAI that occurs in yes/no questions (as in 21b) does not appear to serve any other function than that of questioning a proposition, a function which has never been (and is not likely to be) attributed to inversion (as defined here) or any subtype thereof. 7

2.2.3 Quotation inversion. Quotation inversion, exemplified in 24, clearly qualifies as a type of inversion under the definition in 3 above, in that the logical subject appears post-verbally, with the (direct or indirect) quotation in initial position.

24. (a) "I think the hyper-cars are more hype than anything," said Larry Carlat, editor of Toy And Hobby World.
["Wheeling 'n' dealing," Chicago Tribune, 11/21/89, sec. 5, p. 1]

(b) The makers of Simplesse attempt to pull off this fat charade by taking egg albumen and/or milk whey and reducing it to microparticles, says Dr. Robert Moser, vice president for medical affairs for Simplesse Co.
["Taste buds may say it's ice cream—but it's not," Chicago Tribune, 2/23/90, sec. 1, p. 20]

Indeed, several researchers (e.g., Hartvigson and Jakobsen (1974), Green (1980), and Penhallurick (1984)) have classed such quotation inversions together with other inversions in attempting to assign a discourse function to the class of inversion as a whole. However, there are significant differences at all linguistic levels between these inversions and others; I will argue that quotation inversion, being
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syntactically, semantically and intonationally distinguishable from other inversions, is also functionally distinct.

First, quotation inversion is the only inversion type that may occur with an active transitive matrix verb (excluding such complex verb-NP pairs as take place; see chapter 5). Moreover, quotations permit a variety of orderings beyond CWO and inversion; in fact, the constituents of quotation inversion may appear in any order—including having the NP and verb appear parenthetically inside the quotation—so long as the subject NP and the verb remain adjacent:

25. (a) NOW PLAYING: Rambo III. Sylvester Stallone does his part to keep the Cold War alive, battling cartoonishly brutal Russians in Afghanistan even as, in real life, the personable Gorbachev is withdrawing Soviet troops. Writes L.A. Weekly critic John Powers, "His diction (always bad) is now incomprehensible, as if his ego has grown so big that it now fills his mouth like a cup of mashed potatoes." [Slansky 1989:239]

(b) One progresses through a maze of offices and outdoor sets (a tenement alleyway, a Western street, a Victorian porch) and past row after row of that greatest and most cherished of Hollywood perks, the personalized parking space ("John Milius", one reads; "Harold Ramis", proclaims another). ["Brian De Palma thinks we need more violence in our lives", Philadelphia Magazine, Philadelphia Inquirer, 2/12/84, p. 15—token provided by Gregory Ward]

(c) Also there are strict new regulations concerning how taxpayers should cheat. "If a taxpayer wishes to deduct an imaginary business expense," the IRS instruction booklet states, "then he or she MUST create a pretend financial record by clumsily altering a receipt from an actual transaction such as the rental of the videotape 'Big Nostril Mamas.'"

When preparing your return, you should be sure to avoid common mistakes. The two most common taxpayer mistakes, states the IRS booklet, are (1) "failure to include a current address," and (2)
"failure to be a large industry that gives humongous contributions to key tax-law-writing congresspersons."

[Dave Barry, "1040 tips 4U (see col. 4, para. 2),"
Chicago Tribune Magazine, 2/25/90, p. 25]

In addition to the 'canonical', but not necessarily most common, NP-verb-quotation (NP-V-Q) word order, we find V-NP-Q (25a), Q-NP-V and Q-V-NP (25b), and Q-NP-V-Q and Q-V-NP-Q (25c). This freedom of word order is not characteristic of the constituents of any other inversion type. Also, quotation inversion seems to be the only inversion type that occurs with a preposed sentential constituent.8

Quotation inversion is obviously semantically distinguishable from other inversions in that it occurs only with direct or indirect quotation, and requires a verb of saying (say, write, note, recall, etc.). It is, moreover, intonationally distinct as well. As can be demonstrated by uttering the tokens in 24 aloud, the post-verbal NP would be pronounced with a low pitch accent (L*), whereas all other inversion types are typically pronounced with a high pitch accent (H*) on the post-verbal NP (see also Hartvigson and Jakobsen 1974:79, Green 1980:591).9 This, however, is not surprising if the function of quotation inversion differs from that of other inversions, as seems to be the case. (See chapter 5 for discussion of intonation and the discourse function of inversion.) Consider, for example, 26:

26. Judith Exner, who has led a life of poor choices and worse luck, finally has a decent fellow at her side, reveals April Vanity Fair. It's the son she never knew.

Exner, 56, is a drab footnote to the high-handed legacy of John F. Kennedy.

["Judith Exner's No. 1 man: Her 'lost' son brightens a life soiled by illness and a long-ago tryst," Chicago Tribune, 3/15/90, sec. 5, p. 2]

As will be demonstrated in chapter 4, all other inversion types can be seen to mark the relative status of the information represented by the preposed and postposed constituents; the preposed element represents relatively familiar information in context. The inversion in 26, however, begins an article; thus, Judith Exner has not been evoked in the discourse, nor does she or the information preceding reveals represent inferrable information. The fact that the article goes on to tell the reader who Exner is indicates that the NP is not intended to represent generally
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known, 'unused' information (in the sense of Prince 1981b), as is Vanity Fair, which requires no such explanation. Thus the preposed element, unlike the postposed element, represents brand-new information. Such examples are common; the postposed NP denoting the speaker very often represents familiar information (in extended dialogues, for example), while the information in the preposed quotation represents new information. Therefore, such inversions clearly do not serve the function argued in chapter 4 to be shared by other inversions.

Since quotation inversion has been seen to differ significantly from other inversions at virtually every level of the grammar, I will consider it a distinct phenomenon, and have therefore excluded it from further consideration in this study.

2.2.4 There-insertion. Finally, it has frequently been claimed that inversion, particularly locative inversion (as in 27a), is closely related to there-insertion (henceforth TI), exemplified in 27b and c; many authors in fact consider them to be essentially the same construction.

27. (a) In the garden sat a little rabbit.
(b) There sat in the garden a little rabbit.
(c) In the garden there sat a little rabbit.

I will first briefly survey some of the works taking such an approach, and then present evidence that TI and inversion are distinct constructions (see also Toribio 1992).

Penhallurick (1984) and Hartvigson and Jakobsen (1974) maintain that TI is a type of inversion in which there appears for pragmatic reasons. Hartvigson and Jakobsen extend their analysis of inversion to encompass TI, maintaining that TI serves to preserve the basic distribution of 'communicative dynamism' (1974:62). Penhallurick argues that there can be used to fill the pre-verbal position, as in 27b, when both the postposed subject and the locative represent new information, and that it can also be used with a preposed locative, as in 27c, "when something is out of sight or less concrete, factors which make for harder processing" (1984:50). He cites Bolinger (1977), who argues that "'existential' there is an extension of locative there," and that there-less inversion "presents something on the immediate stage (brings something literally or figuratively BEFORE OUR PRESENCE) whereas [TI] presents something to our minds (brings a piece of knowledge into consciousness)" (1977:91-4).

Kuno (1971) argues that the basic word order of English existential sentences is locative-verb-NP, as in 27a, and that the locative is
postposed and replaced with *there*, a locative pronoun, in sentences such as 27b. However, Kuno recognizes that there are problems with this analysis. For example, as Kuno himself notes, there exist *there*-insertions which do not contain a locative, such as in 28:

28. (a) There are *there*-sentences which lack locatives.  
(b) There will be no more money left.  
(c) There are two more weeks of school.  
[=Kuno 1971, ex. 96a-c]

Kuno proposes that the analysis of *there* as a locative pro-form may be saved by positing a semantically empty locative element in sentences like 28, a solution which is by his own admission ad hoc. Moreover, Kuno's analysis has the "unpleasant effect", as he puts it (1971:377), that the derivation of 27c requires first the postposing and then the subsequent preposing of the locative.

Recent syntactically-based studies relating TI and inversion include Lumsden 1988, Coopmans 1989, and Rochemont and Culicover 1990. Lumsden presents an analysis of inversion wherein *there* is present at s-structure but not realized in PF,\(^ {10} \) Coopmans similarly considers locative inversion to be a case of optional semi-pro-drop. Rochemont and Culicover, interestingly, argue that a sentence such as that in 29, containing a heavy post-verbal NP and only one d-structure complement of the verb, is derivationally ambiguous:

29. Into the room walked a man no one recognized.  
[=Rochemont and Culicover 1990:105, ex. 18]

They claim that such a sentence may be derived either as an inversion\(^ {11} \) or as an instance of TI in which *there* is optional.

It is not my purpose here to present a syntactic analysis of *there*-insertion; clearly there is much that remains to be said about TI and its similarities (or lack thereof) to inversion. However, I do wish to demonstrate that the two are not variants of a single construction—that is, that inversion (or, more narrowly, 'locative inversion') is not simply *there*-insertion with *there* optionally omitted; nor, alternatively, is TI simply locative inversion with *there* standing in as a pro-form for the locative. (See also Milsark 1974 for arguments that existential *there* is distinct from locative *there.*)

Let us begin by considering the claim that *there* in TI is a pro-form of the locative. First, note that not all *there*-insertions are in fact locative, as illustrated in 28 above. Second, dummy *there* participates in
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subject-auxiliary inversion (Milsark 1974:15), while the preposed locative of locative inversion does not:

30. (a) There will stand a duck salesman outside the door.
(b) Will there stand a duck salesman outside the door?
(c) Outside the door will stand a duck salesman.
(d) *Will outside the door stand a duck salesman?
[cf. Milsark 1974, ex. 6a-f]

Finally, while there are locative inversions with an initial there which is clearly anaphoric to some salient location, in these cases there is accented:

31. (a) We drove down a lane of poplars, past a wide lawn on which sheep grazed, and <there, around the curve,> lay <the monastery—a large farmhouse with wings added on, enclosed by a high wooden wall>. [Colwin 1990:218—token provided by Beth Levin]
(b) A probable twenty-five miles lay between him and the hut tenanted by Dot's friend. There lay safety, for about the hut the land was free from grass, as to a greater extent it was free about the wells and tanks of Windee. [Upfield 1931:204—token provided by Beth Levin]

In the examples in 31, there is anaphoric to a location evoked in the immediately prior context; hence, there in such contexts is indeed a pro-form of the locative, and these examples are inversions. However, these occurrences of there would be accented in oral production. The there of TI (as in 28 above), on the other hand, is deaccented, and a reading of 31a-b with deaccented there—that is, as TI—is distinctly odd (as would be an accented there in TI). Thus, the relevant sentences in 31 exemplify locative inversion and not TI; similarly, we can conclude that true instances of TI, with deaccented there, are not instances of locative inversion with anaphoric there.

Let us now consider the proposal that locative inversion (as in 27a) and there-insertion with a preposed locative (as in 27c) are variants of a single construction with optional pro-drop. It is important to note that the proposed relationship is typically framed in terms of locative inversion rather than inversion in general; in fact, the vast majority of non-PP, non-locative inversions in the corpus are either unacceptable as
there-insertions or seem quite different in structure with (unstressed) dummy there:

32. (a) <Voted best supporting actor in a TV series> was <Lionel Stander> for his crusty chauffeur’s role in “Hart to Hart”.

(b) ??Voted best supporting actor in a TV series there was Lionel Stander for his crusty chauffeur’s role in “Hart to Hart”.

33. (a) Just last week, Kohl and Mitterand announced that their countries planned to develop a helicopter.
<More important> has been <France’s strong and vocal support for NATO’s decision to deploy the new missiles and its condemnation of Western European pacifism>.
[“What worries the French now is the rise of pacifism in Germany,” Philadelphia Inquirer, 11/27/83, p. 16-A—token provided by Gregory Ward]

(b) ??More important there has been France’s strong and vocal support for NATO’s decision to deploy the new missiles and its condemnation of Western European pacifism.

In 32, the addition of dummy there renders the sentence odd. In 33, the addition of dummy there renders the sentence acceptable only with a pause before there, on a reading where there has been NP is a clause modified by more important. (The written sentence in this case would generally contain a comma before there.) On this reading the sentence is no longer an inversion. Thus, the motivation for considering TI and inversion to be the same construction does not exist for non-locative inversions. (See Green 1985 and Levine 1989, inter alia, for more examples of this sort, as well as syntactic arguments against the proposed connection.)

One could claim that the relationship therefore exists only between TI and locative inversion, but here we find theoretical difficulties. If they were in fact two variants of a single construction, one would
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expect either that they would occur in free variation (i.e., that the rules governing the use of this construction would apply equally to both of them) or that they would occur in complementary distribution (i.e., that there would be rules governing which of them would be used in a given context, as with allophones). However, neither seems to be the case. Consider 34-36:

34. (a) At 3:30 p.m. Monday, at a pizzeria, *up* walked *a 17-year-old youth with a set of keys*.

   ["Beeper lets car-theft victim reach out and catch the thief," *Chicago Tribune*, 7/13/89, sec. 1, p. 10]

   (b) ??At 3:30 p.m. Monday, at a pizzeria, up there walked a 17-year-old youth with a set of keys.

35. (a) To the left of the altar one of the big wall panels with rounded tops opens, it is a secret door like in a horror movie, and <out of it> steps <Archie Campbell> in a black cassock and white surplice and stole.

   [Updike 1981:242]

   (b) ??... out of it there steps Archie Campbell in a black cassock and white surplice and stole.

36. (a) I filmed David, age twelve, plucking lint off his underwear. . . . David’s undershirt, like several of its predecessors, is about to fall apart. He has, in a sense, picked it “clean.”

   <Under David’s bed> is <his entire lint collection, the result of three years of thread-pulling>.

   [Rapoport 1989:188—token provided by Gregory Ward]

   (b) ??Under David’s bed there is his entire lint collection, the result of three years of thread-pulling.

Although the (b) sentences have acceptable readings wherein *there* is interpreted deictically, they are unacceptable as instances of TI. Thus it is not the case that all instances of locative inversion will permit *there*-insertion. (See also Green 1985 and Bresnan 1990 for more examples of this type and discussion; cf. Lumsden 1988 for arguments to the
contrary.) Similarly, not all instances of TI with a preposed locative are equally acceptable without there.\textsuperscript{12}

37. (a) How was it that at this moment, for the first time, there darted through Gwendolen, like a disagreeable sensation, the idea that this man knew all about her husband's life?
[Elliot 1876:618—token provided by Beth Levin]

(b) ??How was it that at this moment, for the first time, darted through Gwendolen, like a disagreeable sensation, the idea that this man knew all about her husband's life?

38. (a) But at the centre of his own faith there always stood the convincing mystery—that we were made in God's image.
[cited in Erdmann 1976:139]

(b) ??But at the centre of his own faith always stood the convincing mystery—that we were made in God's image.

39. (a) Every day at eleven and at four there occurred meetings of the O.O.s. (Organizing Officers), called respectively the coffee-meeting and the tea-meeting, and presided over by Miss Casement and Miss Perkins, where the "cuties", as Evans called them, gathered together to discuss matters of office procedure and feminine interest.
[=Hartvigson and Jakobsen 1974:71, ex. 167]

(b) ??Every day at eleven and at four occurred meetings of the O.O.s. (Organizing Officers). . . .

On the other hand, many there-insertions with preposed locatives are equally acceptable without there (i.e., as a locative inversion), and many inversions are equally acceptable with there inserted:\textsuperscript{13}

40. (a) Finally, ahead of them there loomed what seemed to be a hill of stone.
[L'Engle 1962:83—token provided by Beth Levin]
(b) Finally, ahead of them loomed what seemed to be a hill of stone.

41. (a) On the grass there shone a film of dew, gossamer-white in the sunshine, with firm black trails of footsteps across it, like a diagram in a detective story. [=Hartvigson and Jakobsen 1974:70, ex. 164]

(b) On the grass shone a film of dew.

42. (a) Behind the counter stood a middle-aged man. [Potok 1990:188—token provided by Beth Levin]

(b) Behind the counter there stood a middle-aged man.

43. (a) Over the men came a fury of work, a fury of battle. [Steinbeck 1969:403—token provided by Lori Levin]

(b) Over the men there came a fury of work, a fury of battle.

Since locative inversion and there-insertion with a preposed locative are neither in free variation nor in complementary distribution, it seems likely that they are distinct constructions governed by distinct sets of rules, resulting in a partial overlap of contexts of application.

2.3 INVERSION TYPES

The definition and exclusions discussed above delimit a natural class of intuitively related linguistic phenomena; within this class there are several potential ways of cutting up the inversion pie, based on syntactic, semantic, lexical, and/or pragmatic criteria. As will be demonstrated below under PP inversion, however, many of these classes of criteria cross-cut rather than complement each other. The discussion that follows classifies inversions by the syntactic category of the preposed constituent. A more complex taxonomy based on syntactic, semantic and pragmatic correlations will be presented in chapter 5.

Categorizing inversion types based on the type of preposed constituent they contain, we find five major classes of preposed
elements: PPs, VPs, AdjPs, NPs, and AdvPs, distributed in the corpus as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP inversion</td>
<td>1286</td>
</tr>
<tr>
<td>VP inversion</td>
<td>282</td>
</tr>
<tr>
<td>AdjP inversion</td>
<td>112</td>
</tr>
<tr>
<td>NP inversion</td>
<td>34</td>
</tr>
<tr>
<td>AdvP inversion</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>48</td>
</tr>
</tbody>
</table>

The tokens classified as "other" include inversions whose preposed constituents I had difficulty classifying (e.g., involving two preposed constituents of different types). Each of the above five major inversion types will be discussed in turn.

2.3.1 PP inversion. By PP inversion, I mean inversions with an initial PP, such as those in 44:

44. (a) <To the west, on the other side of the CTA’s elevated tracks,> lies <the Cabrini-Green public housing project, an urban disaster story>.
[“A satisfactory end to a silly suit,” Chicago Tribune, 2/26/90, sec. 1, p. 10]

(b) <On any public beach> can be found <yuppie males, or even older stiffs, who devote long hours at the health club to developing their lats and pecs>.
[M. Royko, “Fairness, equality, and going topless,” Chicago Tribune, 6/28/89, sec. 1, p. 3]

(c) He was making tea and warming his deeply lined, cracked hands on the pot—<under his ragged nails> was <the mechanic’s permanent, oil-black grime>.
[Irving 1985:291]

I also include as PPs preposed locative and temporal adverbials of the type illustrated in 45:

45. (a) The experienced reporters had all brought binoculars, and from their high perch in the balcony of the Kremlin’s Palace of Congresses yesterday afternoon, they intently watched the members of the Politburo file onto the stage. <Here> came <Yuri V. Andropov,
thin and stooped, walking with his unmistakable shuffle>.
["All eyes are on the Politburo: Has anybody seen Chernenko?", Philadelphia Inquirer, 4/23/83, p. 1—token provided by Gregory Ward]

(b) For minutes Nevin lost them. For seconds Burning Water lost them. Then they would see the tracks ahead of Bony's horse ridden by a relentless human hound. <Now and then> could be seen southward through the scrub <the vista of the great plain parallel to which the tracks were running on and on before Bony>: now down into a gully, now over a sand-crowned summit where grew no scrub and from which vantage point could be seen the plain and the rolling border of the high land extending to the promised couch of the sun.
[Upfield 1940:121]

(c) To be eligible, an ambassador must maintain an official residence in Washington. That ruled out the diplomatic representative from Western Samoa, who was next in line but doesn't live in Washington. <Next> was <the southwestern Pacific nation of Tuvalu,> but its ambassador already had been transferred elsewhere.
["'Mr. senior diplomat, sir, Where on earth were you?'", Chicago Tribune, 6/28/89, sec. 1, p. 2]

See Jackendoff 1973 for evidence that such words as here, now, then, and next as used here are in fact prepositions.

It should also be noted that such sentences are to be distinguished from non-inversions which contain an initial PP subject, as in 46:

46. Out by the lake is the last place the mailman goes.
[A.B., conversation, 4/21/89]

Notice that on the intended reading ('the mailman goes out by the lake last'), out by the lake is the logical subject, of which 'the last place the mailman goes' is predicated. (Compare the inversion reading, 'the last place the mailman goes (e.g., the barbershop) is located out by the lake'.) As Bresnan (1990, 1992) points out, such PPs behave as surface
subjects in ways that the initial PP of PP inversion does not; for example, they undergo subject-auxiliary inversion and show agreement with the pronominal in tag question formation:

47. (a) Is out by the lake the last place the mailman goes?
   (b) Out by the lake is the last place the mailman goes, isn’t it?

As 48 demonstrates, locative inversion does not undergo subject-aux inversion, and the initial PP does not agree with the tag-question pronoun:

48. (a) In the town lived a little boy named Johnny.
   (b) *Did in the town live a little boy named Johnny?
   (c) *In the town lived a little boy named Johnny, didn’t it?

See also Levine 1989 for discussion of the distinction between sentences like 46 and inversion.

PP-initial inversions have probably been the most frequently studied inversion type, albeit generally under the rubric of ‘locative inversion’. Locative inversion, though often discussed in the literature, has usually been defined by example only, and the relationship between locative inversion and other inversion types has generally been left unspecified.

Locative inversion is typically exemplified by inversions containing a matrix verb other than be, and a preposed semantically ‘locative’ PP. However, these correlations are not absolute. For example, there certainly exist semantically locative inversions around be, as in 44c; the corpus contained 430 such tokens. Likewise, while sentences with pre-verbal PPs accounted for the vast majority of inversions with verbs other than be in the corpus (1096/1124, or 98%), such verbs also occur in VP inversions, as exemplified in the VP-inversion section below, and many PP-initial inversions (213/1309, or 16%) have be as their main verb, as in 44c above. Thus, there is no perfect correlation between verb class (be vs. non-be) and either locativity or preposed PPs.

Finally, while discussions of locative inversion are generally restricted to inversions with a pre-verbal PP, there were 251 non-PP inversions in the corpus with preposed constituents denoting location, as in 49:
49. Weeds had taken over the path, showing no sign of
damage from the movement of the gate or the tramp of
feet. <Flanking the gates> were <low walls topped with
railings>.

[Grant-Adamson 1986:11—token provided by Beth
Levin]

Thus, the correlation of locativity, verb selection, and preposed
constituent type is imperfect.

Nevertheless, the term ‘locative inversion’ has been used almost
exclusively to denote PP inversions around verbs other than be, and
discussions of PP inversion have concentrated almost exclusively on
locative inversion. One reason for this is that, as noted above, PP
inversion occurs with verbs other than be far more frequently than any
other inversion type occurs with these verbs; moreover, the vast
majority of PP inversions are semantically locative (see chapter 5).
However, given that these correlations are not absolute, it does not
appear that a subclass of locative inversion can be defined in terms of
parallel syntactic, semantic and lexical distinctions; there seems to be
no one-to-one mapping among these factors. Therefore, since there
seems to be no reason to identify locative inversion either with PP
inversion or with be-less inversion, I shall reserve the term ‘locative
inversion’ to indicate all and only those inversions with a semantically
locative preposed constituent, regardless of the verb and the syntactic
type of the preposed constituent. 15

Finally, in view of the frequency with which the term ‘locative’ is
used with respect to inversion, I will take a moment here to discuss its
meaning. By locative I mean to designate a rather large class of
expressions that denote or suggest a spatial or temporal location,
motion, or direction (either absolute or relative to some other entity), or
are metaphorically construable as locative in this sense. Under this
definition, all of the preposed PPs in the inversions in 50 would be
considered locative:

50. (a) There are barrels of whole wheat flour. There are
huge cartons and tins of nuts, vanilla, honey, peanut
butter. Varieties of herb tea are visible. <On the
counter> are <loaves—whole wheat, cinnamon
raisin, oatmeal, rye, soy sunflower, corn meal>.

[Terkel 1974:607]
(b) There was a side road flanking this hedge. One gate opened on to the side road, and there was another gate fronting the main highway. The latter was open, and as he approached it, a car backed out. *<From the car> alighted <the man who had been pointed out to him on the bus as Clarence B. Bagshott>.*

[Upfield 1946:156—token provided by Beth Levin]

(c) The Supreme Court decision follows earlier Bush administration assertions of authority to go abroad to seize persons indicted by U.S. courts, in disregard of foreign jurisdictions and sovereignties. *<Before that> were <American attempts to enforce U.S. company, banking and securities legislation abroad, in defiance of foreign sovereignties>.*

["The high court's pernicious ruling that 'We're No. 1'", William Pfaff, *Chicago Tribune*, 3/6/90, sec. 1, p. 17]

On the counter in 50a is spatially locative, situating the loaves in physical space. *From the car* in 50b is directional, indicating movement in some direction in physical space (i.e., out of a car), and the preposed *before that* in 50c is temporally locative, indicating a point in time.

Lyons (1968) includes spatial and temporal locatives and directionals within his class of 'local' functions. Lyons argues that "the term 'local' must be understood to include temporal as well as spatial distinctions, since these are commonly brought together in the 'orientational' systems associated with different languages" (1968:298-9); he moreover considers the terms 'locative' and 'directional' to be neutral with respect to the distinction of space and time. Likewise, spatial and temporal locatives and directionals seem to behave as a class with respect to inversion; I therefore group them together under the umbrella term 'locative'.

Also included as locative are comitatives, as in 51:

51. VISITING BOULDER ABBEY: Mother Teresa pays a Saturday afternoon visit to St. Walburga's, an abbey east of Boulder. *<With the Nobel Peace Prize winner> are <Archbishop Francis Stafford, Mother Mary Thomas Beil*
Definition and Preliminary Taxonomy

and the Very Rev. Marcian O’Meare, who is vicar for religious affairs for the Denver archdiocese. [caption below photo accompanying article “Nun to send missionaries to Colorado,” Boulder Camera, 5/21/89, p. 7A]

Here, the preposed comitative with the Nobel Peace Prize winner is locative in that it serves to locate the individuals mentioned in the postposed NP with respect to Mother Teresa in the photo.

Tokens in which the preposed constituent is metaphorically construable as locative include those in 52:

52. (a) As is always the case about this time of the season, the natives have begun to get restless, to ask themselves whether all the tourist dollars are worth the abuse that has come with the conversion from a placid peninsula to one of America’s most popular and overcrowded summer playgrounds.

<Beneath the grumbling, endemic to any resort area,> however, is <the inescapable reality that Cape Cod has changed drastically in recent years>. [“On Cape Cod, charm ebbs as numbers grow,” Philadelphia Inquirer, 9/6/83, p. 2-A—token provided by Gregory Ward]

(b) Consumers are showing a renewed taste for extravagance. <Among the most popular items> are <high-fashion clothes and high-tech gadgetry>.

[“Tidings of Profit and Joy,” Time, 12/5/83, p. 68—token provided by Gregory Ward]

In 52a, beneath the grumbling represents not a literal spatial relationship, but rather an abstract relationship expressed metaphorically in locative terms. Similarly, in 52b the preposed PP among the most popular items situates the high-fashion clothes and high-tech gadgetry within an abstract field of popular items. How to best delimit what counts as an abstract locative, however, and whether these should be classed together with concrete locatives, remains controversial; see Bolinger 1977 and Bresnan and Kanerva 1992 for discussion.
Finally, I include as locative any constituent containing a semantically locative constituent, such as a VP containing a locative PP, as in 53:

53. He opened the door and took a folded canvas bucket from behind the seat. *<Coiled on the floor> lay <a one-hundred-and-fifty-foot length of braided nylon climbing rope three-eighths of an inch thick>*.

[=Birner and Ward 1992, ex. 17]

Here, although *coiled* is not intrinsically locative, the PP *on the floor* renders the larger VP *coiled on the floor* locative. Support for this analysis is provided in chapter 5, where it is shown that preposed VPs containing embedded locative PPs pattern with other preposed locatives in inversion.

For the purposes of this study, then, I will take to be locative those phrases that denote or suggest a spatial or temporal location, motion, or direction, or are metaphorically construable as locative in this sense, as discussed above. This definition is imperfect, I recognize, in that it leaves a good deal of room for subjective interpretation; nonetheless, for present purposes it adequately captures a class that is not only intuitively coherent but also behaves coherently with respect to inversion (see chapter 5).¹⁶

2.3.2 VP inversion. VP inversion refers to inversions with a preposed verb phrase, as in 54:

54. (a) *<Co-sponsoring the event along with the Archdiocese of Denver> was <Citizens for Responsible Government, which has backed pro-life ballot initiatives in Colorado>*.

["Nun to send missionaries to Colorado," *Boulder Camera*, 5/21/89, p. 7A]

(b) *<Included on the menu> are <traditional choices such as French onion soup, smoked salmon with caviar, beef with three mustard sauces and salmon with herbs>*.

[JeanMarie Brownson, “Carlos’ new chef keeps excellence as top menu item,” *Chicago Tribune*, 7/7/89, sec. 7, p. 29]
(c) <Suspended from her belt> hung <her knife, her tobacco pouch and her mug>.
[Munthe 1929:87—token provided by Beth Levin]

As illustrated in these examples, the preposed VP can be headed by either a present participle or a past participle, and the verb following this preposed constituent is very often, but not always, be.

Such inversions display an interesting interaction between syntax and pragmatics, as discussed in Birner and Ward 1992. That is, while inversions and their CWO counterparts are semantically equivalent, there exists a non-truth-conditional asymmetry between the interpretation of certain VP inversions and that of their CWO counterparts. Consider 55a-b:

55. (a) Free elections were held yesterday in Czechoslovakia for the first time since the war. The main opposition party was losing the election.

(b) Free elections were held yesterday in Czechoslovakia for the first time since the war. Losing the election was the main opposition party.

(c) The main opposition party lost the election.

[=Birner and Ward 1992, ex. 1]

From the CWO variant in 55a, one could plausibly infer that the completed interpretation (55c) does not hold, or that the speaker doesn’t know whether it holds; from the inversion in 55b, however, one could reasonably infer that the completed interpretation does hold. In Birner and Ward 1992, we discuss how this difference in interpretation between inversion and CWO can arise. As noted by Bennett and Partee (1972), Dowty (1979), and Stump (1985), inter alia, a sentence in the past progressive, such as 55a, unlike one in the preterit, such as 55c, does not necessarily entail completion. In fact, use of the past progressive may in many contexts induce an inference of non-completion, as in 55a. This inference can be accounted for as a Quantity-based implicature (Grice 1975, 1978; Horn 1972, 1984; McCawley 1978; Dowty 1979; Stump 1985; Hirschberg 1991; inter alia), whereby the use of a less informative form indicates that the additional information represented by a more informative form is false, unknown or otherwise inappropriate. Thus, the use of the past
progressive rather than the preterit form can implicate that the more informative preterit is inappropriate—i.e., can implicate non-completion, as in 55a. The inverted variant in 55b, however, lacks an inverted preterit form with which it can compete in this way, and hence lacks the implicature of non-completion. 18

Thus, the absence of a Gricean implicature associated with the use of inverted past progressives arises from the absence of a competing preterit form. This restriction in turn follows from a grammatical constraint on VP inversion — specifically, that be is unique among auxiliary verbs in allowing VP inversion (Birner and Ward 1992), as illustrated in 56-58:

56. (a) Swimming across the lake is/was John Smith.
(b) *Swim/swam across the lake does/did John Smith.

57. (a) Running through the park has/had been John Smith.
(b) *Run through the park has/had John Smith.

58. (a) Competing in the marathon will/would be John Smith.
(b) *Compete in the marathon will/would John Smith.

[=Birner and Ward 1992, ex. 5-7]

That it is the presence of be, and not the participle, which is necessary is illustrated in 59:

59. (a) Criticized often for drunkenness is/was John Smith.
(b) *Criticized often for drunkenness gets/got John Smith.

[=Birner and Ward 1992, ex. 8]

Given that the absence of an inference of non-completion associated with the use of inverted past progressives arises from the absence of a competing preterit form, we can predict that when a competing inverted preterit form exists, the use of the inverted progressive will in fact license an inference of non-completion, as in 60:

60. (a) Driven from office for accepting bribes was Senator John Williams of Vermont.
(b) Being driven from office for accepting bribes was Senator John Williams of Vermont.

[=Birner and Ward 1992, ex. 13]

As expected, the inverted passive progressive in 60b licenses the same inference of non-completion as would the CWO variant, given that there exists a competing inverted simple passive (60a) which conveys completion.

Progressives introduced by (non-auxiliary) verbs other than be have no corresponding preterit form either as inversions or in canonical word order:

61. (a) Counting to five sat Little Johnny Jones.
    (b) *Count to five sat Little Johnny Jones.

62. (a) Little Johnny Jones sat counting to five.
    (b) *Little Johnny Jones sat count(ed) to five.

[=Birner and Ward 1992, ex. 15-16]

Here there is no competition between forms, and therefore no implicature of non-completion associated with either the inversion (61a) or the CWO variant (62a).

2.3.3 AdjP inversion. Inversion with a preposed adjective phrase is illustrated in 63:

63. (a) <Immediately recognizable here> is <the basic, profoundly false tenet of Movie Philosophy 101, as it has been handed down from “Auntie Mame” and “Harold and Maude”>: Nonconformism, the more radical the better, is the only sure route to human happiness and self-fulfillment.
    [Dave Kehr, “Good acting moments bolster ‘Family Business,’” Chicago Tribune, 1989]

(b) The minimal syntactic theory introduced relies on phrase structure. [. . . ] <Much more prominent than theory> is <methodology—i.e., argumentation and syntactic reasoning>—because an important goal of
the book is guiding readers to think of grammatical analyses as empirically motivated. [Kaplan 1989:x]

(c) Far fewer applications, however—typically less than 5%—are found to contain gross misrepresentations, investigators say. *<Even rarer,> according to these experts, is <the kind of wholesale fraud that Pennsylvania authorities have alleged in the Crafton case, in which a cultured, 59-year-old engineer is said to have taught at 7 colleges under 5 names and operated elsewhere under as many as 34 aliases>.*

[Philadelphia Inquirer, 4/10/83, p. 1-B—token provided by Gregory Ward]

There is only one token in the corpus that might be considered an AdjP inversion with a main verb other than *be*:

64. They left the top of the mountain and plunged into the shadow of the March night trees. *<Black across the clouds> flapped <the cormorant,> screaming as it plummeted downward and disappeared into the wood.*

[L’Engle 1945:332—token provided by Beth Levin]

It is likely, however, that the preposed constituent here is not an AdjP with a PP complement, but rather a PP with an adjective specifier; this analysis is supported by the fact that *flap* typically takes a PP rather than an AdjP complement. All other AdjP inversions in the corpus (112) have *be* as their main verb.

Many of the AdjP inversions in the corpus contain such links to the prior context as *also* or a comparative form of the adjective, as in 63b-c and 65a-b:

65. (a) Bowie has always cultivated his “misterioso” quality, and in “Mr. Lawrence” it serves him well. His icy determinism and eccentric little bits really flesh out what is at heart an underwritten role, more icon than person. But I just didn’t come away from the movie with hints, as others have suggested, that a great new star has burst upon the screen.
"More impressive for me" was "Tom Conti in the thankless role of Mr. Lawrence, the audience's alter ego."

["David Bowie in a work by Nagisa Oshima," Philadelphia Inquirer, Weekend section, p. 20—token provided by Gregory Ward]

(b) In cities like New York, the threat of further spread has led to aggressive responses. Beginning in September 1990, New York City will test all students entering the public school system for tuberculosis.

"Especially worrisome to public health experts" is "the growing number of cases caused by tuberculosis germ strains that have become resistant to drugs commonly used to treat the disease"; five of the nine clusters reported to the Centers for Disease Control so far this year involved such organisms.


Penhallurick (1984) notes that "fronted comparative adjectives seem to be more acceptable than their positive counterparts" (1984:43), as illustrated in 66:

66. (a) More serious were the injuries to his head.
(b) ?Serious were the injuries to his head.

[=Penhallurick 1984:43, ex. 25]

Penhallurick observes that the oddness of 66b is due to the fact that one "would normally predicate seriousness of an entity already present in the discourse" (1984:43), and that the comparative improves the sentence because it indicates that seriousness has already been evoked in the discourse. This is the result that would be expected if felicitous inversion requires the preposed element to be relatively more given than the postposed element, as will be argued in chapter 4. Similarly, also can improve such a sentence by indicating that seriousness is already salient:

67. Also serious were the injuries to his head.
Of course, the preposed element needn't be explicitly evoked in the discourse. In 65a, for example, it has been implicitly suggested that Bowie's performance was impressive to some (non-high) degree; the inversion then situates Conti's role with respect to Bowie's on the salient scale of impressiveness. Similarly, in 65b, the "threat of further spread" of disease renders inferable that this is a worrisome state of affairs to some degree. See Hirschberg 1991 and Ward 1988 for further discussion of scalar relations.

2.3.4 NP inversion. NP inversions include examples such as those in 68:

68. (a) <Another major trend of the 1980s> was <the sudden ubiquitousness of the personal computer, a tool that has freed millions of people to use words such as "ubiquitousness" without actually knowing how to spell them>.
   [Dave Barry, "Dave Barry slept here," Chicago Tribune Magazine, 6/89, p. 22]

   (b) <An excellent appetizer> is <the squab ravioli with garlic sauce>.
   [JeanMarie Brownson, "Carlos' new chef keeps excellence as top menu item," Chicago Tribune, 7/7/89, sec. 7, p. 29]

   (c) <By far the most important of the works,> however, was <Raphael's 1508 "Mary with the Christ Child and Young John the Baptist", known as the Esterhazy Madonna after the Hungarian noble family that sold it to the state in 1872>.
   ["Masters of the Art," Time, 11/21/83, p. 46—token provided by Beth Levin]

Such examples pose an interesting problem in that, since their linear structure is the same as that of an SVO sentence (NP-V-NP), it is difficult to tell on syntactic grounds alone whether such a sentence is an inversion or not. There are two basic arguments in favor of the existence of NP inversions. First is the simple fact that, given VP inversion, AdjP inversion, and PP inversion, one might expect to find NP inversion as well. That is, the non-occurrence of NP inversion would represent an inexplicable gap in the paradigm.
Second, there are sentences of the linear form NP-V-NP whose logical subject is clearly the post-verbal NP. Rapoport (1987) distinguishes between predicative and equative copular constructions; she argues that "in predicative sentences, a quality or property specified by the post-copular phrase is attributed to the NP subject" (1987:29), while equative sentences are used to equate the referents of two NPs. Now consider the predicative copular constructions in 69:

69. (a) She’s a nice woman, isn’t she? <Also a nice woman> is <our next guest>. . . .
   [David Letterman, 5/31/90 (rerun)]

(b) A diphthong is a double vowel sound in which the first part makes a smooth transition into the second.
   <Examples> are <the vowel sounds of I, now, and toy>.
   [Kaplan 1989:25]

(c) <Not the least of Upali’s enemies> is <Sri Lanka’s prime minister, Ranasinghe Premadasa>.
   [“A Sri Lankan tycoon leaves a rich mystery,” Philadelphia Inquirer, 8/21/83, p. 2-A]

In 69a, ‘also a nice woman’ constitutes a quality or property being attributed to ‘our next guest’, and not vice versa. Similarly, in 69b, the writer does not seem to be predicating of some set of examples that they are the vowel sounds of I, now, and toy, but rather is predicating of these sounds that they are examples. And finally, 69c is predicating of the prime minister that he is Upali’s enemy, and not predicating of ‘not the least of Upali’s enemies’ that he is the prime minister. That is, in these sentences the quality or property being predicated is represented by the pre-copular rather than the post-copular phrase, while the NP subject of which this property is being predicated appears in post-copular position. Consequently, these appear to be predicative NP inversions.

Moreover, these sentences share with other inversions the fact that their pre-verbal constituent is relatively familiar in context (see chapter 4); for that reason, they also share with AdjP inversion the characteristic of often improving with the addition of also or a comparative:
70. (a) A good doctor is John Smith of Glenview.
(b) Also a good doctor is John Smith of Glenview.
(c) A far better doctor is John Smith of Glenview.

Furthermore, also seems to mark the NP as being a predicate; cf. Higgins 1973:299-300. Note the ill-formed 71:

71. A good doctor is also John Smith of Glenview.

While 71 is acceptable (though semantically odd) as a CWO sentence (meaning that for a doctor to be good, he must also be John Smith of Glenview), as an inversion it is nearly uninterpretable.

It is true, however, that the determination of ‘logical subject’ is not always obvious. For example, the sentences in 72 appear to be equatives within Rapoport’s (1987) system:

72. (a) <Second runner-up> was <Miss Alabama>, third runner-up Miss Mississippi and Miss Ohio took fourth runner-up.
[KYW News—token provided by Gregory Ward]

(b) The Los Angeles Teacher’s Union and the School Board make a last attempt today to reach a contract agreement before a strike vote tomorrow. <Remaining issues> are <pay and forced transfers>.
[KYW News—token provided by Gregory Ward]

(c) <Senators from the Philadelphia area voting for the cut> were <Joseph R. Biden Jr., (D., Del.), Bill Bradley (D., N.J.), John Heinz (R., Pa.), Frank Lautenberg (D., N.J.) and William V. Roth Jr. (R., Del.).>

It is not clear to me how one would argue definitively for or against an inversion analysis in the case of such examples. However, the absence of the definite article in the pre-verbal NP in each case may constitute evidence that this NP is in fact the predicate; see Higgins 1973:222-232.
NP inversion, then, appears to be well attested. Note, however, that NP inversion occurs only with main verb be, which is to say that inversion does not occur in transitive sentences. Penhallurick (1984) attributes this fact in part to the availability of the passive for transitive verbs, and in fact similar discourse functions have been posited for the two constructions (cf. Kilby 1984; Siewierska 1984).

2.3.5 AdvP inversion. Although preposed locative and directional adverbials like then and here are classified as PP inversion (see above), non-locative anaphoric adverbs like thus and so also frequently appear as the preposed elements in inversions:

73. (a) Upali was going to turn 45 in two days. A gala party was planned at his palatial mansion, with his cousin, the nation's president, among the guests. Upali never made it. [. . .]

<Thus> was born <one of southern Asia's best real-life mysteries>.
["A Sri Lankan tycoon leaves a rich mystery," Philadelphia Inquirer, 8/21/83, p. 2-A—token provided by Gregory Ward]

(b) Postiglione, 43, a landlord, got a year in jail and $15,000 in fines after pleading guilty to coercion and conspiracy in forcing low-income residents out of [his 54-room building on W. 85th St.] so that expensive property could be built on the property.

<So> ended <one of the more sordid episodes in a long-running housing war that has engulfed NY neighborhoods from the sedate brownstones of the Upper West Side to seedy streets in Brooklyn>.
["In New York, gentrification brings violence," Philadelphia Inquirer, 9/13/83, p. 6-A—token provided by Gregory Ward]

It is entirely possible that thus and so are best analyzed as PPs as well, particularly in view of the fact that they may be paraphrased as in this way or in this manner. For the moment, however, I will retain them in a separate class; my reason for doing so will become clear in chapter 5, where they will be seen to pattern differently from PPs in inversion.

Hartvigson and Jakobsen (1974) and Green (1982) group negatives like nor and neither with so in their discussions of inversion. However, these appear only in SAI (which they do not distinguish from
inversion); this can be demonstrated by adding auxiliaries to their examples, as in 74:

74. (a) She was never happy about our life together, right from the start. And neither was I. . . .
 [=Hartvigson and Jakobsen 1974:75, ex. 205]

(b) She would never have been happy about our life together. *And neither would have been I.

(c) [ . . . ] And neither would I have been.

Interestingly, although 73 illustrates the use of thus and so in clear instances of inversion (given that the verbs involved are not auxiliaries)\(^{20}\), note that the examples in 75 are not inversions:

75. (a) Thus do wars begin. Or, rather, since Lebanon has been in a state of civil war since 1975, thus do wars widen, thus are outsiders drawn in.
["U.S. joins Lebanon’s war, a tragic, perilous error,” Philadelphia Inquirer, 9/21/83, p. 18-A—token provided by Gregory Ward]

(b) Just as an excessive sense of guilt can drive people to excessive action, so was Miss Brodie driven to it by an excessive lack of guilt.
 [=Hartvigson and Jakobsen 1974:76, ex. 212]

In these sentences the main verb appears after the subject; hence they are instances of SAI.

Green (1982) also includes as and such in her list; these appear to be like thus and so in being able to appear with either SAI or inversion:

76. (a) But you know, <such> was <my respect for him>, that even after I switched to martinis I still ordered sweet manhattans when Gus was behind the bar.
 [=Green 1982:124, ex. 6a]

(b) But if he had helped me, such would have been my respect for him, that I’d have drunk sweet manhattans forever.
(c) But if he had helped me, such would my respect for him have been, that I'd have drunk sweet manhattans forever.

77. (a) Two flights from San Francisco—one to Houston and the other to Denver—were canceled because of the strike, as were flights from Orlando, Fla., and New Orleans, Hicks said. ["Continental still flying despite two walkouts," Philadelphia Inquirer, 10/2/83, p. 13-A—token provided by Gregory Ward]

(b) Two flights from San Francisco had been canceled because of the strike, as had been flights from Orlando and New Orleans.

(c) Two flights from San Francisco had been canceled because of the strike, as had flights from Orlando and New Orleans been.

Here, the (b) examples illustrate inversion, while the (c) examples illustrate SAI.21

2.4 SUMMARY

Although many constructions have been termed 'inversion' in the literature, there has been little agreement on its definition. Inversion is defined here as a sentence in which the logical subject appears in post-verbal position while some other, canonically post-verbal, constituent appears in clause-initial position. This excludes subject-auxiliary inversion, preposing, and there-insertion, which have been demonstrated to be distinct constructions. Although the definition given also applies to quotation inversion, quotation inversion has been seen to differ significantly from other inversions syntactically, semantically, and pragmatically, and can therefore be considered a distinct phenomenon as well. Categorizing inversion types based on the type of preposed constituent they contain, we find five major classes of inversion—PP, VP, AdjP, NP, and AdvP inversion—with distinct characteristics.
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Previous Analyses

Previous accounts have attributed a wide range of discourse functions to various inversion types. Many of these works have dealt with larger classes of syntactic constructions, of which inversion or certain inversions comprise a subset. For example, Emonds (1969, 1970, 1972, 1976) defines a class of ROOT TRANSFORMATIONS, including certain types of inversions, and a number of researchers over the past two decades have posited discourse functions for the class of root transformations. Other researchers have included inversions among constructions classed together on the basis of their putatively sharing some discourse-level characteristic, in particular that of marking a focus and/or presupposition. Finally, a few writers have focused specifically on the function(s) of inversion itself, more or less independently of other constructions. This chapter will address each approach in turn.

3.1 ROOT TRANSFORMATIONS AND INVERSION

The notion of root vs. structure-preserving transformations, while perhaps less relevant in current syntactic frameworks, has had a significant impact on past approaches to inversion and continues to exert an influence. Coopmans 1989, for example, presents a syntactic account of inversion designed in part to account for properties of the construction related to its status as a root transformation, notably the putative inability of inversion to occur in embedded clauses (discussed below). Likewise, many of the functional analyses that have been posited for inversion are based on the classification of inversion as a root transformation. The class of root transformations was first
described by Emonds (1969, 1970, 1972, 1976), whose ‘structure-preserving constraint’ has the consequence of dividing transformations into three broad classes: root, structure-preserving, and local transformations.

The primary empirical claim of the structure-preserving constraint with respect to inversion is that a phrasal constituent can only be moved to a position where the phrase structure rules can generate such a constituent (structure-preserving transformations), or to a position immediately dominated by the highest S (root transformations). Thus, no transformation that is not structure-preserving in this sense may occur in an embedded clause, according to Emonds. Among the root transformations Emonds lists a variety of inversion types (Emonds 1972:38-9), including ‘directional adverb preposing’ (i.e., where the preposed constituent is a directional adverb) and ‘preposing around be’. These will each be discussed in turn.

Directional adverb preposing, according to Emonds, “seems limited to exclamatory statements” (1976:29). As if to underscore this point, he ends each of his examples with an exclamation point:

1. In came John!
   Down the street rolled the baby carriage!
   Up trotted the dog!
   Round and round spins the fateful wheel!
   (from Emonds 1976:29, ex. 22)

However, the vast majority of written tokens of this type in the corpus do not have exclamatory punctuation, and, as the examples in 2 demonstrate, this type of inversion seems acceptable in non-exclamatory contexts:

2. (a) Loud-speakers had been erected along the garden; through them emerged the bland informal voice of Commander Stephen King-Hall describing the scene as he saw it from St. Paul’s Cathedral.
   [Holtby 1936:489—token provided by Beth Levin]

(b) Grandma and Grampa raced each other to get across the broad yard. They fought over everything, and loved and needed the fighting.
   <Behind them, moving slowly and evenly, but keeping up,> came <Pa and Noah>—Noah the first-
born, tall and strange, walking always with a wondering look on his face, calm and puzzled.
[Steinbeck 1969:72—token provided by Lori Levin]

Elsewhere, Emonds (1976:50-1) argues that root transformations such as directional adverb preposing serve to give prominence to a constituent by attaching it to the root S; however, what constitutes “prominence” is left undefined, and therefore this claim is difficult to evaluate.

With respect to the inversions he classifies as instances of ‘preposing around be,’ Emonds acknowledges that some occurrences may appear to represent counterexamples to the structure-preserving constraint, yet he argues that the constraint holds nonetheless:

In order to retain [the structure-preserving constraint], I assert that the use of these rules in embedded sentences is ungrammatical in the strict sense, and that the structure-preserving constraint is being broken for purposes of emphasis, clear communication, etc. Since I am not in a position to be able to characterize the conditions under which ungrammatical sentences can be used, my theory, in the only sense that I can make it precise, does not always coincide with judgments of acceptability. However, it is likely that the way to correct it is to study the conditions under which the structure-preserving constraint can be broken, and not to abandon the constraint itself. (Emonds 1976:34-5)

Sentences he lists as being provisionally acceptable in this way include the following:

3. (a) ?I am sure that most embarrassing of all was losing your keys.
    (b) ?I’ve noticed that upstairs is (lies) all the wine you bought in Europe.
    (c) ?Bill was just explaining that here will be (will stand) a war memorial.

[=Emonds 1976:35,37]

Although Emonds considers the sentences in 3 to be marginal, other sentences of this type appear to be uncontroversially acceptable:
4. Prompted by no more compelling motive than having nowhere else to reside, I moved here three months ago and soon became aware that *below me* lived *a woman who was quite as alone and secretive, as inaccessible, perhaps even (and my heart cheered at the possibility) as near to death as I have been all my life*.

[Shields 1989:197—token provided by Beth Levin]

Declaring such sentences ungrammatical but acceptable is an unsatisfying solution in the absence of an account of the conditions under which they are rendered acceptable.

Aissen and Hankamer (1972) discuss potential counterexamples to Emonds' analysis of the type illustrated in 5:

5. (a) Two men entered the room. One was wearing a frock coat and black whiskers. The other wore drain-pipe trousers, a high-buttoned coat and a huge cravat *in which* was stuck *a great golden horseshoe*.

[Upfield 1988:177—token provided by Beth Levin]

(b) The subconscious begins working on three things without which there can be no Christmas: the credit limit on the VISA card; the brown box in the basement corner *in which* sits *a four-decade-old cast-steel Lionel Steam Engine electric train, enough “O” gauge track to circle the whole dang living room (!) and a transformer powerful enough to put that baby right through the living room wall*; and, finally, the smell of tangerines.

["‘Have Yourself a . . . ‘Aargh!’", Chicago Tribune, 11/22/89, sec. 1, p. 13]

Aissen and Hankamer argue that the possibility of inversion within relative clauses demonstrates that inversion is not a root transformation. Emonds (1976) agrees that such sentences are not the result of a root transformation, contending instead that these cases represent a distinct type of inversion accomplished "by a structure-preserving substitution of the subject NP for an empty object NP node" (Emonds 1976:39).

Emonds receives some support from Hooper and Thompson (1973), who agree with Emonds that directional adverb preposing serves to make a sentence more ‘emphatic’, and that such a sentence "would appear in writing with exclamatory punctuation or in speech
with emphatic intonation” (Hooper and Thompson 1973:470). As we have already seen, however, such sentences typically do not in fact appear with exclamatory punctuation or seem especially emphatic; it is therefore also likely that they would not require ‘emphatic intonation’ in speech. As for Emonds’ ‘preposing around be’, they claim that in these sentences “the subject is given added importance or emphasis by its position at the end of the sentence” (1973:470).23

Hooper and Thompson observe that root transformations may in fact appear in certain non-root Ss, and claim that their tendency to appear in relatively few such contexts is a result of their ‘emphatic function’. They maintain that because emphasis would be inappropriate in presupposed clauses, these transformations “are restricted to application in asserted clauses” (1973:472). Thus, they consider ungrammatical the following inversion in a presupposed clause:

6. *Harry was annoyed that even more corrupt was the Republican Party.

[=Hooper and Thompson 1973, ex. 105]

However, the equally presupposed inversion in 7 is grammatical:

7. It’s surprising that even more corrupt was the Republican Party.

Aissen (1975) points out a number of other problematic cases, including 8:

8. He’s forgotten that over the fireplace hangs a picture of his late wife.

Here the embedded clause is clearly presupposed, yet the inversion is acceptable.

Hooper and Thompson further claim that since complements with head nouns like claim, report, and notion are neither presupposed nor asserted, root transformations should not be applicable in such clauses:

9. *I don’t believe the report that up the street trotted the dog.

[=Hooper and Thompson 1973, ex. 172]

However, the sentences in 10 seem perfectly acceptable:
10. (a) I don't believe the report that in the garden stands a unicorn.
(b) Harry questioned the notion that in the city sewers live dozens of alligators.

The account in Hooper and Thompson 1973 also leads the authors to claim that root transformations may not apply in restrictive relative clauses on definite head nouns, since these are not asserted:

11. *The rotunda in which stands a statue of Washington will be repainted.

[Hooper and Thompson 1973, ex. 201]

However, not all speakers find 11 ungrammatical, and in fact such uses do occur in naturally-occurring language:

12. (a) Thinking about these several matters, Bony paid a visit on foot one Sunday afternoon to the tree <in the fork of which> were concealed <his sheepskin sandals>.

[Upfield 1931:107—token provided by Beth Levin]

(b) Before long he crossed the road <on the lower side of which> had been erected <white-painted guide posts>.

[Upfield 1946:153—token provided by Beth Levin]

Such examples suggest that Hooper and Thompson's formulation of the function of root transformations is incorrect.

Green (1976, 1985) also lists a variety of acceptable embedded inversions; in Green 1976 she further provides a number of counterexamples to Hooper and Thompson's claim that root transformations apply exclusively in asserted clauses. Green herself is the first to admit that she has no definitive solution with which to replace Hooper and Thompson's analysis, but concludes that "the embeddability of so-called MCP [main clause phenomena—BB] is influenced not only by syntactic forms and semantic functions, but also by pragmatic functions, by what a speaker is trying to do in using a particular syntactic form to express something" (1976:397).

N. McCawley (1977) similarly counters Hooper and Thompson, and claims that in fact there are two types of root transformations, 'speech act RTs' and 'realization RTs', which together constitute a
class of ‘expressions of ego’. These serve either to reflect the attitude of the speaker toward the proposition and/or addressee (speech act RTs), or to capture an internal sensory or mental experience (realization RTs). Among the realization RTs she lists Emonds’ participle preposing (VP inversion) and PP substitution (PP inversion); among the speech act RTs she includes Emonds’ comparative substitution (AdjP inversion). Thus, she claims that a sentence containing an embedded comparative substitution must reflect “the speaker’s positive attitude toward the content of the complement” (1977:389); however, 13, despite the speaker’s “negative attitude” toward the complement, seems perfectly acceptable:

13. Fred believes that balancing the budget is terribly important. John said that much more important is preventing a war, but I disagree.

Moreover, she claims that 14 is ungrammatical because ‘visual sensory realization RTs’ do not undergo complement preposing:

14. *Standing there was Peter Pan, Wendy was flabbergasted.

However, the non-inverted equivalent is just as bad, indicating that the ungrammaticality is not due to the inversion:

15. *Peter Pan was standing there, Wendy was flabbergasted.

Thus, McCawley’s analysis is not supported by the data.

Gary (1976) examines three of Emonds’ inversion transformations—directional adverb preposing, participle preposing, and PP substitution—and concludes that their function is to signal ‘counter-expectation’. Once again, however, the examples in 2 above do not seem especially contrary to expectation; at best, expectations concerning the events described in the inversions are neutral. Gary argues that, in the event where no relevant expectations have been established, directional adverb preposing may nonetheless apply, resulting in a more exclamatory sentence; thus, the speaker is able “to create a sense of an action which is counter-to-expectation, even in the absence of an expectation-creating context” (1976:10). Gary acknowledges, however, that where PP substitution has applied in a neutral-expectation context, the resulting sentence typically is not particularly exclamatory. Moreover, as demonstrated in 2 above, directional adverb preposings are typically not exclamatory in nature,
and the VP inversions in 16 seem neither contrary to expectation nor particularly exclamatory:

16. (a) In 1983, they all will be gone: William G. Milliken after 13 years in Michigan, James A. Rhodes after 16 years in Ohio, Robert D. Ray after 14 years in Iowa. *<Gone also> will be <Minnesota's Albert Quie, Wisconsin's Lee Sherman Dreyfus and Nebraska's Charles Thone>*. All but Thone had decided not to run again.  
[Philadelphia Inquirer, post-election day news—token provided by Gregory Ward]

(b) Two CBS crewmen were wounded by shrapnel yesterday in Souk el Gharb during a Druse rocket attack on Lebanese troops.

They were the 5th and 6th television-news crewmen to be wounded in Lebanon this month. One television reporter, Clark Todd of Canada, was killed earlier this month.  
 *<Wounded yesterday> were <cameraman Alain Debos, 45, and soundman Nick Follows, 24>*.  
[“2 CBS crewmen hit,” Philadelphia Inquirer, 9/24/83, p. 6-A—token provided by Gregory Ward]

(c) In the Cabinet Room of the White House yesterday, Pres. Reagan played 8 minutes of taped conversations among three Soviet pilots that took place before a South Korean jetliner apparently was shot out of the sky in Soviet airspace early Thursday.  
 *<Listening to the pilots' excited voices> were <congressional leaders, Cabinet officials and foreign policy advisers>*.  
[“Reagan, officials play tapes of Soviet pilots,” Philadelphia Inquirer, 9/5/83, p. 4-A—token provided by Gregory Ward]

Consequently, we must reject the premise that such inversions signal that an event or situation is contrary to expectation.24

Thus, the various approaches to inversion that have taken as a starting point its putative status as a root transformation have proven
flawed. I will next consider another class of analyses, which frame the discourse function of inversion in terms of the notion of focus.

3.2 FOCUS-BASED ACCOUNTS

Inversion has frequently been said to mark 'focus', but what is meant by this varies from one account to the next. For example, Bresnan (1990), Rochemont (1986), and Rochemont and Culicover (1990) view certain inversions as identifying the post-verbal constituent as a focus, while Penhallurick (1984) argues that inversion in fact defocuses the post-verbal NP, and Levine (1989) claims that inversion identifies the pre-verbal element as the focus. Before reviewing the research that has attributed a focus-based function to inversion, I will present a bit of background on the notion of focus.

Chomsky (1971) uses the concepts of focus and presupposition to argue that certain aspects of semantic interpretation are determined by surface structure. In his account, focus is a syntactic notion; the focused constituent contains and is determined by the 'intonation center', and the presupposition is obtained by replacing the focus with a variable. The focus-related intonation directly affects what constitutes a well-formed question/answer pair:

17. (a) is it JOHN who writes poetry?
   (b) it isn't JOHN who writes poetry.
   (c) no, it is BILL who writes poetry.
   [=Chomsky 1971, exx. 38, 39]

Chomsky notes that "Under normal intonation the capitalized word receives main stress and serves as the point of maximal inflection of the pitch contour" (1971:199). The semantic representation of 17a and 17b, he argues, must show 'John' to be the focus of the sentence, and 'someone writes poetry' as the presupposition. In 17c, a natural response to 17a or 17b, the presupposition remains the same, while the focus changes to 'Bill'.

Chomsky further observes that a given utterance with a given intonation center may nonetheless be ambiguous as to its focus, since the intonation center may be embedded within increasingly large constituents, any one of which could be the focus (cf. Wilson and Sperber 1979, Ward 1988). Consider 18:
18. (was he (warned to (look out for (an ex-convict (with (a red (SHIRT))))))
[from Chomsky 1971, ex. 53]

Here any of the phrases in parentheses, up to and including the entire sentence, may be interpreted as the focus, with corresponding appropriate responses, including those in 19:

19. (a) no, he was warned to expect a visit from the FBI
(b) no, he was simply told to be more cautious
(c) no, nothing was said to anyone.
[=Chomsky 1971, ex. 54]

An appropriate response, then, is one sharing the presupposition of the question.

Jackendoff (1972) agrees that “intuitively, it makes sense to speak of a discourse as ‘natural’ if successive sentences share presuppositions” (1972:230). He defines the focus of a sentence as “the information in the sentence that is assumed by the speaker not to be shared by him and the hearer,” and the presupposition, then, as “the information in the sentence that is assumed by the speaker to be shared by him and the hearer” (1972:16). He also agrees with Chomsky that the division into presupposition and focus is part of the semantic representation of the sentence, reflected in its syntactic structure. This reflection, in Jackendoff’s account, consists of a syntactic marker F which is associated with a node in the surface structure to indicate focus. Focus is realized as stress, as indicated in 20:

20. If a phrase P is chosen as the focus of a sentence S, the highest stress in S will be on the syllable of P that is assigned highest stress by the regular stress rules.
[=Jackendoff 1972, 6.58]

This formulation, while consistent with Chomsky’s, is somewhat more specific in that it determines where within the focus the intonation center will appear.25

Drawing on this tradition, Prince (1986) defines a class of syntactic constructions which serve to mark an open proposition (or OP) as shared knowledge in the discourse, where the OP is essentially the equivalent of Chomsky’s and Jackendoff’s ‘presupposition’. That is, the OP is obtained by replacing the ‘tonically stressed constituent’ with a variable whose instantiation corresponds to the new information, or
focus, of the utterance (see also Wilson and Sperber 1979, Prince
preposing’ (PP inversion) among the constructions marking an OP as
salient, and it is argued in Birner and Ward 1989 that non-locative
inversion serves to mark an OP as salient in the discourse. These OP-
based accounts of inversion will be discussed extensively in chapter 5,
in connection with an examination of the verbs that appear in inversion.

Rochemont 1986 and Rochemont and Culicover 1990 also draw on
the tradition of Chomsky and Jackendoff in applying the concept of
focus to inversion. Like Chomsky and Jackendoff, Rochemont
considers focus to be “a syntactic notion with both a phonetic and a
semantic interpretation” (1986:17). Also like Jackendoff, Rochemont
assumes a feature F that identifies a constituent at s-structure as a focus;
F is then interpreted in PF and LF as the site of accent and focus,
respectively. However, he argues on the basis of wh-questions (in which
the wh-word may be focused yet unaccented) that accent is neither
necessary nor sufficient to indicate a focus. Instead, he adopts the
following ‘Nuclear Stress Rule’:

21. Assign an accent to the rightmost lexical category (in a
[+focus] constituent) in S.
[=Rochemont 1986, ex. 48]

Thus, if a [+focus] constituent exists, it is assigned accent on its
rightmost lexical category. If no such constituent exists, the rightmost
lexical category in the sentence receives the accent (as in wh-questions,
in which the wh-word needn’t be marked [+focus] to be a focus,
according to Rochemont). The semantic interpretation of a constituent
is described in terms of C-CONSTRUABILITY, where a string is c-
construable if it is either ‘under discussion’ or an indexical expression
(1986:174). He identifies two types of focus, presentational and
contrastive; an expression P is a presentational focus if and only if it is
not c-construable, and it is a contrastive focus if the sentence containing
it is not c-construable but the result of extracting P from the sentence
(very much as with open propositions) is c-construable.

Rochemont claims that the post-verbal NP in an inversion is both
(intonationally) prominent and syntactically identified as a
presentational focus (and hence referred to as a CONSTRUCTIONAL
FOCUS). Thus, this NP should not be c-construable; however, consider
the examples in 22:
22. (a) Nusseibeh's unusual predicament causes concern all around. His friends fear that Arab hard-liners will turn on Nusseibeh, thinking he is an Israeli ally.

The Israelis, who certainly want to squelch the 17-month-old uprising in the West Bank and Gaza Strip, are under intense pressure from the United States not to jail moderates who may figure in their election proposal for the territories occupied since the 1967 war.

<Most immediately affected> is <Nusseibeh himself>.

["West Bank prof is either on the spot or off the hook,” Chicago Tribune, 5/21/89, sec. 1, p. 5]

(b) Each of the characters is the centerpiece of a book, doll and clothing collection. The story of each character is told in a series of six slim books, each $12.95 hardcover and $5.95 in paperback, and in bookstores and libraries across the country. More than 1 million copies have been sold; and in late 1989 a series of activity kits was introduced for retail sale.

<Complementing the relatively affordable books> are <the dolls, one for each fictional heroine and each with a comparably pricey historically accurate wardrobe and accessories>...

["Barbie backlash,” Chicago Tribune, 1/4/90, sec. 5, p. 3]

In both cases the postposed NP is c-construable by Rochemont's definition; both Nusseibeh in 22a and the dolls in 22b count as being 'under discussion'.

As a diagnostic for focus, Rochemont claims that "wh questions evidently require of possibly appropriate responses that the provided new information be both focused and prominent" (1986:111). Similarly, Rochemont and Culicover (1990) claim that "in a well-formed wh question/answer sequence, all and only the information requested in the question is focused in the response" (1990:18). Thus, Rochemont offers the following examples of felicitous question/answer sequences as evidence that the postposed NP in an inversion is focused:

23. (a) Who ran into the forest?
(b) Into the forest ran ROBIN HOOD.
24. (a) What was standing next to the fireplace?
(b) Next to the fireplace stood a large old SOFA.

[=Rochemont 1986, ex. 5a, 6a]

However, these sequences do not seem particularly natural, given the immediate word-for-word repetition of the PP; thus they are of questionable value as evidence for the status of the postposed NP.

It is similarly argued in Rochemont and Culicover 1990 that if a phrase in a sentence constitutes new information in the context, that phrase must be a focus. 'New' information is again defined in terms of 'c-construability', which in turn is defined as "under discussion", although they note that this term itself is inadequately defined and must await a complete theory of pragmatics.

Rochemont and Culicover use the term STYLISTIC INVERSION for inversion constructions, and argue that such inversions identify the post-verbal NP as a STRUCTURAL FOCUS, i.e., "a focused phrase that is identified as a focus by virtue of its appearing in a specific position in a given construction, with the attendant consequences for well-formedness of relevant question-answer sequences" (1990:152). Importantly, they note that although a constituent that is not c-construable must be a focus, a constituent may be c-construable and nonetheless be a focus:

25. (a) Who does John's mother like?
(b) John's mother likes JOHN/HIM.

[=Rochemont and Culicover 1990, ex. 15]

Here, John is a focus, though clearly c-construable; such a focus is termed 'contrastive' as opposed to 'presentational' (a slightly different use of these terms from that in Rochemont 1986). Contrastive focus, Rochemont and Culicover note, is not a distinct syntactic type of focus, but simply "a different use of a single syntactic notion of focus" (1990:21). Nonetheless, the postposed NPs in 22 remain counterexamples; they cannot be presentationally focused because they are c-construable, and they do not seem 'contrastive' by any currently accepted definition. (No concrete definition is provided in Rochemont and Culicover 1990.)

More globally, these two accounts present certain theory-internal difficulties. First, although Rochemont assumes that the syntactic focus marker is semantically interpreted in LF, this "semantic interpretation" appears to be no more than an assessment of c-construability—a
contextual, non-truth-conditional phenomenon. Second, we gain nothing in explanatory adequacy by assuming a syntactic marker for this pragmatic feature; indeed, to assume a distinct syntactic and semantic representation for each potential combination of focus and presupposition for a given sentence seems unwieldy and misses the generalization that it is in fact a single sentence, which may be used in a variety of ways depending on the context. The tests proposed are contextual in nature, and even those sentences that become odd when placed in the context of a question/answer diagnostic do not seem ungrammatical. It is one thing to assume that one aspect of our linguistic competence is our knowledge that a certain syntactic type of sentence may be used for a certain purpose; it is quite another to assume a syntactic marker on each individual sentence to indicate this purpose. The former is a more unified way of capturing the necessary generalization, and given the former, the latter is redundant.  

Bresnan (1990) also presents a focus-based account of 'locative inversion', in the framework of Lexical-Functional Grammar. In LFG, the thematic, constituent, and functional structures of a sentence are parallel but distinct; focus is marked in the functional structure. Bresnan argues that locative inversion "has a special discourse function of presentational focus . . . , in which the referent of the inverted subject is introduced on the scene" (1990:13). In the 'core cases', the scene is expressed as a locative, and the NP being introduced is a theme. According to Bresnan, "the default syntactic realization of these arguments would have the theme become the subject and the location, an oblique" (1990:19). However, because the subject is the 'unmarked discourse topic', and because topic and focus are considered conflicting functions, the conflict is avoided by making the locative the subject, with the (focused) theme becoming an object. The topic, according to Bresnan and Mchombo 1987, "designates what is under discussion, whether previously mentioned or assumed in discourse" (1987:746), and is presupposed; since presentational focus serves to introduce an entity, that entity is unlikely to be presupposed. Consequently, it would be inconsistent for an entity to be both topic and focus. Since subjects tend naturally to be topics and objects tend to be focused, according to Bresnan, locative inversion permits these 'natural' roles to be assumed while avoiding the clash of roles that would result from having a focus in subject position.

This same argument is presented in Bresnan and Kanerva 1989 with respect to locative inversion in Chichewa:
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This correlation seems natural when we take into account the widespread association between the syntactic subject and the discourse topic, on the one hand, and the syntactic object and the discourse focus, on the other. In our theory, the highest thematic role is the default subject, but when it is a theme [ . . . ] it can be realized as an object in order to presentationally focus the argument. The theory requires a subject, so the atypical locative or expletive subject (depending on the language) is pressed into service in this marked case. (1989:33-34)

The account of focus presented by Bresnan and Kanerva with respect to locative inversion in Chichewa bears certain resemblances to the previously discussed focus-based accounts, although the formal details of the grammar differ. For example, they note that the post-verbal subject "is not only presented on the scene in locative inversion, it is . . . set off against presupposed material" (1989:35). Moreover, inversion depends on the presence of a 'presentational focus attribute' in the functional structure of the verb, represented as a feature [f]. The important difference here is that the attribute appears in the functional structure as opposed to the syntax per se; nonetheless, its presence seems equally redundant, for the reasons given above.

The major difficulty, however, in an analysis of locative inversion as introducing the post-verbal NP 'on the scene' is that not all of these inversions can plausibly be considered to serve such a purpose. Consider 26a-b:

26. (a) McPherson proffered the cigar and a fat hand reached forward and accepted it. The round face was expanded in a grin of anticipated pleasure, and <into the wide mouth> went <half the cigar>, to be masticated by strong but tobacco-stained teeth. [Upfield 1940:77—token provided by Beth Levin]

(b) Shiny and red, the apples hung over their heads. One squirrel stood on his hind legs. He stretched up until he was as thin as a weasel, but still the biggest apple hung out of his reach. Another squirrel leaped to the branch above it. He knew a better way than stretching! His sharp teeth gnawed the string that held
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it. \textit{<Down>} plopped \textit{<the apple>} on the first squirrel's head.

[=Green 1982:119-53]

It is not likely that the inversions in these examples are intended to introduce the cigar and the apple, respectively, on the scene, given that these entities have been evoked, to some degree, in the immediately prior context. (Similarly, since these entities are c-construable, they also represent counterexamples to Rochemont 1986 and Rochemont and Culicover 1990).

The above interpretations of focus are in sharp contrast with that of Penhallurick (1984), who states that subject position "signals the constant meaning 'in focus' . . . That is, it signals, as a matter of meaning, what the speaker's attention is centred on in relation to the event specified by the verb" (1984:46-47). Thus, for Penhallurick, inversion serves to DEFOCUS the subject by moving it out of subject position. Penhallurick's account of inversion, based primarily on a given/new principle, will be examined in more detail below; for now it is sufficient to note that his notion of focus is clearly quite different from those we have thus far considered.

Another focus-based account that differs in a similar way from those above is that of Levine (1989), who presents a GPSG-based analysis of what he calls 'focus inversion'. Although Levine defines 'focus inversion' only by example, and doesn't define 'focus' at all, it is apparent that he considers the focus to be the pre-verbal constituent. Once again, focus is assigned by way of a feature specified in the syntax. Given that Levine makes no specific functional claims with respect to the focus feature (his purpose being instead to determine the correct syntactic analysis of the construction), I will not consider his account here except to note his use of the term 'focus' for the initial constituent in inversion.

Thus, the term 'focus' has been applied often to inversion, with many different meanings. Several such accounts have viewed focus as a syntactic feature, an analysis which I have argued complicates the grammar unnecessarily. Vallduvf (1992), in contrast, offers an analysis wherein focus is considered part of the informational structure of the sentence (where a sentence is composed of a focus and a 'ground'); this informational structure, in turn, is represented as an independent linguistic module. Such an account seems preferable to a syntax-based one, in that the notion of focus takes its proper place as a pragmatic rather than a syntactic notion. This view of a focus as the complement
to some 'background' information is closely related to the focus/open-proposition distinction discussed at length in chapter 5.

### 3.3 OTHER ACCOUNTS

The remaining accounts approach inversion neither from the perspective of constraints on root transformations nor from the perspective of focus and presupposition. These three accounts—Green 1980, Hartvigson and Jakobsen 1974, and Penhallurick 1984—address inversion more or less exclusively (though there is some disagreement on what should properly be included as 'inversion'), and each account is to some degree similar in spirit to that presented in this work. Thus, it is important to see where these analyses differ.

#### 3.3.1 Green 1980

Green discusses a wide range of discourse functions that she attributes to inversion:

27. (a) a practical function—to give a speaker time to decide on the proper characterization of the individual who is to be mentioned as the subject;
(b) connective functions—indicating the relevance and importance of the postposed subject to the information that has been presented in the prior text;
(c) an introductory function—to ‘set the scene,’ or locate the referent of the postposed subject not with respect to the prior context, but, rather, ‘absolutely’;
(d) direct quotes—a variety of functions relating to different levels of text structure;
(e) emphatic functions—to resolve some apparent disorder in narrative structure, e.g. by re-introducing a central character in an unexpected place.

While some of these functions overlap with those that have been proposed by others—for example, Green’s 'emphatic function' is similar to Gary’s 'contrary to expectation'—Green proposes no unifying factor or more general principle encompassing these disparate functions. In fact, Green (1980:599) denies that a one-to-one relation holds between the above functions and the syntactic types of inversion, arguing that the functions are distributed 'over, rather than among,' these types.

Given the analysis to be spelled out in chapter 4, however, all inversion types essentially perform what Green calls a 'connective function', relating the relatively 'unfamiliar' entities evoked in the post-
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verbal constituent to the prior context. Although Green herself maintains that the connective function is just one among many needed to account for the full range of inversions, this is necessitated in part by her inclusion of subject-auxiliary inversion and quotation inversion in the class of constructions she is considering. As discussed above in chapter 2, there are compelling reasons for considering these constructions to be both functionally and formally distinct from inversion as it has been defined here. Indeed, despite her disavowal of any one-to-one relation between form and function, the array of functions Green attributes to inversion after direct quotes, as in 28, are distinct from those she attributes to the other inversion types.

28. "It looked the same, tasted the same and even melted the same in my mouth," said one taster with an expensive ice cream penchant.
   ['Taste buds may say it's ice cream—but it's not,' Chicago Tribune, 2/23/90, sec. 1, p. 20]

Eliminating quotation inversion, therefore, from the present discussion, let us investigate how Green's practical, introductory, and emphatic functions can be subsumed under the connective function, or more particularly under the analysis of assumed familiarity posited in the present study.

As examples of the 'practical function,' Green gives only sentences from sports broadcasts, including those in 29:

29. (a) Underneath the basket is Barbian.
    [=Green's (2b)]

    (b) At the line for Lanphier will be Shelly Tunson.
    [=Green's (2h)]

Green maintains that inversion in such instances is essentially a stalling device on the part of the announcer, and that postponing reference to the player's name permits the announcer "to begin describing what is directly observable—the ball being stolen, someone coming off the bench—while (in real time) remembering or figuring out who 'number 30, blond guard' is, so that he can inform his listeners" (1980:585). While there may very well be times when a speaker tries to postpone reference to a person until he can remember that person's name (and may even decide to use an inversion for that reason), it is not at all clear that this constitutes a 'function' of a syntactic construction; such a
postponement would be a matter of performance, not linguistic competence. However, sentences such as those in 29 can easily be viewed as serving a connective function, first directing the listener's attention to some salient (textually or situationally evoked) location and then relating the less familiar entity represented by the sentence-final NP to that location. In this way, these inversions can be seen to share the discourse function of other inversions. While inversion may be well-suited to postponing mention of a player's name because of its discourse function, that postponement is not itself the discourse function; it is, rather, derivative of the primary function of the construction.

As examples of the 'emphatic' function, Green gives 30a-c:

30. (a) Through the revolving doors swept Tom Pulsifer.
   (b) Springing from its catacomb with a hoard of Kate Greenaway prints he had unearthed came Spitalny, hair as tumultuous as ever but powdered with silver.
   (c) There before her eyes was the red button she had been looking for.
[=Green's 27a-c]

In explaining this function, Green points to an "apparent disorder in narrative structure" (1980:595) resulting in a sense of expectation or suspense which is then resolved by the appearance of the post-verbal subject. The 'disorder' lies in the fact that the entity represented by each of the postposed NPs is introduced earlier in the discourse as a central character, but has not been mentioned for some time. The sentences in 30 bring them back into the action. For example, 30c is the third-to-last sentence in a story, and although the button is the principal character in this narrative, the search for it has not been mentioned since the beginning of the story (Green 1980:595). In these instances the postposed NPs represent what Prince (1981b) terms 'unused' discourse entities, while the NP in each of the preposed constituents represents information which is familiar in the discourse. Thus, although the postposed NP represents (in some sense) familiar information, it is less familiar than that represented by the NP in the preposed constituent; hence the inversion is warranted. (Different types of familiarity are discussed at length in chapter 4.)

Similarly, the inversion in 31 is said to resolve a disorder in narrative structure:
31. One night there was a tap on the window. Mrs. Rabbit peeped through the window. *Outside stood a little angel.*

'Your wish is granted,' it said. 'A baby rabbit is on her way to you.'

[=Green's 28]

According to Green, the first sentence sets up a minor anomaly in the narrative by mentioning a significant action without indicating the agent; the inversion supplies the agent and resolves the tension created by the first sentence. This is a rather different sort of resolution of narrative disorder than that described for the examples in 30. However, the little angel in 31 is new information, while 'outside' can be expected to be inferrable given the prior context (in that peeping through a window generally gives one a view of what is outside). Thus, in 31 as in 30, the sentence-final constituent represents less familiar information than the sentence-initial constituent.

The introductory function maps roughly onto the 'presentational focus' discussed in connection with focus-based accounts, and in fact this function may seem to be at odds with the connective function: on the one hand, inversion may serve to connect the referent of an NP to what has come before; on the other, it may introduce an entity, in effect marking it as in some sense *not* connected to what has come before. Green specifically notes that the examples in 32 below "do not serve a connective function; they do not locate the Postposed Subject Phrases with respect to anything referred to before the adverbial. Rather, they locate the referents of the subject NP's 'absolutely'." (1980:590)

32. (a) *<In a little white house> lived <two rabbits>.*

(b) *<Into the consulting room of a fairly mad physician, whose name I somehow remember as Lucas Membrane,> hurtled <a haggard middle-aged woman, towing her husband, a psychotic larrikin about seven feet tall>.*

(c) *<Down the dusty Chisholm Trail into Abilene> rode <taciturn Spit Weaver,> his lean brown face an enigma, his six-gun swinging idly from the pommel of Moisshe, the wonder horse.*

[=Green's 15a-c]
It is true that, since each of these sentences begins a narrative, they clearly do not locate the postposed NP with respect to anything referred to previously in the narrative. However, as we will see in chapter 4, entities may become ‘familiar’ by a variety of mechanisms, including but not limited to explicit mention in the discourse. For example, while Spit Weaver in 32c is brand-new information, the author may reasonable assume the Chisholm Trail and/or Abilene to represent places known to the reader, and it is with respect to these locations that the postposed NP is being located. Similarly, although the “fairly mad physician” in 32b represents new information, it is anchored (by the relative clause) to the speaker, which renders it more familiar than the middle-aged woman and her husband referred to in the postposed NP with no such anchoring. 31

In 32a, there is clearly only brand-new information represented; neither the little white house nor the two rabbits can be assumed to be familiar in the context. Thus, in this case Green is right in asserting that the inversion does not locate the postposed NP with respect to anything referred to before the adverbial, given that there is nothing that has been referred to before the adverbial. Interestingly, however, the postposed NP is referred to again immediately following the inversion, while the entity represented by the preposed constituent is not evoked again in the discourse. In fact, of the 20 tokens in my corpus that contained only brand-new information, in 12 cases the information represented by the postposed constituent (or some portion thereof) constituted the topic of the following clause; in four cases the topic of the following clause did not appear in the inversion, while another four tokens lacked sufficient context to make a determination. Notice that in none of these tokens did the preposed constituent provide the topic for the next clause. Thus, 32a is much less acceptable as the first sentence of a story about a little white house than as the first sentence of a story about two rabbits, as evidenced in 33a-b:

33. (a) In a little white house lived two rabbits. #It/The house was the oldest one in the forest, and it was in disrepair. All the animals in the forest worried that someday the house would come crashing down.

(b) In a little white house lived two rabbits. They/The rabbits were named Flopsy and Mopsy, and they spent their days merrily invading neighborhood gardens.
(c) Two rabbits lived in a little white house.

i. It/The house was the oldest one in the forest.

ii. They/The rabbits were named Flopsy and Mopsy.

The canonical-word-order variant, as in 33c, is an acceptable first sentence for either type of story. The inversion in 32a, then, allows the writer to set up a locative element which is relatively uninformative (and unimportant in the discourse) to which he or she can then relate the postposed constituent by way of introducing it (in order to say more about it in the succeeding discourse). Thus, although the term ‘familiarity’ forces a perspective which considers only preceding material, it is possible that both the preceding and succeeding contexts are relevant to inversion. In chapter 4 I will discuss further discourse-based distinctions that may be relevant for inversions whose preposed and postposed constituents represent equally familiar or unfamiliar information.

Finally, it should be noted that Green specifically argues against a ‘given/new’ analysis of inversion; her counterexamples include 32a above and quotation inversions, both of which have already been discussed, as well as examples like 34:

34. Seated next to me was a sprightly oldster in a brand-new suit set off by an opulent watch chain.

[=Green’s 14c]

Green notes that such inversions “begin with ‘new information’—relational predicates like attached and back of, or descriptive predicates like holding and sprawled, or combinations like seated next to” (1980:589). However, while the predicate in each case may be new, the NP incorporated within it is not—as above, where me constitutes familiar information (see discussion in chapter 4). Thus, the numerous discourse functions Green attributes to inversion can in fact be reduced to one.

3.3.2 Hartvigson and Jakobsen 1974. A rather different, taxonomic study of inversion is presented by Hartvigson and Jakobsen (1974), who distinguish between two major types: ‘attraction inversion’ and ‘weight inversion’. The class of attraction inversions consists primarily of subject-auxiliary inversions triggered by interrogative, negative, and
emphatic (e.g., so, such) ‘openers’, as in 35, and therefore will not be considered here (see chapter 2).

35. (a) Why had I lived? I wondered.
[=Hartvigson and Jakobsen 1974:26, ex. 4]

(b) Nor do I count my room at my Aunt Emily’s; . . .
[=Hartvigson and Jakobsen 1974:31, ex. 36]

Weight inversion, for Hartvigson and Jakobsen, refers to the inversion of subject and verb following the preposing of some ‘thematic’ ('given' or 'presupposed') element. This inversion type corresponds to inversion as it is defined in the present study; Hartvigson and Jakobsen claim that in such cases inversion is determined by the relative weight of the subject and verb, where ‘weight’ refers to either ‘formal weight’ (“number of syllables/syntactic complexity” (1974:12)), or ‘notional weight’ (“information content/news value” (1974:12)). Consider 36:

36. Behind Welch’s head hung the departmental timetable drawn up by Welch. . . .
[=Hartvigson and Jakobsen 1974:50, ex. 4]

Here, the departmental timetable drawn up by Welch would be considered both formally and notionally heavier than the verb hung, hence the inversion.

Hartvigson and Jakobsen invoke Jespersen’s (1965) ‘principle of weight,’ which states that the heavier an element is, the more likely it is to occur in a peripheral position in a sentence. Their ‘notional weight’ clearly makes reference to the same types of factors as are relevant for determining an element’s degree of assumed familiarity. They state that “the higher degree of CD an element has, the heavier it is” (1974:50), where CD, Communicative Dynamism, is defined as “the extent to which the sentence element contributes to the development of the communication, to which it ‘pushes the communication forward’” (Firbas 1966a:270). Elements low in CD belong to the theme, while elements high in CD comprise the rheme, with the ‘basic distribution’ of CD being that theme precedes rheme. Theme is defined by Mathesius as “that which is known or at least obvious in the given situation, and from which the speaker proceeds” (quoted in Firbas 1966a:268). Thus, the analysis presented by Hartvigson and Jakobsen has much in common with that presented here, in that known information precedes new information.32 However, there are important differences. Crucially,
Hartvigson and Jakobsen assume that inversion is dependent on preposing—that, given preposing, inversion may or may not apply, depending on the relative weight of the subject and verb. In the absence of a sufficiently heavy subject, inversion will not occur, the result being a simple preposing. However, as we saw in chapter 2, if inversion is dependent on preposing in this way, it follows that the function of an inversion should subsume the function of the preposing it incorporates, and this is demonstrably incorrect. Therefore, inversion cannot be considered to be the product of preposing and subsequent weight inversion. Moreover, it is shown in chapter 4 that what determines the felicity of inversion is not the relative CD of the subject and the verb, as Hartvigson and Jakobsen claim, but rather the relative familiarity of the postposed subject and the preposed element. (However, see chapter 5 for a discussion of the information status of the verb.)

Another difficulty with Hartvigson and Jakobsen’s account is that, by their own admission, they have no rigorous mechanism for quantifying weight. Their notion of ‘syntactic complexity’ remains largely undefined, and they present no clear-cut strategy for identifying varying degrees of CD. Furthermore, the claim that subjects are postposed when they are formally heavier (longer, more syntactically complex) than the verb is subject to counterexample:

37. In the grass little jeweled lizards darted.
   [L’Engle 1978:56—token provided by Beth Levin]

In 37, the subject is formally heavier than the verb, yet it remains in pre-verbal position despite the fact that inversion would result in a grammatical sentence. It could of course be argued that considerations of formal weight are overridden by notional weight in 37, but Hartvigson and Jakobsen present no strategies for dealing with such potential weight clashes. If notional weight consistently takes precedence over formal weight, formal weight is rendered irrelevant, whereas if the equation is more complicated than that, it cannot be properly evaluated until it is made explicit. On the other hand, what generalizations can be made concerning formal weight may very well be derivative of the relative information statuses of the elements in question. As Green (1980:599) notes, “It is not mere coincidence that inverted subjects tend to be syntactically long and complex, and bear new information. Because they are long, they bear a lot of information (and vice versa); and because they have a lot of information, they are likely to contain information which is new relative to the discourse.”
3.3.3 Penhallurick 1984. Penhallurick presents an account of inversion which is similar in spirit to the one presented here, but with crucial differences. Penhallurick notes that, contra Hartvigson and Jakobsen (1974), inter alia, the initial constituent in an inversion is not necessarily ‘thematic’, and moreover observes that Hartvigson and Jakobsen “fail to emphasise that the given-new distinction should be defined not in terms of the hearer’s KNOWLEDGE, but in terms of assumptions made by the speaker about what is currently in the consciousness of the hearer” (1984:39). Penhallurick also argues against the premise that preposing triggers inversion (see chapter 2), and in fact claims that “to the extent there is anything APPROACHING the sort of ‘mechanical effects’ appealed to by the standard accounts, it is that BACKING OF A SUBJECT requires the fronted expression, rather than vice versa” (1984:38). The backing of the subject, in turn, is claimed to be licensed by virtue of its representing new information—that is, “information which the speaker assumes not to be in the consciousness of the hearer at the time of the utterance” (1984:40; cf. Chafe 1976). Thus, he maintains that inversion requires that the subject represent ‘new information’, in contrast to Green 1980.

As noted above, Penhallurick views the inversion as a ‘defocussing’ device, claiming that subject position is reserved for elements that are ‘in focus’, where ‘focus’ is defined as “what the speaker’s attention is centred on in relation to the event specified by the verb” (1984:47). As we saw, this use of ‘focus’ is quite different from the majority of those surveyed above. Moreover, Penhallurick argues that elements which continue to be the focus of the subsequent discourse tend not to be postposed by means of inversion: “... it would be odd to defocus, with the use of full-verb inversion, entities who will continue to occupy the discourse focus.” (1984:47) However, as was demonstrated above in 33a-b, repeated below, quite the opposite situation holds.

33. (a) In a little white house lived two rabbits. #It/The house was the oldest one in the forest, and it was in disrepair. All the animals in the forest worried that someday the house would come crashing down.

(b) In a little white house lived two rabbits. They/The rabbits were named Flopsy and Mopsy, and they spent their days merrily invading neighborhood gardens.
That is, it appears that at least in some cases it is quite natural for the entity represented by the postposed subject to continue to occupy the discourse focus. In fact, in 659 (55%) out of 1193 tokens in my corpus for which a determination could be made, the information represented by the postposed constituent (or some portion thereof) constituted the topic of the following clause.

There are two further difficulties with Penhallurick's account. First, there exist counterexamples such as 38:

38. Yes, this is no ordinary general election.
   "Evans is a Democrat; Daley is a Democrat. Different Democrats have different points of view about the city of Chicago and its politics," Jackson noted. "The war between forces within the party continues, and within our coalition."
   
   <Standing in the middle of it all> is <Jesse Jackson>.
   [Chicago Tribune, 3/6/89, sec. 1, p. 10]

The inversion in 38 is the final sentence of an article on Jesse Jackson, and in fact Jackson is quoted just prior to this sentence. Clearly Jackson cannot be considered new information. However, although Jackson is undeniably salient, he is not as salient in the discourse as the antecedent of it, which refers to the war between forces within the party and within the coalition, which has been mentioned even more recently than Jackson. No analysis utilizing a binary given/new distinction will be able to account for 38; what seems to be needed is an analysis that takes into account gradient levels of salience (see chapter 4).

The second difficulty with Penhallurick's account is his failure to define what he means by the hearer's 'consciousness'. Certainly one has a sense of what is meant, and certainly Penhallurick is not the first to use the term as though there were a firm distinction between what is and what is not in a person's consciousness at a given moment. But reasonable assumptions concerning an individual's 'consciousness' can be interpreted as including anything from just the most recent handful of elements (say, a sentence or two) to the entire discourse plus situational context. Moreover, as 38 illustrates, even the most restrictive definition of 'consciousness' will still be unable to account for all inversions unless allowance is made for varying degrees of familiarity.
3.4 SUMMARY

Thus, a survey of previous approaches to the discourse function of inversion has shown that none is fully capable of accounting for the distribution of inversion in discourse. In particular, approaches based on various given/new principles have proved unable to account for the data due to their assumption that old and new information constitute a single dichotomy. As I will show in chapter 4, inversion is indeed sensitive to the level of familiarity of the information represented by the preposed and postposed constituents; however, a comprehensive account of the function of inversion must distinguish among types and degrees of familiarity.
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4

The Function of Inversion

In this chapter, I present a unified account of the discourse function of inversion, based on my study of 1778 naturally-occurring tokens. After a review of the theoretical background from which the current approach derives, I argue that inversion serves an information-packaging function (Chafe 1976), linking relatively unfamiliar information to the prior context via the clause-initial placement of information which is relatively familiar (typically evoked or inferable) in the current discourse. Drawing on work by Prince (1992), who distinguishes between the (assumed) familiarity of an element to the hearer and the familiarity of the element within the discourse, I show that it is discourse-familiarity that is relevant for inversion. I then use this result to argue for the status of inferable information as discourse-old. The chapter concludes with a discussion of the implications of this study for current pragmatic theory.

4.1 THEORETICAL BACKGROUND

In chapter 3 I reviewed previous accounts of inversion, including a number of analyses utilizing the notions of 'focus' and 'given/new'. 'Focus' was shown to be defined variously by different researchers, with some definitions drawing on the given/new status of some entity represented by a constituent in the discourse. As discussed in chapter 3, a number of researchers have attempted to apply some type of given/new principle to the function of inversion, but these analyses fail to account for the full range of inversion in natural discourse—primarily, I will argue, because 'givenness' has been treated
inaccurately as an all-or-nothing phenomenon, with differences among types of givenness and degrees of salience overlooked.

Chafe (1976) defines given information as "that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance," while new information is defined as "what the speaker assumes he is introducing into the addressee's consciousness by what he says" (1976:30). However, as noted in chapter 3, 'consciousness' is a slippery notion. Under the more specific notion of discourse familiarity which will be used below, the preposed 'given' information in an inversion is very often neither explicitly evoked in the discourse nor plausibly in the hearer's immediate consciousness. Other notions of 'old' information have allowed for a looser relationship between the old information and the discourse model, relying on such notions as predictability and shared knowledge (see discussion in Prince 1981b). Prince (1981b) rejects these terms in favor of ASSUMED FAMILIARITY, reflecting the fact that only an omniscient observer can truly know what knowledge is in fact shared between interlocutors, while actual language users must operate on the basis of what they assume to be familiar to their interlocutors.

Prince (1981b) further notes that a two-way division of information into given and new is inadequate; she presents instead a taxonomy of given and new information, focusing on the various types of assumed familiarity that may be relevant for discourse. Prince offers a preliminary scale of assumed familiarity, shown in 1, which ranks entities from most to least familiar:

1. Evoked > Unused > Inferrable > Containing Inferrable > Brand-New Anchored > Brand-New

Briefly stated, 'evoked' entities are those that are either explicitly evoked in the discourse ('textually evoked') or are otherwise salient in the physical context of the discourse ('situationally evoked'). Evoked elements are illustrated in 2:

2. (a) GW: What's against it?
   BB: <Against it> is <the fact that I could just do nothing this summer>.
   [Conversation, 4/24/89]

(b) For example, "What's Hot," a magazine published by General Foods for children aged 4 to 14, is sent to households that are known to be responsive to ad
promotions. The “message from the sponsor” is subtle, with brand names worked into activities such as games and quizzes. <Accompanying the magazine> are <cents-off coupons>. [In “Selling it,” Consumer Reports, 6/89, p. 423]

In 2a, against it represents textually evoked information, as does the magazine in 2b.

‘Unused’ entities are entities that are presumed to be known to the hearer but have not been evoked in the current stretch of discourse, as in 3:

3. Yet another massive steel fireplace, the grate concealed by a low screen of floral design. <Above the mantel> stood <the youthful Queen Victoria>. [Upfield 1950a:232-233—token provided by Beth Levin]

Here, Queen Victoria represents information which is neither evoked nor inferrable in the context, but which can safely be assumed to be known to the reader.

‘Inferrable’ entities are those that the speaker believes the hearer can plausibly infer from entities that are already salient shared knowledge in the discourse, as in 4:

4. (a) She got married recently and <at the wedding> was <the mother, the stepmother and Debbie>. [E.B., in conversation, 6/29/89]

(b) Donald Wallace, 28, who faces murder charges in Cook County, has told Hammond police he would be willing to help them find the body. But his court-appointed attorneys have filed a motion with the Illinois Supreme Court to keep him from doing so.

<At issue> is <whether an Illinois judge can allow a man accused of murder to cooperate with authorities in another state without going through criminal extradition proceedings>.
[“‘Where is Jo-Jo? Only jailed dad may know,” Chicago Tribune, 4/14/89, sec. 1, p. 1]

In 4a, the fact that someone got married renders the wedding inferrable; in 4b, one can infer from the fact that a motion has been filed that
something is at issue. A ‘containing inferrable’ is a special case of an inferrable in which “what is inferenced off of is properly contained within the Inferrable NP itself” (Prince 1981b:236). That is, the entity represented by the inferrable constituent can be inferred from some other constituent syntactically contained within it, as illustrated in 5:

5. On the door side of the bed was a small woolly mat, on the far edge of which was a pair of embroidered slippers. <Over the bed's foot> sprawled <a floral linen dressing-gown>, and <on one of two chairs> lay <a flecked tweed skirt, a lemon-coloured sweater, a satin brassiere and slip, and silk stockings>. [Upfield 1950b:72—token provided by Beth Levin]

This token provides two inversions conjoined by and; each of the inversions contains a preposed containing inferrable. The first containing inferrable is bed's foot; here, bed represents evoked information, and given a bed, the reader can infer that it has a foot. In contrast, in the containing inferrable one of two chairs in the second inversion, two chairs represents brand-new information; nevertheless, given two chairs, the reader can infer the existence of one of them. (I will argue below that the difference in discourse status between examples like these two is an important one.)

'Brand-new anchored' entities are those brand-new entities represented by an NP which is linked to some other discourse entity by means of an 'anchor' represented within the NP, as illustrated in 6:

6. (a) <Somewhere in this town> is <a person who doesn't get a check from us every month>. ['The Lockhorns' cartoon, Chicago Tribune, 5/16/89, sec. 5, p. 9]

(b) A: Are you sorry you had to leave China at this time? B: [nodding] <Going through my mind a lot> are <images of the Chinese I've met>. [NBC 10 p.m. news interview, 6/15/89]

In 6a, a person who doesn't get a check from us every month is anchored by means of the salient us; in 6b, images of the Chinese I've met is similarly anchored to the speaker.

Finally, 'brand-new' entities are those that have not been evoked in the discourse and are assumed to be unknown to the hearer, as in 7:
7. (a) We’re at the headquarters of the professional football team. It is an enclave in Virginia, some twenty-five miles outside Washington. It has the appearance of a successful industrial complex. Aside from the blackboards, chalked with arcane diagrams, there are plaques on the walls of the offices bearing the recurring encomium: “... for the unselfish sacrifice while serving with outstanding leadership, vision, ability. ...” *<Most striking> are <two silver discs under glass>: it is the Fiftieth Anniversary American Legion Award for God and Country.*

[Terkel 1974:506-7]

(b) Pastry chef Celeste Zeccola is continuing Carlos’ tradition of turning out stunning desserts. (Zeccola has worked at Carlos’ for the last two years with Mary Beth Liccioni.) The most visually enticing selection is the chocolate “delice”: a hatbox-shaped dessert made of dark chocolate and filled with berries and white chocolate mousse. *<Surrounding the creation> is <a mosaic of four fruit sauces>.*

[“Carlos’ new chef keeps excellence as top menu item,” JeanMarie Brownson, *Chicago Tribune*, 7/7/89, sec. 7, p. 29]

*Two silver discs under glass* in 7a and *a mosaic of four fruit sauces* in 7b represent brand-new information, in that the information has not been evoked in the context, nor is it inferrable or anchored to some other evoked or inferrable information.

Prince posits a “conspiracy of syntactic constructions resulting in the nonoccurrence of NPs low on the scale in subject position” (1981b:247), including existential *there*, it-clefts, and certain left-dislocations.34 That is, these constructions conspire to prevent relatively unfamiliar information from occupying subject position in the sentence. In previous work (Birner 1989, 1991) I suggested that inversion represents another participant in the conspiracy to keep new information out of subject position. Thus, I proposed that inversion serves to keep less familiar information, as determined by Prince’s 1981 scale, out of subject position.
A rather different approach to assumed familiarity, however, is provided in Prince 1992, where the 1981 linear scale is transformed into a matrix of crosscutting dichotomies. This matrix classifies the information represented by an utterance in terms of two distinct divisions: DISCOURSE-OLD/DISCOURSE-NEW and HEARER-OLD/HEARER-NEW. This pair of distinctions captures the fact that what is new to the discourse may not be (assumed by the speaker to be) new to the hearer (cf. Firbas 1966b, Chafe 1976:30), although presumably what is 'given', 'old', or 'familiar' in the discourse will be familiar as well to the hearer.

The discourse-old/discourse-new distinction is clearly related to, though not isomorphic with, the theme/rheme distinction discussed by Firbas (1966a, 1966b), inter alia, where the theme is said to convey “facts that are known or can be gathered from the preceding sentence” (Firbas 1966a). The theme/rheme distinction is situated within the theory of communicative dynamism (see chapter 3); thematic material exhibits a lower degree of communicative dynamism than rhematic material. The intuition that the theme may consist of information that can be ‘gathered’ from the preceding sentence corresponds roughly to Prince’s category of inferrable information. The results of the present study are in general compatible with a theme/rheme analysis; I believe the taxonomy of familiarity types used here provides a more concrete way of getting at many of the same intuitions that motivate the theory of CD. A theme/rheme-based account of inversion offered by Hartvigson and Jakobsen 1974 is critically discussed in chapter 3.

Thus, there are four theoretically possible information statuses, of which only three are useful for the analysis of discourse:

Hearer-old, Discourse-old—Information which has already been evoked in the current discourse.

Hearer-old, Discourse-new—Information which has not been evoked in the current discourse, but of which the speaker believes the hearer is aware.

Hearer-new, Discourse-new—Information which has not been evoked in the current discourse, and of which the speaker believes the hearer is unaware.

Hearer-new, Discourse-old—Theoretically, information which has been evoked in the current discourse, but of which the speaker nonetheless believes the hearer is unaware. For
obvious reasons, this type presumably does not occur in natural discourse (except perhaps due to performance error—e.g., a memory lapse on the part of the speaker).

The first type, hearer-old/discourse-old, corresponds to 'evoked' information on Prince's 1981 scale; the second type, hearer-old/discourse-new, corresponds to 'unused' information; and the third type, hearer-new/discourse-new, corresponds to 'brand-new' (including 'brand-new anchored') information. The fourth, non-occurring type has no analog in the 1981 system. The status of 'inferrable' information is left unresolved in Prince 1992 and will be discussed below.

4.2 ANALYSIS OF THE CORPUS

In coding the corpus for the relative familiarity of the information represented by the preposed and postposed constituents, I used Prince's 1981 scale of assumed familiarity, which as we will see can be mapped straightforwardly onto her current matrix. While the most crucial of my classification tasks, this was also the least clear-cut. For example, although I had taken care, where possible, to obtain sufficient prior context to determine whether the relevant entities/elements constituted 'evoked' information, it is of course impossible to know for certain how much prior context should be considered, and how long information remains evoked before fading to 'unused' status. Here I often had to rely on my own native speaker intuitions.

Also, I found that it was seldom the case that the ENTIRE preposed constituent represented familiar information; rather, for example, in a preposed PP it was consistently the NP (within the PP) that was familiar in context. Similarly, Ward (1988) found that in PP preposings, the PP itself (e.g., the location relationship) needn't be salient, but rather serves as a bridge between the salient NP contained within it and the prior context. Ward also found (1988:170-1) that certain preposed NPs can likewise serve as 'anaphoric bridges', describing some previously evoked entity in new terms, as in 8:

8. Facts about the world thus come in twice on the road from meaning to truth: once to determine the interpretation, given the meaning, and then again to determine the truth value, given the interpretation. This insight we owe to David Kaplan's important work on indexicals and
demonstratives, and we believe it is absolutely crucial to semantics.
[=Ward 1988, ex. 350]

Here, this insight describes familiar information (i.e., the concept explained in the previous sentence) in new terms, since the concept had not previously been described as an insight. Analogous cases were found in the inversion corpus. In both the NP and PP cases (among others), a previously evoked (or, in many cases, inferrable) entity is being referred to, with additional information about it being added within the same preposed constituent. In such cases the constituent was coded according to the information status of that entity rather than the description that was being added. If, in fact, inversion’s preposing of relatively familiar information serves essentially a connecting function (cf. Green 1980), as the current study suggests, this function is equally well served by the preposing of familiar information whether or not some portion of the constituent adds some new information about that entity. In many cases (e.g., AdjP inversion), the preposed familiar element was not an NP at all, but rather a description or activity; in these cases, I coded for the familiarity of the description or activity, respectively, using criteria analogous to those used for NPs. In the case of the final constituent, which was nearly always an NP, I simply coded the information status of the entity represented by that NP.

As ‘evoked’, then, I included those elements that were under discussion, recently mentioned in the current discourse, or salient in the context of the discourse. I coded as ‘unused’ those elements that were no longer, or never had been, evoked, but which, in my opinion, the speaker could plausibly assume to be familiar to the hearer. Among the ‘inferrables’ I counted information which could plausibly be considered inferrable from information assumed to be in the hearer’s discourse model; I included in this category spatial and scalar relationships, as exemplified in 9a-b, respectively:

9. (a) Turn left on Bainbridge. Then <right on your left> \( \text{will be } \langle \text{a church} \rangle \). Just buzz.
[M.S. in conversation—token provided by Gregory Ward]

(b) At nearly every angle that a camera might catch there were banners featuring checkered flags and race cars encircled by the word “National Association of Record Breakers.” <Less abundant but equally
In 9a, given a salient 'you', 'your left' is inferrable. In 9b, the evoked abundance and prominence of one type of banner renders inferrable the scales of abundance and prominence.37

I coded as 'brand-new' that information which not only had not been evoked in the current discourse but also could not plausibly be assumed to be inferrable or familiar to the hearer. It was coded as 'brand-new anchored' if it was linked to another, more familiar entity by means of an anchor within the same preposed or postposed constituent; such information was coded as 'brand-new anchored' regardless of whether the anchor itself was evoked, unused, or inferrable.

4.3 RESULTS AND DISCUSSION

As noted above, I hypothesized in Birner 1989 and 1991 that inversion serves to keep less familiar information, as determined by Prince's 1981 scale, out of subject position. However, this hypothesis was not fully supported by my empirical study. Of the 1310 tokens that contained sufficient context to make a determination, in 137 cases (10%) the preposed constituent represented less familiar information than did the postposed constituent, contrary to what would be predicted by the hypothesis presented in Birner 1989 and 1991.

The largest class of counterexamples to Birner 1989 and 1991 involved inversions with a preposed inferrable element and a postposed unused element, as in 3, repeated here:

3. Yet another massive steel fireplace, the grate concealed by a low screen of floral design. Above the mantel stood the youthful Queen Victoria.

Here, given an evoked fireplace, 'the mantel' constitutes inferrable information; on the other hand, 'the youthful Queen Victoria' constitutes unused information, since Queen Victoria has not been evoked but can be assumed to be known to the reader. The corpus contained 96 such tokens. Interestingly, the corpus contained no tokens wherein the reverse situation held; that is, there were no examples of a preposed unused element with a postposed inferrable element. Thus, the
juxtaposition of inferrables and unused elements represents a major class of counterexamples that must be accounted for.

A second difficulty concerns the relation between evoked and inferrable elements. As illustrated in 10, both possible orderings of these elements are found in inversion:

10. (a) She's a nice woman, isn't she? \(<\text{Also a nice woman}>\) is \(<\text{our next guest}>\). . . .
[David Letterman, 5/31/90 (rerun)]

(b) Nusseibeh's unusual predicament causes concern all around. His friends fear that Arab hard-liners will turn on Nusseibeh, thinking he is an Israeli ally.

The Israelis, who certainly want to squelch the 17-month-old uprising in the West Bank and Gaza Strip, are under intense pressure from the United States not to jail moderates who may figure in their election proposal for the territories occupied since the 1967 war.

\(<\text{Most immediately affected}>\) is \(<\text{Nusseibeh himself}>\).
["West Bank prof is either on the spot or off the hook," Chicago Tribune, 5/21/89, sec. 1, p. 5]

A nice woman within the preposed also a nice woman in 10a represents evoked information, while the postposed our next guest represents inferrable information, since it's to be expected in the middle of a talk show that there will be another guest. In contrast, the preposed most immediately affected in 10b represents inferrable information (i.e., one can be expected to infer that someone will be affected), while the postposed Nusseibeh himself clearly represents evoked information.

Among inversions with a postposed evoked element, the preposed element constituted evoked information in 29 tokens and inferrable information in 26; similarly, among inversions with a postposed inferrable element, the preposed element represented evoked information in 42 tokens and inferrable information in 41. This situation is shown in Fig. 4-1.
Thus, all four possible combinations appear in inversion; in particular, the 26 cases of preposed inferrables followed by postposed evoked elements constitute counterexamples to Birner 1991.

Similar, though less numerous, counterexamples can be found when one considers the distribution of unused elements with respect to brand-new and brand-new anchored elements; while in 28 instances the unused element predictably preceded the brand-new element, in six cases (18%) the brand-new element preceded the unused element. Consider the tokens in 11:

11. (a) \(<\textit{In the basement of Emersonian}> \text{ was } <\textit{a candy dispensing machine}>.\)

[T.L. in conversation, 7/23/89]

(b) Napkin notes: \(<\textit{Reopened after a summer siesta} > \text{ is } <\textit{the SMC Club}, \text{ only it's not the SMC Club anymore}.\) With renovations and an expansion of the old Videotech concept came a new name—the Kennel Club.

[Au Courant, p. 5, Oct. 4-10, 1983—token provided by Gregory Ward]

In 11a, which begins a narrative, the *basement of Emersonian* represents a location known to both speaker and hearer, but which had not been evoked previously in the discourse; hence it is unused. The candy machine mentioned in the postposed constituent is brand-new. This situation is reversed in 11b: Here it is the postposed constituent—the *SMC Club*—that represents unused information, while the preposed constituent represents brand-new information about the club.

What, then, can we make of these facts? The fact that inferrables and unused elements in the corpus pattern with respect to each other in a way exactly opposite that predicted in Birner 1991 suggests that such a scale of familiarity is in fact relevant to inversion (since if it were not,
one would expect to find both orderings rather than exclusively preposed-inferrable/postposed-unused), but that to maintain such an account there must minimally be a reordering of these elements. More serious is the existence of tokens containing both possible orderings of evoked and inferrable elements, and of tokens containing both possible orderings of unused and brand-new elements. These data suggest that at least some of the distinctions drawn in Prince 1981b are unnecessary or irrelevant with respect to inversion. Thus, a reordering of some categories and a collapsing of others seems necessary if a given/new approach to inversion is to be maintained; this in turn suggests a need for a new approach to the scale of familiarity.

Examining the data with respect to Prince's 1992 reformulation, however, yields quite surprising results. Recall that in this formulation, 'evoked' elements (including those that are situationally evoked) are considered both hearer-old and discourse-old, 'unused' elements are discourse-new and hearer-old, and 'brand-new' elements are both discourse-new and hearer-new. Given that there are three possible levels of familiarity within this system, and two sentence positions to be coded in any given inversion, this results in nine possible familiarity-status combinations. For the 703 tokens in the corpus involving only these three familiarity types, the results are striking:

As can be seen in Fig. 4-2, there is not a single token in the corpus wherein the element represented by the initial constituent is discourse-new (i.e., unused or brand-new) while that represented by the final constituent is discourse-old (i.e., evoked). That there do exist
felicitous tokens (6) containing a hearer-new initial constituent with a hearer-old final constituent suggests that it is not the (assumed) familiarity of the information to the hearer that is relevant, but rather the familiarity WITHIN THE DISCOURSE of the information represented by the preposed and postposed constituents. I will term this the DISCOURSE-FAMILIARITY of the information, to avoid confusion with the term 'discourse status', which has been used elsewhere in the literature with a more general meaning. When the results are charted for discourse-familiarity alone, the conclusion is even clearer:

Fig. 4-3. Discourse-familiarity distribution

<table>
<thead>
<tr>
<th>Final element</th>
<th>Initial element</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D-old</td>
<td>D-new</td>
</tr>
<tr>
<td>D-old</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>D-new</td>
<td>533</td>
<td>141</td>
</tr>
<tr>
<td>Total</td>
<td>562</td>
<td>141</td>
</tr>
</tbody>
</table>

Here we see not only that the corpus contained no tokens with a preposed discourse-new element and a postposed discourse-old element, but also that in postposed position, constituents representing discourse-new information outnumbered those representing discourse-old information by more than 20 to 1 (674 tokens (96%), vs. 29 (4%)). Similarly, though not as dramatically, preposed constituents representing discourse-old information outnumbered those representing discourse-new information 4 to 1 (562 tokens (80%) vs. 141 (20%)). And in fact 76% (533) of the tokens contained both a preposed discourse-element and a postposed discourse-new element, as in 12:

12. (a) We have complimentary soft drinks, coffee, Sanka, tea, and milk. *<Also complimentary> is <red and white wine>*. We have cocktails available for $2.00. [Stewardess on Midway airlines, 12/30/83—token provided by Gregory Ward]

(b) When this merry band of eco-warriors first emerged from Edward Abbey's fertile imagination and unforgiving love of nature in 1975, its members were united by an outrage over "progress" run amuck.
Now, however, they've had to be grabbed by the scruff of the conscience and hauled kicking and scheming out of their complacency.

*Doing the hauling* is *none other than George Washington Hayduke—ex-Green Beret, lover, brawler, chauvinist, self-appointed protector of the great Southwest and, clearly, the curmudgeonly author's alter ego*.

[“Eco-war returns in a darker shade,” *Chicago Tribune*, 2/12/90, sec. 5, p. 3]

In 12a, the preposed *complimentary* represents information that has been evoked in the previous clause, while the postposed *red and white wine* represents brand-new information. In 12b, the preposed *hauling* represents evoked information, and the postposed *George Washington Hayduke* represents brand-new anchored information (anchored to ‘the curmudgeonly author’).

Given these results, we can posit a pragmatic constraint on inversion: specifically, that the preposed element in an inversion must not be newer in the discourse than the postposed element. It appears, then, that inversion serves an information-packaging function: to present information which is relatively familiar in the discourse before information which is relatively unfamiliar in the discourse. Vallduví 1992 claims that “the purpose of information packaging is precisely to optimize the entry of data into the hearer’s knowledge-store” (1990:14); in this spirit, it could be argued that one plausible reason for the ordering of information found in inversion is to allow the new element to be processed in terms of its relationship to the (preceding) evoked element.

Note that the above formulation is not equivalent to saying that the preposed constituent in an inversion always represents discourse-old information while the postposed constituent always represents discourse-new information; as noted in chapter 2, this is not the case. As seen in Figure 4-3, in 170 cases the preposed and postposed elements were either both discourse-old or both discourse-new. Given that there is a 100% correlation between discourse-familiarity and sentence position for those inversions in which the two elements differ in status, it seems reasonable to hypothesize that the generalization is correct but that perhaps finer distinctions could still be made. For example, among the 29 tokens containing both a discourse-old initial element and a discourse-old final element, in 21 cases the initial element had been mentioned more recently than the final element. Thus,
although the dolls referred to in the postposed NP in 13 are evoked only three sentences earlier, they have been mentioned less recently, and are arguably less salient, than the books referred to in the preposed VP:

13. Each of the characters is the centerpiece of a book, doll and clothing collection. The story of each character is told in a series of six slim books, each $12.95 hardcover and $5.95 in paperback, and in bookstores and libraries across the country. More than 1 million copies have been sold; and in late 1989 a series of activity kits was introduced for retail sale.

<Complementing the relatively affordable books> are <the dolls, one for each fictional heroine and each with a comparably pricey historically accurate wardrobe and accessories>. . . .

["Barbie backlash," Chicago Tribune, 1/4/90, sec. 5, p. 3]

If, as seems indicated by the data, recency of mention is in fact relevant to inversion, this would suggest that speakers may recognize varying degrees of discourse-familiarity based on recency of mention (cf. Grosz, Joshi, and Weinstein 1983; Grosz 1986; Sidner 1986; inter alia); such a finding would have significant implications for linguistic theory (cf. Chafe 1976:33). Prince (1992) notes the oddness of claiming that there is "a continuum between what we have in our head and what we do not," and indeed it seems that an entity is either discourse-old or discourse-new, with no gradience in this distinction. Prince also notes, however, that SALIENCE is an additional feature that may be relevant for distinguishing among discourse-old elements. Salience is a gradient notion, reflecting not whether an entity is in the hearer's consciousness, but to what degree the hearer is (believed to be) attending to that entity. If this is the case, it would seem that salience is affected by recency of mention, and, given the data presented here, that it is relevant to the speaker's decision regarding whether to use an inversion. Nonetheless, a good deal more study is necessary before such a conclusion can be drawn.

In another five of the 29 cases in which both the preposed and postposed constituents represented evoked information, a single phrase had evoked both, and in all five cases the information represented by the postposed constituent appeared in the evoking phrase as a proper subset of the information represented by the preposed constituent, as in 14:
14. Over a weekend, Montagnier and Barre, whose English was more fluent than Chermann’s, hammered out a manuscript reporting the isolation of their new retrovirus from Frederic Brugiere, who would henceforth be known in the scientific literature as BRU. *Listed first among the authors, the position traditionally reserved for the researcher who has made the greatest contribution to the work,* was *Francoise Barre.*

["The Great AIDS Quest: Science under the microscope," *Chicago Tribune*, 11/19/89, sec. 5, p.4]

Here, *Montagnier and Barre, whose English was more fluent than Chermann’s* is the phrase that evokes the authors of the paper, who are subsequently referred to in the preposed phrase of the inversion; *Francoise Barre* is mentioned in the evoking phrase as a subset of those authors, and is subsequently referred to in the postposed NP of the inversion.

In one of the 29 tokens with both preposed and postposed discourse-old information, both elements are situationally evoked (Prince 1981b) and therefore cannot be fairly evaluated in terms of one being more or less recently ‘mentioned’. The final two tokens are slightly more problematic:

15. (a) *The earth was friable. He scooped a small and deep hole straight down so that the bottle would not lie longwise with the danger of its precious contents seeping out from the glass-stoppered cork.* *Down* went *the bottle* into the hole.

[Upfield 1946:31—token provided by Beth Levin]

(b) *Visiting hours were over and a collection of parents, wives, and husbands had begun to descend the steps in front of the hospital and spread out in the shadowy parking lot.* *Behind them* loomed *the lighted building, dingy and familiar.*

[McLaughlin 1989:54—token provided by Beth Levin]

In 15a, it may be that the orientational *down* of *straight down* (indicating the orientation of the hole) is distinct from the motional *down* (indicating downward movement) preposed in the inversion—that
is, perhaps the information encoded in the latter (downward movement) has not actually been evoked in the discourse, despite the appearance of the (homophonous) lexical item down; this would render the preposed element inferrable rather than evoked (see discussion of inferrables, below). Notice that the token is equally felicitous without the prior use of the word down:

16. The earth was friable. He scooped a small and deep hole so that the bottle would not lie longwise with the danger of its precious contents seeping out from the glass-stoppered cork. Down went the bottle into the hole.

This explanation is nonetheless speculative. In 15b, it may be that the embedded mention of the hospital in the steps in front of the hospital is insufficient to evoke the hospital (cf. #Behind them loomed the steps in the same context); alternatively, the formal weight of the postposed constituent may be relevant. Again, however, this is speculative, and must be left as a question for future research.

Nonetheless, the fact that 21 of these 29 tokens can be accounted for by a principle of recency of mention raises the likelihood that further study of inversions containing evoked information in both preposed and postposed position will reveal finer distinctions of discourse status relevant to the choice between inversion and canonical word order in these cases. Although I have not considered in this regard those inversions containing discourse-new information in both positions (or those whose preposed and postposed constituents are not of equal discourse-familiarity, which seem fully accounted for by the analysis presented above), it appears that future research may be able to uncover the full range of distinctions governing the distribution of information in inversions containing discourse-equal preposed and postposed elements (by Prince’s dichotomy). However, in view of the data, we may conclude that felicitous inversion depends on the discourse-familiarity of the preposed and postposed constituents. Specifically, I have proposed a necessary condition on felicitous inversion: the preposed element must not be newer in the discourse than the postposed element.

4.4 INFERRABLES

The analysis in Prince 1992 leaves unresolved the status of inferrables—that is, instances in which the constituent represents an
element which is not explicitly evoked in the context but is nonetheless plausibly inferrable from the context, as in 17:

17. (a) Dolls, in fact, appear to be the hot toy line for 1990, but in a reversal of trend that seems to say that the good old days really were not so bad as everyone makes them out to be. While people's lives become more and more computerized, and high-tech gadgetry dominates everything from kitchen appliances to automobiles, dolls were returning, en masse, to basics.

< Gone > were < the expensive high-tech Teddy Ruxpins and Chatty Cathies which, in 1987, walked, talked, told stories and practically carried out the garbage >.

[“Dolls are winning the war of the toys,” Chicago Tribune, 2/21/90, sec. 5, p. 1]

(b) Labor savings are achieved because the crew is put to better use than cleaning belts manually; < also eliminated > is < the expense of buying costly chemicals >.

[WOODEXTRA, August 1988]

In 17a, gone represents inferrable information; in the context of a trend leading back to basics in dolls, it is inferrable that some (presumably less basic) dolls would be gone. Similarly, in 17b, mention of labor savings renders inferrable that something (labor) has been eliminated; hence, eliminated in the preposed constituent represents inferrable information.

Prince notes that inferrables are technically both hearer-new and discourse-new, but depend upon a discourse-old 'trigger' element. Based on an examination of a small corpus of data, she suggests that inferrables may be collapsible with discourse-old nonpronominals, but observes that her data are not conclusive on this point. Therefore, I next examined those cases in which either the preposed or the postposed constituent in an inversion represented inferrable information, with the hope of determining whether such inferrables are treated more like discourse-old or discourse-new information with respect to inversion. That is, given that the results for discourse-old and discourse-new information clearly indicate that this dichotomy accounts for the felicity of inversion in discourse, I hypothesized that an examination of the
The Function of Inversion

placement of inferrables in inversions would reveal whether speakers treated them as discourse-old, discourse-new, or a distinct category.

Again, the results were striking. Recall that there were 96 tokens in the corpus that contained preposed inferrable elements with postposed unused (discourse-new) elements, but for no token was the situation reversed—i.e., in no token did an unused element appear preposed while an inferrable element appeared postposed. This is reminiscent of the situation with discourse-old and discourse-new information in general; as discussed above, in no case did a discourse-new element appear preposed while a discourse-old element appeared postposed. Recall also that all possible combinations of evoked and inferrable elements were represented in the corpus, suggesting that the two behave as members of the same class:

Fig. 4-1 [repeated here for convenience].

<table>
<thead>
<tr>
<th>Final element</th>
<th>Evoked</th>
<th>Inferrable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evoked</td>
<td>29</td>
<td>26</td>
<td>55</td>
</tr>
<tr>
<td>Inferrable</td>
<td>42</td>
<td>41</td>
<td>83</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>67</td>
<td>138</td>
</tr>
</tbody>
</table>

These results taken together suggest that inferrable information may be collapsible with evoked information for purposes of determining the felicity of an inversion—specifically, that inferrable information may also be treated as discourse-old. Indeed, when evoked and inferrable elements are collapsed into a single category (i.e., discourse-old information), this conclusion is confirmed:

Fig. 4-4. Discourse-familiarity including inferrables

<table>
<thead>
<tr>
<th>Final element</th>
<th>D-old</th>
<th>D-new</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-old</td>
<td>138</td>
<td>3</td>
<td>141</td>
</tr>
<tr>
<td>D-new</td>
<td>1008</td>
<td>141</td>
<td>1149</td>
</tr>
<tr>
<td>Total</td>
<td>1146</td>
<td>144</td>
<td>1290</td>
</tr>
</tbody>
</table>
That is, in 1008 cases (78%) out of 1290 (disregarding 20 tokens with ‘containing inferrables’ (see below) and 468 tokens for which insufficient context was available to determine the discourse-familiarity of one or both constituents), a discourse-old (evoked or inferrable) element was represented by the preposed constituent while a discourse-new (unused, brand-new, or brand-new anchored) constituent was represented by the postposed constituent. In another 279 cases (22%), the elements represented by the preposed and postposed constituents were either both discourse-old (138) or both discourse-new (141); in only three cases did it appear that the preposed constituent represented discourse-new information while the postposed constituent represented discourse-old (specifically, inferrable) information. Although these three cases represent only 0.23%, or less than one-quarter of one percent, of the 1290 relevant tokens, I will take a moment here to discuss them, as they represent potential counterexamples to my claim.

18. (a) I filmed David, age twelve, plucking lint off his underwear. Meticulously, slowly, he studied each section of the cloth and assembled a midget pyramid of white thread.

David always sets about his plucking in the same way. And he always does a perfect job of it, his fingers moving in fine pincer movements. David’s undershirt, like several of its predecessors, is about to fall apart. He has, in a sense, picked it “clean.”

<Under David’s bed> is <his entire lint collection, the result of three years of thread-pulling>.
[Rapoport 1989:188—token provided by Gregory Ward]

(b) A focus on commerce, it is widely believed, distorts the values of both those who create art and those who buy it. Moreover, much of the newly stimulated demand for art is coming from abroad, raising the prospect that the cream of contemporary work will find homes far from America.

<Often overlooked, however, are <the benefits>.
(c) Napkin notes: Reopened after a summer siesta is the SMC Club, only it's not the SMC Club anymore. With renovations and an expansion of the old Videotech concept came a new name—the Kennel Club.

[Au Courant, p. 5, Oct. 4-10, 1983—token provided by Gregory Ward]

The example in 18a is perhaps the least problematic; although it seemed at the time of the coding that his entire lint collection was inferrable from the evoked discussion of lint-plucking, one would not necessarily expect that a boy who compulsively plucks lint from his underclothes would save the lint. (Notice that replacing his with the in the postposed NP renders the inversion infelicitous in this context.) This conclusion is supported by the addition of the phrase the result of three years of thread-pulling, which seems intended to clarify the source of the lint collection; that is, the writer here seems to be treating the collection as new, rather than inferrable, information. Under this analysis, then, his entire lint collection, the result of three years of thread-pulling represents a brand-new anchored (i.e., discourse-new) entity. Moreover, David's bed can quite plausibly be considered to represent inferrable information in the context. In either case, 18a becomes unproblematic.

Similarly, it is plausible that the postposed NP in 18b would also be more appropriately considered discourse-new than inferrable. My initial reaction was that the reader would infer the distortion of values, etc., discussed in the prior paragraph to be drawbacks, which would in turn render 'benefits' inferrable via antonymy; however, if such an antonymy-based inference does occur, the preposed overlooked should also be considered inferrable via antonymy from the evoked focus on commerce. Nonetheless, it is not clear that either occurs; that is, the fact that there are drawbacks may not necessarily render inferrable that there are benefits as well.

Finally, in 18c it seems that it is not just a new name (inferrable), but rather a new name—the Kennel Club (brand-new anchored) that is to be evaluated in terms of discourse-familiarity; this is consistent with my earlier observation that it is the entity represented by the entire postposed NP that is to be considered in determining discourse status.

Thus, we can conclude that inferrables pattern with evoked information with respect to inversion, and that evoked and inferrable elements are treated as equally discourse-old for this purpose.
The situation with containing inferrables is slightly more complex. Recall that a containing inferrable is a special case in which the constituent representing the element inferenced off of is properly contained within the constituent representing the inferrable element. For example, consider the tokens in 19:

19. (a) Official sources said yesterday that at least 22 people were killed in rebel attacks during nationwide municipal elections in which voters swung to the left in a sharp rebuff to President Fernando Belaunde Terry's centrist government.

[. . . ] <One of the people killed> was <Filimon Delgadillo, the mayoral candidate of Belaunde's party, Popular Action, in Huamanguillo>.

["Peru rebels said to kill 22 in voting," Philadelphia Inquirer, 11/15/83, p. 7-A—token provided by Gregory Ward]

(b) <On the ground occupied by this building> once stood <the house where lived in 1791 Alexander Hamilton Secretary of the Treasury of the United States>

[inscription on wall of building—token provided by Ellen Prince]

In 19a, one of the people killed can be inferred from the people killed; similarly, in 19b, the ground occupied by this building can be inferred from this building. (The token in 19b is particularly interesting, as it is the only instance in the corpus of an inversion embedded within an inversion.)

Here, I hypothesized that in cases where the element that was 'inferenced off of' was previously evoked or inferrable in the context—i.e., discourse-old—the entire NP would be treated as discourse-old, while in cases where the element inferenced off of was discourse-new, the entire NP would be treated as discourse-new. And in fact, of the 20 tokens in the corpus which involved a containing inferrable, there were no tokens involving either a preposed discourse-new containing inferrable (as defined by my hypothesis) in combination with a postposed discourse-old element, or a preposed discourse-new element in combination with a postposed discourse-old containing inferrable.
There were, however, tokens representing all six other logically possible combinations. Thus, it seems likely that the above hypothesis is correct—i.e., that the discourse status of the containing inferrable is dependent on the discourse status of the element inferenced off of. Nonetheless, given the small number of tokens considered, this conclusion must remain tentative pending further research.

4.6 DEFINITENESS

The data showed a significant asymmetry in the morphological definiteness of the preposed constituent. Of the 1485 relevant tokens (i.e., excluding those whose preposed constituent did not contain an NP and therefore could not be assessed for definiteness), there were 1332 (90%) whose preposed constituent was definite, as in 20a, and only 153 (10%) whose preposed constituent was indefinite, as in 20b.

20. (a) <After the duck> came <a salad of watercress and chicory in a faint mist of chives>.
[Waugh 1945:176—token provided by Gregory Ward]

(b) <In a tiny office here, buried under shelves filled with dictionaries,> sits <Dr. Jeffery Triggs, the director of the first North American Reading Program for the Oxford English Dictionary>.
[Marjorie Keyishian, “Reader of dictionary seeks new uses for words,” 1990 N.Y. Times News Service—token provided by Beth Levin]

Interestingly, the definiteness results for the postposed constituents were much more symmetrical, with 763 postposed definites (51%), as in 21a, and 722 postposed indefinites (49%), as in 21b.

21. (a) Performer wraps deck in his handkerchief and lays on table. He offers to cause the card to penetrate the deck and the handkerchief and come out on the table. But when he lifts the bundle, nothing has happened. He tries again and this time, <on top of the folded hanky> is seen <the imprint of the selected card>!
[Magic Inc. Trick Catalog #25, p. 71]
(b) The products come complete with bags for the microwave cooking. Both popped up nicely enough, with an ear producing about five cups of popped corn. *<In there with the popcorn, of course,* is *<a dessicated-looking cob, with quite a few unpopped and semi-popped kernels clinging to it>*.


These results are especially surprising in view of the so-called ‘definiteness effect’ (Milsark 1974, Safir 1985, inter alia) observed for *there*-insertion. It has been claimed that the post-verbal NP in a *there*-sentence must be indefinite (but see Milsark 1974, Bolinger 1977, Rando and Napoli 1978, and Ziv 1981, inter alia, for evidence that the constraint is not so clear-cut); therefore, given the large number of researchers who have posited a close syntactic relationship between inversion and *there*-insertion (see chapter 2), one might expect, if anything, that the postposed constituent in inversion would exhibit a definiteness effect. On the contrary, the distribution of definites and indefinites in this position appears to be roughly equal, while preposed position appears to overwhelmingly favor definites. 44

Given the above conclusions regarding discourse status, however, a potential explanation for the definiteness results presents itself. It seems that while inversion is sensitive to discourse-familiarity, definiteness correlates with hearer-familiarity (cf. Webber 1979, 1981). Prince (1992) observes that hearer-old elements are typically definite, while hearer-new elements are typically indefinite, although the correlation is imperfect (e.g., she notes, inferrables may be either definite or indefinite). 45 Moreover, to the extent that indefinites correlate with hearer-new status, they necessarily also indicate discourse-new status, since what is new to the hearer must also be new to the discourse.

Similarly, Chafe (1976) argues that definiteness depends on whether the speaker believes the hearer can identify the intended referent (which in turn entails that the hearer know of the intended referent). Consequently, he argues, indefiniteness indicates newness in most cases (where by “newness” is meant lack of salience, roughly equivalent to discourse-new status); to the extent that indefiniteness is in fact correlated with hearer-new status, this claim is analogous to Prince’s (1992) observation that hearer-new status entails discourse-new status. On the other hand, he notes that “there is no reason why [definites] cannot be either given or new,” observing that definiteness may be established “on some other basis than prior mention” (1976:42-
The Function of Inversion

43). He concludes that of the four possible combinations—new/definite, new/indefinite, given/definite, and given/indefinite—the first three are common, while the fourth occurs “only when the referent in question is different from the referent which established the givenness” (1976:43).

Since the preposed constituent in an inversion overwhelmingly represents discourse-old information (‘given’ information, for Chafe), we would predict that indefinites would be much less common in this position, and this is exactly what the data show. There is a strong tendency for the initial constituent to be definite because the initial element in the inversion tends to be discourse-old, and any element which is discourse-old is necessarily hearer-old, and hence definite.46 (The correlation is imperfect to the extent that discourse-old information can appear in preposed position and to the extent that indefinites can in some cases represent hearer-old information, as discussed above). There is, however, no tendency for the final constituent to be indefinite, because the class of discourse-new elements (which tend to appear in this position) includes both hearer-new and hearer-old elements. In particular, unused elements (discourse-new but hearer-old) frequently appear in this position; their status as hearer-old typically renders them definite, while their status as discourse-new renders them felicitous in postposed position in the inversion.

It is interesting to note that, although there is no restriction against the appearance of definites in postposed position in an inversion, it does seem to be the case that pronouns may not appear in this position (Hartvigson and Jakobsen 1974, Penhallurick 1984, Green 1985, Bresnan 1990, inter alia), although some authors (e.g., Bresnan 1990) have claimed that deictic pronouns are acceptable:47

22. Among the guests of honor was sitting HER [pointing].
[=Bresnan 1990:14, ex. 37]

Most of these researchers have also noted that this apparent restriction on anaphoric pronouns is likely to be pragmatic rather than syntactic in nature, since the pronoun’s referent is salient, ‘given’ information. Thus the pronoun has been variously considered to be inconsistent with inversion’s function of presentationally focusing the postposed NP (Bresnan 1990), marking it as new information (Penhallurick 1984), or postposing the informationally heavier element (Hartvigson and Jakobsen 1974). These accounts were critically examined in chapter 3. The pronominal restriction, however, follows straightforwardly from the discourse function proposed here for inversion; if postposed position is typically reserved for discourse-new entities, it will not be
felicitously filled by a pronoun, whose referent must be salient, and therefore discourse-old, in order to be successfully identified by the hearer (cf. Penhallurick 1984, Prince 1992).

4.7 CONCLUSIONS

It has long been assumed that the ‘givenness’ of certain information represented in a sentence is relevant to the ordering of that information in the sentence, but ‘givenness’ historically has proven difficult to define. The first serious attempt to develop a taxonomy of givenness was Prince 1981b; the resulting linear ordering is further developed into a matrix in Prince 1992. The results presented here with respect to inversion suggest that this matrix, which consists of cross-cutting dichotomies of discourse-familiarity and hearer-familiarity, more closely characterizes a speaker’s assessment of assumed familiarity in discourse. It has been demonstrated above that where inversion is concerned, what is relevant is familiarity in the discourse, not familiarity to the hearer. The vast majority of inversions in the corpus contained preposed discourse-old information and postposed discourse-new information, while none contained the opposite ordering. That there were found to be a smaller number of inversions whose preposed and postposed elements were of equal status seems to indicate that further distinctions, including perhaps the relative salience of the entities represented, may be necessary to fully account for the data. Nonetheless, the absence of tokens containing a preposed discourse-new element and a postposed discourse-old element indicates that this dichotomy is the primary factor determining the felicity of the construction.

Also significant is the finding that inferrables appear to be treated as discourse-old information; in fact, given the distribution of evoked elements and inferrables with respect to each other, it seems clear that (for purposes of inversion, at least) inferrables are treated exactly as though they had been explicitly evoked. That is, inferrables are treated as no less ‘given’ in this sense than explicitly evoked elements. This is a particularly intriguing result, with potential implications for theories of the processing of discourse; the question arises, for example, whether inferrable elements are in fact evoked by the prior discourse from which they are inferred, or alternatively whether the use of an inferrable in a position reserved for discourse-old information cues the hearer to evoke it (see chapter 6). It also remains for future research to determine whether inferrable elements are treated as discourse-old with respect to other constructions and functions.
It is interesting to compare the results described above with those of Prince (1992). Prince similarly found that discourse-familiarity, and not hearer-familiarity, accounted for the distribution of subject NPs in her data; specifically, she found that constituents representing discourse-old entities were more likely to be subjects than were constituents representing discourse-new entities. However, Prince notes that the document she is analyzing contains no clauses in which the verb's arguments appear in non-canonical position—e.g., the document contains no inversions (nor topicalizations, there-insertions, etc.). Therefore, her conclusions regarding subjecthood are specific to canonically-positioned subjects, a point which is crucial to the comparison between her findings and those in this study.

Interestingly, we have seen that, for inversions, just the opposite informational distribution holds; while Prince found that discourse-old information tends be represented by subjects, we have seen that in inversion discourse-new information tends to be represented by the postposed subject. That is, the preposed constituent in an inversion, rather than the postposed subject, patterns with Prince's CWO subjects in being discourse-old. Perhaps what is relevant, then, is not subjecthood but rather the relative position of the discourse-old and discourse-new information, at least in the case of CWO and inversion. This finding would accord with the conclusion in Horn 1986 that initial position tends to be reserved for information which is familiar, and preferentially for information that is either salient or presupposed (1986:175). As Horn notes, this position typically correlates with subjecthood; as we have seen, however, in inversion it does not. Therefore the finding that preposed constituents in inversion pattern with CWO subjects provides support for Horn's conclusion that what is relevant for information packaging (or thematicity, to use Horn's term) is not subjecthood but rather initial position in the sentence (cf. Penhallurick 1984, Tomlin 1986). Indeed, Horn suggests that leftward movement rules in general function to move 'thematic' (familiar) material leftward, while rightward movement rules move non-thematic (unfamiliar) material rightward into focus position; such an analysis would be consistent with the inversion data, whether inversion is considered a leftward- or rightward-moving rule. One promising avenue for further research, then, is the correlation between discourse-familiarity and sentence position, including the extent to which, for example, other leftward-movement rules serve to prepose relatively discourse-old information (see, e.g., Ward 1988).

There also exist other useful correlations between Prince's results and those of this study. For example, Prince found interesting but
inconclusive evidence that among the class of discourse-old entities, pronominal status may be significantly correlated with subjecthood, suggesting that salience may also be relevant, as was similarly suggested above for inversion. Clearly the issue of relative salience within the class of discourse-old information is a fruitful topic for further research.

As noted above, Prince’s results for inferrables were also inconclusive; however, her suggestion that they may be collapsible with discourse-old elements has been given significant support by the results from inversion. On the other hand, her suggestion that containing inferrables may be collapsible with unused elements is contradicted by the inversion data.

With respect to definiteness, the other variable under consideration in her study, Prince found that the greater likelihood of a subject being definite than a nonsubject being definite was entirely accounted for by the discourse-familiarity results; that is, when discourse-familiarity was taken into account, the statistical preference of definite NPs for subject position disappeared. This again accords with the results from inversion, where it was found that the definiteness results could be readily explained as a reflex of the discourse-familiarity facts.
Verbs and Related Issues

Thus far, I have dealt primarily with the preposed and postposed constituents in an inversion, and have not specifically addressed the status of the remaining element present in every token of the construction—the verb. Inversions can be classed into two major categories: those in which this verb is *be* (henceforth 'be inversion' (BI)) and those in which it is some other verb (henceforth 'non-be inversion' (NBI)). These two classes have somewhat different semantic and syntactic profiles, which will be discussed at length below. However, both classes will be seen to share certain pragmatic restrictions on the verb; specifically, I will argue that the verb must contribute no new information to the discourse. After proposing this constraint on verbs in inversion, I will turn to an assessment of an account presented in Birner and Ward 1989 that utilizes a focus-open proposition structure and seems to incorporate this verb constraint, but which is in fact unable to account for the data. Finally, having completed my analysis of the discourse status of each of the constituents in an inversion, I will turn to a brief discussion of the intonational correlates of this information status.

### 5.1 THE CHARACTERISTICS OF BI AND NBI

An examination of the corpus reveals that NBI is syntactically and semantically much more constrained than BI. Unlike BI, tokens of NBI almost always contained preposed locative PPs (1092/1124, or 97%, of the NBI tokens, as opposed to 191/654, or 29%, of the BI tokens). Moreover, in all of the tokens of NBI in the corpus, the preposed
element was either a PP, some other kind of locative constituent, or thus, so, or as. On the other hand, the corpus contained 194 tokens of BI which fell into none of these categories (30%), including NP, VP and AdjP inversions.

Of the 32 tokens of NBI that did not contain a preposed locative PP, 16 contained either a preposed locative non-PP (12) or a preposed non-locative PP (4); all of the 16 remaining tokens contained preposed thus, so, or as. This distribution of preposed constituents in NBI is shown in Fig. 5.1:

Fig. 5-1. Preposed constituents in NBI

<table>
<thead>
<tr>
<th></th>
<th>Locative</th>
<th>Non-locative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>1092</td>
<td>4</td>
<td>1096</td>
</tr>
<tr>
<td>Non-PP</td>
<td>12</td>
<td>16</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>1104</td>
<td>20</td>
<td>1124</td>
</tr>
</tbody>
</table>

Thus, the corpus shows that what has been termed in the literature ‘locative inversion’ does indeed characteristically contain a preposed locative PP. (See chapter 2, section 3.1, for discussion of the definition of the term ‘locative’.)

The four non-locative PP-initial tokens bear some discussion. They are given in 1-4:

1. Dispute about the passive concerned three points of view. In terms of common-sense ‘meaning’, by which hitting someone is a different thing from being hit by him, there were two categories, active and passive. <On a more sophisticated consideration of action, but still conceiving it largely in physical terms,> rose <the view that action entailed the receipt of action, active entailed passive, and there was therefore ‘really’ only one category>. From a narrowly formal point of view, that of inflection, English could be thought to have virtually no passive form. [Michael 1970:377—token provided by Beth Levin]

2. <Against the greatest odds> will surface <the greatest story of survival>. [TV voice-over introducing the movie “Places in the Heart”]
3. The surroundings were of Brompton, but the voice might have come from a Rabbi transmitting the sentences of an elder time to be registered in Bбли—*by which affectionate-sounding diminutive* is meant *the vast volume of the Babylonian Talmud*.

4. *<By syntax (the technical term for sentence structure)> is meant, for example:*

   *<Grouping>*

   In grouping the words of a sentence, they fall into chunks, or phrases.

   [Kaplan 1989:29]

The inversion in 1 does not seem perfectly acceptable to my ears; nonetheless, to the degree that it is acceptable it might plausibly be considered temporal (meaning essentially 'when action was considered in a more sophisticated way. . . . '), or alternatively an abstract locative of the kind discussed in chapter 2. The token in 2 is more problematic, in that *against the greatest odds* does not seem locative in any but the most abstract sense, although the preposition itself has locative uses. Note, however, that it is pragmatically odd; consider the canonical-word-order (CWO) equivalent:

5. The greatest story of survival will surface against the greatest odds.

In both cases, the syntactic scope of *against the greatest odds* is not the same as the scope that seems intended; i.e., one infers that what is meant is that survival is against the greatest odds, not that the story will surface against the greatest odds.

Finally, the examples in 3 and 4 are similar to each other, both being of the form *by X is meant Y*. I currently cannot account for why the preposed phrase is not locative, unless again these preposed PPs represent abstract locational fields in some sense. It should be noted, however, that *by*, like *on* and *against* in examples 1 and 2, is in its basic meaning a locative preposition. Notice as well that the *by*-phrase here is not the passive *by*-phrase (as in *A ball was thrown by Pam*). The passive *by*-phrase generally does not appear in inversion (Hartvigson and Jakobsen 1974, Bresnan 1990), as demonstrated in 6a-e; cf. the felicitous inverted locative *by*-phrase in 6f:
6. (a) ?By Pam was thrown a ball (into the yard).
(b) ?By Pam into the yard was thrown a ball.
(c) ?Into the yard by Pam was thrown a ball.
(d) ?Into the yard was thrown by Pam a ball.
(e) Into the yard was thrown a ball.
(f) By Pam was standing an old goat.

It seems that the passive by-phrases in 3 and 4 have likewise been omitted; in each case the intended meaning seems to be something like 'Z means Y by X'. Thus, a sentence like I mean Y by X passivizes to Y is meant (by me) by X (compare a ball was thrown (by Pam) into the yard); subsequent inversion results in By X is meant Y, the structure exemplified in 3 and 4.

Interestingly, of the 12 locative non-PP tokens of NBI, 11 were VP inversions containing a locative PP embedded within the preposed VP, as in 7:

7. <Seeping through the squalid air of the police station, the sour smell of dirt and disinfectant,> came <the sweet, rich smoke of a Havana cigar—of two Havana cigars, for the sergeant in charge was smoking also>.
[Waugh 1945:118—token provided by Gregory Ward]

The single locative non-PP token of NBI not containing an embedded locative PP is given below:

8. With knees bent and arms hanging loosely, Bony crouched and stared over the paspalum grass short cut and evenly rolled. He could see nothing on it until his gaze extended to a wide circular patch recently drenched by one of the sprinklers, and <crossing that patch> went <the man's foot-marks and the woman's shoe imprints>.
[Upfield 1940:119—token provided by Beth Levin]

The inversion in 8 represents the only example among 1108 tokens of NBI in the corpus (excluding the 16 cases with preposed thus, so, or as) whose preposed constituent neither contained nor was itself a PP. It is, however, clearly semantically locative, with the object of crossing representing a physical location (see Bresnan 1992).

Given the homogeneity of the category of non-PP non-locative NBI, and the distribution shown above for the remaining instances of
NBI, I propose that there are in fact two subcategories of NBI: those containing the preposed anaphoric adverbials thus, so, or as (henceforth AdvI); and NBI with a preposed locative PP or VP (so-called ‘locative inversion’, henceforth ‘locative NBI’).

Now compare the results for NBI in Fig. 5-1 (repeated here) with those given in Fig. 5-2 for BI:

Fig. 5-1. Preposed constituents in NBI

<table>
<thead>
<tr>
<th></th>
<th>Locative</th>
<th>Non-locative</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
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<td>1096</td>
</tr>
<tr>
<td>Non-PP</td>
<td>12</td>
<td>16</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>1104</td>
<td>20</td>
<td>1124</td>
</tr>
</tbody>
</table>

Fig. 5-2. Preposed constituents in BI

<table>
<thead>
<tr>
<th></th>
<th>Locative</th>
<th>Non-locative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>191</td>
<td>22</td>
<td>213</td>
</tr>
<tr>
<td>Non-PP</td>
<td>239</td>
<td>202</td>
<td>441</td>
</tr>
<tr>
<td>Total</td>
<td>430</td>
<td>224</td>
<td>654</td>
</tr>
</tbody>
</table>

In Fig. 5-2 we see that BI tokens containing a preposed locative PP are in the minority. Especially significant is the difference between BI and NBI with respect to preposed constituents other than PPs; such constituents were found far more frequently in BI (67%) than in NBI (2%). Moreover, these constituents formed a heterogeneous mix of syntactic and semantic types in BI, whereas in NBI all of the non-PP inversions that were not tokens of AdvI were semantically locative VP inversions.

In 87% of the cases of BI containing a locative initial constituent which was not itself a PP (208/239), this constituent nonetheless contained a PP, as illustrated in 9:

9. <Barely noticed this spring among highly publicized bills to raise the state income tax and ban smoking in public places> is <an obscure piece of legislation that would lay
the groundwork for a new transit system—and a new property tax—in downtown Chicago.


However, 31 of these 239 cases (13%) contained no PP at all, as in 10:

10. <Accompanying the magazine> are <cents-off coupons>.
   ["Selling it," Consumer Reports, 6/89, p. 423]

The example in 8 is the only analogous one among the NBI tokens. Therefore, the data show that locative NBI—and not BI—characteristically involves a preposed locative PP.

It is also interesting to note the relatively low number of BI tokens containing a preposed non-locative PP, indicating that in BI, as in NBI, the preposed PPs that do appear tend to be locative. Benefactive PPs, for example, do not occur in the corpus in either type of inversion (although 11c seems acceptable):

11. (a) *For John arrived a/the young girl.
    (b) ?For John was a/the sweater.
    (c) Also for John was a/the sweater.

This is particularly interesting in the case of BI, where there are no apparent constraints against either non-locatives or PPs individually yet they very seldom coincide. The semantic requirements of BI and locative NBI, and possible correlations between them, remain an important area for future research. For present purposes, we will simply acknowledge that locative NBI does in fact generally, but not exclusively, involve preposed locative PPs, while BI is much less constrained with respect to its initial constituent.

Notice also that two types of BI occur: those containing main-verb be, as in 12, and those containing auxiliary be with a preposed VP, as in 13:

12. <Immediately recognizable here> is <the basic, profoundly false tenet of Movie Philosophy 101, as it has been handed down from "Auntie Mame" and "Harold and Maude">: Nonconformism, the more radical the
better, is the only sure route to human happiness and self-fulfillment.
["Good acting moments bolster ‘Family Business,’” Chicago Tribune, 1989]

13. The man who thought exercise was a waste of time, who “lived on cholesterol,” who routinely worked 14-hour days even on Sundays, no longer exists. Instead, <sitting in the hotel dining room> is <a trim, tanned Californian who exudes good health>.
[“Coronary victim fights back with magazine,” Chicago Tribune, 2/14/90, sec. 5, p. 1]

The reason for classifying aux-be inversions with main-verb be inversions (rather than with other inversions involving non-be main verbs) is that the two be types behave similarly with respect to inversion. Excluding for the moment AdvI, there occur four basic combinations of verb and preposed constituent:

- initial PP, non-be verb (1096 tokens)
- initial VP, non-be verb (12)
- initial VP, aux be (271)
- non-VP initial constituent, main-verb be (383)

These four types plus the 16 AdvI tokens account for all of the 1778 inversion tokens in the corpus. Although it might seem natural at first to class the VP inversions together, or the main-verb be tokens separately from the other three types, in fact the two types of BI seem to pattern together, as do the two classes of NBI. For example, the initial PP or VP of locative NBI was nearly always semantically locative, while the initial constituent of VP-initial BI, like that of other BI types, was found to be either locative or non-locative. Likewise, the locative NBI tokens in the corpus, with only one exception, contained either preposed PPs or preposed VPs which in turn contained embedded PPs; on the other hand, neither main-verb be inversion nor VP inversion with auxiliary be showed similar constraints.

The resulting taxonomy of inversion types is as shown below (cf. chapter 2):
The term ‘locative NBI’ reflects the fact that the preposed constituents in these two inversion types are prototypically locative.

5.2 THE VERBS OF INVERSION

The data from the corpus support the frequently made observation that transitive verbs are disallowed in inversion (Coopmans 1989, inter alia; cf. Demuth 1990). Of 1778 tokens, 654 were instances of BI; 1010 were intransitive NBI, and 112 were passive NBI. The remaining two tokens in the corpus might appear to contain transitive verbs; these tokens are given in 14:

14. (a) Early in 1661 took place a general election.  
[=Hartvigson and Jakobsen 1974, ex. 60]

(b) Under this shelter take root and thrive all monstrous and parasitic growths.  
[=Hartvigson and Jakobsen 1974, ex. 61]

As noted by Hartvigson and Jakobsen (1974), however, such idioms as take place and take root are best analyzed as single (and intransitive) entities rather than as verb plus object, as evidenced by the inability of place and root in these phrases to passivize (see also Bolinger 1977).

It has also been claimed (Emonds 1976, Coopmans 1989, Rochemont and Culicover 1990) that auxiliaries are disallowed in
locative and/or directional PP inversion; the examples in 15, however, seem perfectly acceptable:

15. (a) At such moments, the idiocy would leave his eyes which would blaze with a holy fire, and *<from the lips of this poor soft-brained creature> would issue <a flow of beautiful words in the accent of some place that was certainly not Ballyderrig>*.
   [Laverty 1942:20—token provided by Beth Levin]

(b) *<With the fever> had come <the stiffness in his neck and back>, but when the fever broke and he stopped vomiting—when the headaches were over and the shaking chills were gone, and he wasn't even nauseous anymore—that was when he noticed the paralysis.*
   [Irving 1985:411]

(c) The West was still a region of great wildness, a fact that had earned it the nickname "the Great Plains."
   *<In this rough, untamed environment> had emerged <the cowboy, a hard-ridin’ straight-shootin’ rip-snortin’ cow-punchin’ breed of hombre who was to become the stuff of several major cigarette promotions>*.

Penhallurick (1984) also notes counterexamples to this claim, but maintains that "the majority of clauses containing full-verb inversion do have simple verbs" (1984:42), and attributes this to a distancing effect of auxiliaries which he considers inconsistent with the function he posits for inversion, that of introducing the postposed NP as new information; see chapter 3 for discussion.

It has frequently been noted (L. Levin 1983, Coopmans 1989, Bresnan 1990, B. Levin 1991, inter alia) that the class of NBI verbs appears to be a subset of the class of unaccusative verbs. This class was first posited in Perlmutter 1978, and corresponds to the ‘ergative’ class discussed by Burzio (1986). Simply stated, unaccusative verbs take d-structure objects, typically representing theme (or patient) arguments, while unergative verbs take d-structure subjects, typically representing agents.
Although certain classes of verbs that often appear in inversion seem at first to be unergative (e.g., manner-of-motion verbs: run, fly, walk, etc.; and verbs of emission: flash, whistle, bubble, etc.), B. Levin (1991) argues that these verbs regularly undergo a shift of semantic class when appearing with a locative PP in NBI (cf. Van Valin 1990, Hoekstra and Mulder 1990, inter alia). In the context of a directional PP, for example, an unergative manner-of-motion verb may become an unaccusative directed motion verb (cf. Levin and Rapoport 1988, Levin and Rappaport 1989, Van Valin 1990), as in 16:

16. To the left of the altar one of the big wall panels with rounded tops opens, it is a secret door like in a horror movie, and <out of it> steps <Archie Campbell> in a black cassock and white surplice and stole.
[Updike 1981:242]

Similarly, in the context of a PP denoting a spatial location, a manner-of-motion verb or a verb of emission may act as an unaccusative mode-of-existence verb. For example, bubbled in 17 indicates the existence of the stew by virtue of a verb denoting a characteristic activity:

17. <Over a Bunsen Burner> bubbled <a big, earthenware dish of stew>.
[L'Engle 1962:39—token provided by Beth Levin]

Thus, it appears correct to say that the verbs appearing in locative NBI are exclusively unaccusative.

However, it is not the case that all unaccusative verbs can appear in locative NBI. B. Levin (1991), following Firbas (1966b) and Guéron (1980), inter alia, observes that this construction is further restricted to verbs of existence and appearance, a restriction which has been attributed (Guéron 1980, Penhallurick 1984, Bresnan and Kanerva 1989, inter alia) to a proposed 'presentational function' of inversion. However, as was demonstrated in chapter 4, it is not the case that locative NBI consistently introduces a new entity onto the scene, as many authors assume. Given appropriate discourse conditions, the postposed NP may in fact be quite familiar information, representing an entity which is 'on the scene' and currently under discussion.

Nonetheless, the constraint that locative NBI involve verbs of appearance and existence may in fact be related to the discourse function of inversion. We have seen that inversion allows relatively familiar information in the discourse to precede less familiar
information; the question at hand, then, is whether the verbs appearing in inversion are also constrained by discourse considerations.

As argued above, the clearest distinction to be made is that between BI and NBI. Lyons (1968) observes that be is "a grammatical element, devoid of meaning, which serves only to 'carry' the markers of tense, mood and aspect in the surface structure of sentences" (1968:388). Similarly, Hartvigson and Jakobsen (1974) note that be is informationally 'light'; i.e., it generally does not add new information to the discourse. Thus, in BI, the verb per se contributes no new information to the discourse.

I will argue that the case with NBI is essentially similar—that the verbs appearing in this construction represent evoked or inferrable information in context, and therefore contribute no new (i.e., discourse-new) information to the discourse.

Recall that the overwhelming majority of preposed constituents in NBI are locative in nature. Green (1985) argues that when the preposed PP of an inversion denotes or implies a location, the verb must also denote, entail or imply being at a location, whereas when the PP denotes or implies a goal or direction of action, the verb must denote motion, as in 18.

18. She was about to tell him when <in again> rolled <the trolley, now with afternoon tea on it>.
   [Bowen 1968:167—token provided by Beth Levin]

That is to say, this component of the meaning of the verb (e.g., 'motion' in 18) is inferrable from the meaning of the preposed PP.

The meaning of the verb rolled in 18, of course, includes more than just motion; it indicates a particular type of motion. However, the type of motion is inferrable from trolley, in that rolling is a characteristic form of motion for a trolley (see discussion below). Thus, the verb in 18 is informationally light. In fact, the verbs in the NBI corpus were consistently informationally light in that they represented either evoked information or information that could be considered plausibly inferrable based on the prior context, the preposed constituent, and/or the postposed constituent.

Among those inversions whose verb represented either evoked or inferrable information based on the prior context are those in 19:

19. (a) Later that night she made 59 harassing calls between the hours of 11 p.m. and 1 a.m. <Three nights later>
came <another 28 calls between 1:52 and 2:30 a.m.>
[“Through the Cracks,” Chicago Tribune Magazine, 5/14/89, p. 17]

(b) Michael puts loose papers like class outlines in the large file-size pocket. He keeps his checkbook handy in one of the three compact pockets. The six pen and pencil pockets are always full. And <in the outside pocket> go <his schedule book, chap stick, gum, contact lens solution and hair brush>.
[Lands' End March 1989 catalog, p. 95]

(c) Rather than stand outside the gate pouting, wealthier members of some of the excluded groups got together and bought or developed their own private golf clubs. <Thus> came to exist <clubs that were primarily ethnic Catholic>.
[M. Royko, “Phelan’s old club par for the course,” Chicago Tribune, 2/22/90, sec. 1, p. 3]

In 19a, the notion of calls coming is evoked in the prior discourse, despite the fact that the verb come is not explicitly used; similarly, in 19b the fact that various things go in various places is evoked, despite the absence of the lexical item go. That is, the information represented by these verbs constitutes evoked information, despite the absence of explicit mention of the verbs themselves. Finally, in 19c, prior mention of the purchase and development of golf clubs renders inferrable that golf clubs came to exist.

Interestingly, it is not the case that the verb will necessarily be evoked or inferrable based on the prior context; its use may also be licensed when it is rendered inferrable by other information in the inversion itself. For example, it is argued in Birner and Ward 1992 that those verbs appearing in VP-initial NBI are constrained pragmatically in that they may not represent brand-new information (in the sense of Prince 1981b) at the time of utterance, and that these verbs are therefore functionally equivalent to the aux be of VP-initial BI. Consider 20:

20. He opened the door and took a folded canvas bucket from behind the seat. <Coiled on the floor> lay <a one-hundred-and-fifty-foot length of braided nylon climbing
rope three-eighths of an inch thick>. It was white and shiny, so new it still smelled of the shop.

[Birner and Ward 1992, ex. 17]

Given coiled on the floor, the semantic meaning of lay can be considered inferrable information. Thus, although the verb here is not inherently informationally light, it is nonetheless informationally light in the context of the inversion itself; for that reason, replacing lay in 20 with (the inherently light) was results in no discernible loss of information conveyed (cf. Ljung 1980). In a similar vein, Lyons (1968) notes that “the copula is not a lexical item in such sentences as Mary is beautiful, but a purely grammatical ‘dummy’. . . . and there seems to be no reason why such ‘verbs’ as occur, happen, take place, etc., should not also be treated as temporal and locative copulas in such sentences as The demonstration occurred on Sunday, etc.” (Lyons 1968:346).

Hoekstra and Mulder 1990 likewise argue that in locative constructions the verb can often be taken as copular in an extended sense. Finally, Babby (1980) discusses a process of ‘desemanticization’ that verbs undergo in existential sentences in Russian, whereby in certain contexts they become semantically weakened and “parallel in function to the lexically ‘empty’ verb byt’ ‘to be’” (1980:17). Consequently, Babby notes, the speaker has a choice between selecting a lexically empty verb (byt’) and selecting a contextually empty verb. In the case of English inversion, rather than claim that the semantic status of the verb has changed, I will maintain the terminology in Birner and Ward 1992, following Hartvigson and Jakobsen 1974, and say that the verb is ‘informationally light’ in view of the fact that it is rendered so by contextual factors.

As suggested above, the informationally light status of the verb needn’t be due entirely to prior context, even when prior context is construed to include the pre-verbal elements of the inversion itself. That is, the lexical content of the verb may also constitute information which is inferrable on the basis of the postposed constituent, rendering the inversion felicitous:

21. Then a lubra in a white dress and white shoes emerged from the hospital to take something to the incinerator, and Dr Beamer appeared from his veranda to cross to the office. <After him> trotted <a grossly fat fox terrier, who quickly gave up the idea of escort duty for the pleasure of
rolling his left ear on the ground to remove stick-fast fleas>.  
[Upfield 1953:149-150—token provided by Beth Levin]

22. (a) Sacred Heart is in Back of the Yards, that most blue collar of Chicago neighborhoods. <All around> rise <the gothic towers of cathedral-like churches the neighborhood’s immigrant groups built as reminders of the Old Country from which they came>.  
[“Breaking a neighborhood’s heart,” Chicago Tribune, 1/29/90, sec. 5, p. 1]

(b) The giant leader roared and shouted and cheered on the guests. <Beneath the chin lap of the helmet> sprouted <black whiskers>.  
[Upfield 1988:178—token provided by Beth Levin]

(c) A vase of wildflowers sat in the middle of the table.  
<From the kitchen> wafted <aromatic smells of fresh-cooked meat, spices, garlic, and onion>.  
[Kellerman 1990:220-221—token provided by Beth Levin]

In 21, after him is not necessarily sufficient to render trotted inferrable; however, after him in combination with the postposed a grossly fat fox terrier is sufficient, given that trotting is a prototypical way for a fox terrier to follow someone. The tokens in 22 are a bit different, in that the verbs here are licensed entirely by virtue of the postposed constituent. In these examples, the verb describes some state or activity that is characteristic of the entity denoted by the postposed NP (Firbas 1966b, Bolinger 1977, Babby 1980, Ljung 1980, Lumsden 1988, B. Levin 1991, inter alia). In 22a, rise constitutes a characteristic, and therefore inferrable, state of towers; similarly, in 22b and 22c, respectively, whiskers characteristically sprout and aromatic smells characteristically waft. Likewise, in 18 above rolled represents a characteristic and inferrable activity of a trolley.

B. Levin (1991) notes that the verb in such inversions seems to impose “very strict selectional restrictions” on the postposed argument, rendering it in some sense cognate. Here the common practice, noted by Bolinger, of using “a verb that represents a normal or customary action of a thing to suggest that the thing is there” (1977:97) effectively
transforms these into verbs of existence (cf. Firbas 1966b, Lumsden 1988), with little informational weight beyond that of a copula.

Thus, these verbs, like the others, are in context informationally light. This supports the above generalization that the verb in an inversion must represent evoked or inferrable information in context, with the caveat that 'context' here appears to include the entire inversion as well as the prior linguistic and situational context. The constraint on the verb, then, appears to parallel in many respects the constraint on the preposed constituent. The requirement that NBI involve a verb of existence or appearance, therefore, appears to be largely due to contextual factors; as we have seen, verbs that are not inherently verbs of existence or appearance can in effect serve as such verbs in a context in which they are informationally light, contributing to the discourse no new information beyond existence or appearance.

To summarize, I have claimed that the constraints on the verbs that may appear in inversion are pragmatic in nature, requiring the verb—like the preposed constituent—to represent evoked or inferrable information in context, with the additional allowance that the content of the verb may be inferrable based on the preposed and/or postposed constituents. I consider these findings somewhat preliminary, however, in view of a handful of tokens like the following:

23. (a) At the cross-roads I came on a lantern standing upon the ground, and by it drooped the nose of a benighted horse: the spurt of a match lit the face of its owner.
[Bagnold 1935:39—token provided by Beth Levin]

(b) Into the consulting room of a fairly mad physician, whose name I somehow remember as Lucas Membrane, hurtled a haggard middle-aged woman, towing her husband, a psychotic larrikin about 7' tall.
[=Green 1980, ex. 15b]

In 23a, it is not clear to me whether ‘drooping’ constitutes a characteristic activity for the nose of a benighted horse; nor is it clear whether ‘hurtling’ is an inferrable way for a haggard middle-aged woman to tow her psychotic husband into a mad physician’s consulting room. My intuition, however, is that the descriptive information conveyed by these verbs is in fact precisely what would be conveyed by the rest of the sentence in their absence; the primary informational force
of these verbs does in fact seem to be that of existence (in 23a) and appearance (in 23b). It remains for future research to examine in more detail what constitutes a characteristic and/or inferrable activity of some entity.

5.3 INVERSION AND OPEN PROPOSITIONS

Having discussed the status of the verb in inversion, I am now in a position to address a final possible discourse-functional analysis of inversion, one which considers the status of the verb as well as that of the preposed and postposed constituents. In my discussion of discourse status thus far, I have focused on the distinction between discourse-familiarity and hearer-familiarity, to the exclusion of the third type of old/new dichotomy considered by Prince (1992), the FOCUS-PRESUPPOSITION distinction (Chomsky 1971, Jackendoff 1972, inter alia). This distinction has been applied to certain types of inversion in Prince 1986 and Birner and Ward 1989, and moreover seems consistent with the verb constraint proposed above. Nonetheless, I will show below that it does not fully account for the distribution of inversions in discourse, and will discuss the differences in predictive power between those accounts and the one proposed in this study.

Prince (1986) discusses a number of focus-presupposition constructions—i.e., constructions which mark some open proposition (OP) as salient shared knowledge. The OP is obtained by replacing the constituent bearing nuclear accent with a variable whose instantiation constitutes the focus of the utterance (but see below). Given that both the preposed constituent and the verb in an inversion represent relatively familiar information in context, it initially seems plausible that inversion could be classified as a focus-presupposition construction, marking as salient an open proposition of the type discussed in Prince 1986. In fact, Prince includes NBI (in her terms, 'locative/directional preposing') among the constructions marking an OP as salient. An OP-based approach was also taken in Birner and Ward 1989, where a distinction was drawn between locative and non-locative inversion, and it was posited that non-locative inversion marks an OP as salient shared knowledge in the discourse.

An OP represents the portion of an utterance’s propositional content that the speaker believes the hearer shares at the time of utterance (Wilson and Sperber 1979, Prince 1981a, Ward 1988, Birner and Ward 1992). Birner and Ward 1989 argued that an inversion such as that in 24a marks an OP like that in 24b as salient shared knowledge:
24. (a) After delivering two rulings Thursday, the high court recessed until Monday, when it is expected to release the remaining decisions of the 1988-89 term. <Still to be announced> is <the justices' resolution of an abortion case that has attracted more attention in recent years than any other case on the court's docket>.

[=Birner and Ward 1989, 10a]

(b) X is still to be announced.

The OP in 24b is obtained by replacing the justices' resolution of . . . with a variable, whose instantiation in 24a corresponds to the new information in the utterance. Compare the felicity of 24a with that of 25:

25. George Bush met with several Supreme Court justices Thursday morning. #Still to be announced is the justices' resolution of an abortion case that has attracted more attention in recent years than any other case on the court's docket. [cf. The justices' resolution [ . . . ] is still to be announced.]

Here, the OP in 24b cannot be assumed to be salient shared knowledge based on the prior discourse, and the inversion is distinctly odd.

Crucially, however, it is not the case that all of the (non-variable) information in the OP must be explicitly evoked in the discourse. Consider topicalization, an OP-marking construction (Ward 1988):

26. (a) John wants to see “Casablanca” tonight. “The African Queen” he wants to see TOMORROW.

(b) John wants to see ∈ {Bogart movies} at time X.

[=Birner and Ward 1989, ex. 3a]

In 26a, “The African Queen” is only implicitly related to the set of Bogart movies; this set is evoked by the set member “Casablanca”, and constitutes part of the OP which the speaker can assume to be shared knowledge based on the prior discourse (Birner and Ward 1989). The types of relations that can hold between the referent of the preposed

Similarly, an OP-marking account of inversion does not require that the information represented by the preposed constituent be salient shared knowledge, only that it be related by some scalar relation (Hirschberg 1991) to salient shared knowledge:

27. By the time he got to Kendall's Lobster Pound, Ray was home. He was making tea and warming his deeply lined, cracked hands on the pot—*<under his ragged nails>* was *<the mechanic's permanent, oil-black grime>*. [Irving 1985:291]

In 27, it is not necessary that the 'ragged nails' mentioned in the preposed constituent of the inversion constitute salient shared knowledge, since they stand in a scalar relation to Ray and his hands, both of which represent evoked information in the context.

For this reason, it would seem to follow that when the discourse conditions on inversion are met, the relevant OP will indeed constitute salient shared knowledge in the discourse (cf. Birner 1991). Recall that in the OP claimed to be associated with an inversion, the postposed constituent is replaced with a variable, while the preposed constituent need only be related by some scalar relation to some element that constitutes salient shared knowledge. Now recall that the third element of the inversion, the verb, is either the informationally light *be* or some other verb whose semantic content represents discourse-old information. If, as I claim, felicitous inversion also requires the preposed constituent to represent relatively familiar information, then it might seem that inversion should contain nothing that represents brand-new information except the postposed element, represented in the OP by a variable.

However, there are problems with such an account. First, while the relevant OP is to be obtained by replacing the element bearing nuclear accent with a variable, an inversion may of course contain more than one nuclear accent. Consider the tokens in 28, which have been marked with likely phrasing (/) and nuclear accents (capitals):

28. (a) The big jackpot was totaled at $115,578,980.14, about 30 minutes after 14 workers from a Windham, Ohio, brick factory arrived to claim a share of it, said Jim Scroggins, lottery director.
"I couldn't believe it. I still don't," said brick worker Butch Shavers, 38, of Warren, Ohio.

<ALSO arriving to claim a winning ticket> / were <Alverto HANDEL, 65, of Portage; / her son, JIM, 39, of Summer Hill, / and her DAUGHTER, / Nancy WILLIAMS, 34, of Ft. Montgomery, New YORK.>

["Record $115 million lottery smiles on 14 tickets," Chicago Tribune, 4/28/89, sec. 1, p. 6]

(b) Heterosexually acquired AIDS cases are doubling every 12 months and have been doing so for several years. <Buried in the avalanche of figures gathered by the HEALTH departments> / is <unmistakable EVIDENCE / that the virus is seeping out from the groups afflicted EARLY in the epidemic / and seeding the general POPULATION>.

["A big uncertainty about the spread of the AIDS virus," Chicago Tribune, sec. 1, p. 19, 5/16/89]

Although there exist many felicitous intonational renderings of these sentences, those marked in 28a and 28b indicate one felicitous intonational production for each of the sentences. Every intonational phrase or intermediate phrase (Beckman and Pierrehumbert 1986) contains a nuclear accent; thus, since each of these sentences contains more than one such phrase, each contains more than one nuclear accent. While, again, each of these sentences can be felicitously uttered with more than one intonation pattern, any natural intonational rendering will involve more than one intonational or intermediate phrase, and therefore more than one nuclear accent—minimally, I believe, one in each of the preposed and postposed constituents. Thus, it becomes significantly more complex to construct an OP for the inversion on the basis of nuclear accent (cf. Jackendoff 1972).

Second, and more problematically, the corpus contains tokens of inversion—both locative and non-locative—for which the relevant OP does not seem to constitute salient shared knowledge at the time of utterance. Although a determination on this matter is necessarily subjective, I judged that the relevant OP could be assumed (by the speaker) to represent salient shared knowledge in the case of 1153 tokens (65%), while in 285 cases (16%) such an OP did not seem to represent salient shared knowledge, and 340 cases (19%) lacked sufficient context to make a determination. Even among the 515
instances of BI for which a determination could be made—hence, with a maximally informationally light verb—in 52 (10%) the prior context seemed insufficient to render the OP salient. Consider, for example, 29:

29. On the foreign-policy front, Nixon continued to protect the national security by not telling anybody, not even his secret wife, Pat, what his secret plan to end the Vietnam War was. At the same time, he undertook a major clandestine foreign-policy initiative by sending chocolates and long-stemmed roses to legendary Communist Chinese revolutionary leader Mao ("Mo the Dong") Ze-dong. <Helping him with this initiative> was <the brilliant, avocado-shaped genius Henry Kissinger, who became the nation's top foreign-policy strategist despite being born with the handicaps of a laughable accent and no neck>. [Dave Barry, "Dave Barry slept here," Chicago Tribune Magazine, 6/89, p. 22]

Here, it does not seem that the relevant OP, roughly 'X was helping him,' can be assumed to be salient based on the prior context; on the contrary, the prior context indicates that he was working alone. Even if the information in the preposed constituent is replaced by a maximally vague element with which it stands in a salient set relation—e.g., 'X was participating in some activity or relationship with him'—the presence of the OP does not seem licensed. The problem here is that it's not the information represented by the entire preposed constituent which is familiar, as is required for the presence of the relevant OP, but rather the information represented by the expressions him and this initiative.56 As noted previously, it was seldom the case in the corpus that the entire preposed constituent represented relatively familiar information; rather, some element within the preposed constituent represented relatively familiar information in the discourse. In 29, however, where helping represents brand-new information, the entire OP cannot be considered plausibly salient.

Other circumstances may also give rise to inversions that meet the discourse requirements for felicity, yet fail to involve a salient OP. For example, the preposed constituent in an inversion may represent information which is neither explicitly evoked in the discourse nor plausibly in the hearer's consciousness (i.e., salient), but rather is plausibly inferrable in the context, as in 30:
30. Of the VCR’s tested, the RCA VKP950 and the Hitachi VT89A were the easiest to program. They have on-screen programming, a series of prompts that appears on the TV screen to help you enter the appropriate programming information. <Highly vexing> were <models that have a “one-way” timer>.

[Consumer Reports 9/85, p. 525]

Here, the OP ‘X was vexing/annoying to some degree’ does not seem to be (assumed to be) salient based on the prior discourse, where ‘salient’ is taken to mean in the hearer’s consciousness at the time of utterance. However, some level of vexation is inferrable based on the prior assertion that certain brands were easier to program than others; given this statement, the reader may infer that the others are more vexing. (For further discussion of the difference between salience and inferrability, see Chafe 1976, Prince 1981b, and Ward 1988, inter alia; cf. Rochemont’s (1986) notion of ‘c-construability’.)

Finally, as was demonstrated above, the verb in an inversion may be rendered familiar on the basis of other information presented within the inversion itself; in such cases, the information represented by the verb would be discourse-new prior to the inversion. Consequently, in 22b, repeated here, the OP ‘something sprouted somewhere’ does not represent salient shared information at the time of utterance, despite the fact that the verb sprout is licensed by virtue of representing a characteristic activity of whiskers.

22. (b) The giant leader roared and shouted and cheered on the guests. Beneath the chin lap of the helmet sprouted black whiskers.

For these reasons, then, it does not seem correct to classify inversion as an OP-marking construction; specifically, contra Birner and Ward 1989, examples like 29 and 30 demonstrate that non-locative inversion need not involve a salient OP for felicity.

5.4 INTONATION

It was mentioned above that one difficulty with an OP-based account of inversion is that OPs have been defined in terms of a single nuclear accent within an utterance, whereas inversions are often produced with more than one such accent. It seems nonetheless reasonable to ask
whether evidence from intonation might support the discourse-functional approach outlined in chapter 4.

Since most of the tokens in the corpus were obtained from written sources (see chapter 1), and since there is no record of the pitch accents with which the oral tokens were produced, I can make no valid claims on the basis of how the tokens were actually pronounced. Nor can I base any claims on how a token would be pronounced in context, since for any given token there may be several different, equally acceptable, intonational renderings. I will restrict my discussion, therefore, to the matter of what is a possible intonational rendering for a given token in context—in particular, whether or not a given element can be felicitously deaccented. For the purposes of this discussion, I will consider PHRASING to be the division of an utterance into INTONATIONAL PHRASES and, within an intonational phrase, INTERMEDIATE PHRASES, each of which contains a single primary pitch accent (the NUCLEAR ACCENT) and very often other pitch accents as well (Pierrehumbert 1980, Beckman and Pierrehumbert 1986, Pierrehumbert and Hirschberg 1990, inter alia). These accents are realized as intonational prominence on particular syllables. Note that a single sentence may consist of more than one intonational or intermediate phrase, particularly if it is long, and that in this case it will also have more than one nuclear accent, as discussed above. In the examples in this section marked for intonation, I have indicated all pitch accents, not just nuclear accents. I have also marked phrasing, but have not distinguished between intonational phrases and intermediate phrases, as this distinction is not germane to the points below.

In order to evaluate the intonational possibilities, I created a smaller database of 80 tokens, selected to include tokens representing every possible value for each of the individual factors coded for in the larger study. I coded these tokens for a number of intonational factors, to be discussed below. In order to accurately evaluate the evidence from intonation, however, it is important first to note that the pre- and postposed constituents within the inversion each have an internal discourse structure of their own. That is, as discussed in chapter 4, it is typically not the case that every element within the preposed constituent represents relatively familiar information in the discourse, but rather that some major element within this constituent (e.g., the NP within a PP) has this status. I will refer to this as the ‘connecting element’. For example, consider 31:

31. Parents assume that children are being socialized through language into their particular shared cultural group. This
process includes explicit teaching and correcting and the creation of social contexts in which learning will naturally take place. <Critical also to this process> is <the assumption that, whatever the day-to-day frustrations and irritations in communicating with a child, negative evaluations will be suspended when a matter of real importance to a child arises>. For minority ethnic group workers, there are no such assumptions.


Here, the connecting element is this process, which represents evoked information.

Similarly, although the discourse entity represented by the entire postposed NP has been shown to represent relatively unfamiliar information in context, there may nonetheless be some smaller constituent within this NP that represents familiar information, as in 32:

32. Greetings from Apple Computer,

<Enclosed> is <a publication I think you will find interesting>.

[sales letter, 5/1/89]

Here, I and you represent situationally evoked information; nonetheless, the entire NP a publication I think you will find interesting represents brand-new anchored information (anchored by the evoked I and you).

5.4.1 Preposed constituent. Unfortunately, there is an imperfect correspondence between deaccentability and the discourse-familiarity of an element. For example, although evoked and inferrable elements behave as a single class with respect to inversion, they do not behave similarly with respect to deaccentability. An examination of the corpus suggests that in order to be deaccentable, the connecting element must not only represent discourse-old information; it must in fact represent evoked information. For example, the explicitly evoked connecting element the commission in 33 may be deaccented, while the merely inferrable connecting element clouds in 34 may not. (Likely accents are marked with capitals; likely phrasing is marked with slashes.)

33. Also Thursday, President Bush named a Kentucky homemaker with AIDS and a medical professor as his selections for the National Commission on Acquired
Immune Deficiency Syndrome. Three Cabinet officers also will serve on the 15-member panel to advise the president and Congress on AIDS policy for the next two years.

Bush's choices are Belinda Ann Mason, president of the National Association of People with AIDS, and Dr. David E. Rogers, a professor of medicine at Cornell University Medical College.

Mason, 30, contracted AIDS from a blood transfusion during the birth of her second child in 1987.

<ALSO serving ex OFFICIO on the commission> / will be <Dr. Louis SULLIVAN, secretary of health and human SERVICES; / DEFENSE Secretary Dick CHENEY; / and VETERANS AFFAIRS Secretary Edward DERWINSKI>.  
["AIDS more virulent than realized," Chicago Tribune, 7/21/89, sec. 1, p. 3]  

34. They left the top of the mountain and plunged into the shadow of the March night trees. <BLACK across the CLOUDS> / flapped <the CORMORANT,> / SCREAMING as it PLUMMETED DOWNWARD / and DISAPPEARED into the WOOD.  
[L'Engle 1945:332—token provided by Beth Levin]

In every one of the 32 tokens in which the connecting element was judged deaccentable, the connecting element was explicitly evoked. On the other hand, of 40 tokens in which the connecting element was not judged deaccentable, in only 6 cases did this element represent explicitly evoked information. (Eight tokens lacked sufficient context for me to judge either whether they could be acceptable deaccented, or whether the connecting element had been explicitly evoked.) This situation is illustrated in Fig. 5-4:

Fig. 5-4. Deaccentability of connecting element

<table>
<thead>
<tr>
<th>Evoked?</th>
<th>Deaccentable?</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Yes</td>
<td>32</td>
<td>6</td>
<td>38</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>40</td>
<td>72</td>
</tr>
</tbody>
</table>
Given the data, it appears that explicit evocation in the discourse is a necessary but not sufficient condition for deaccentability of the connecting element. Interestingly, of the 6 non-deaccentable tokens whose connecting element constituted evoked information, 4 of those connecting elements were anaphoric or deictic; these are given in 35.

35. (a) A gala party was planned at his palatial mansion, with his cousin, the nation's president, among the guests. Upali never made it. [...]

<THUS> was born / <ONE of SOUTHERN ASIA'S BEST REAL-life MYSTERIES>.
["A Sri Lankan tycoon leaves a rich mystery," Philadelphia Inquirer, 8/21/83, p. 2-A—token provided by Gregory Ward]

(b) For his camp Venters chose a shady, grassy plot between the silver spruces and the cliff. <HERE, in the STONE WALL,> / had been WONDERFULLY CARVED by WIND / or WASHED by WATER / <SEVERAL DEEP CAVES above the level of the TERRACE>.
[Grey 1980a:58—token provided by Lori Levin]

(c) First would apply a fronting rule, perhaps Topicalization, that would apply to (15) An elegant fountain stands in the Italian garden to yield (16) In the Italian garden stands an elegant fountain. [...]
SECOND, / <to THIS structure> would APPLY, OPTIONALLY, / <a rule we may call VERB SECOND, / that places a VERB PHRASE consisting simply of a VERB / immediately AFTER the PREPOSED CONSTITUENT / to yield (18) / In the ITALIAN GARDEN stands an ELEGANT FOUNTAIN, / whose DERIVED STRUCTURE would be (19)>.
(d) Nothing happened for several minutes. Then Grey Cloud moved a little apart. *<THEN> arose <a FAINT HAZE of DUST>*.

[Upfield 1931:155—token provided by Beth Levin]

The words *thus, here, this,* and *then,* respectively, may not be deaccented, despite representing textually or situationally evoked information. Notice that in 35c, the portion of the preposed constituent that represents evoked information is actually the phrase *this structure*; while the word *structure* may be deaccented, however, *this* may not.

The final two tokens containing evoked but non-deaccentable connecting elements are given in 36:

36. (a) I trod carpets the colour of blotting paper; the painted panels of the walls were like blotting paper, too: kindergarten work in flat, drab colours, and between the walls were yards and yards of biscuit-coloured wood which no carpenter’s tool had ever touched, wood that had been bent round corners, invisibly joined strip to strip, seamed and squeezed and polished; *<ALL OVER the BLOTTING-paper CARPET> / were strewn <TABLES designed perhaps by a SANITARY engineer, / SQUARE blocks of STUFFING, / with SQUARE HOLES for SITTING in, / and, UPHOLSTERED, it seemed, / in blotting paper ALSO>* [ . . . ]

[Waugh 1945:237—token provided by Gregory Ward]

(b) Official sources said yesterday that at least 22 people were killed in rebel attacks during nationwide municipal elections in which voters swung to the left in a sharp rebuff to President Fernando Belaunde Terry’s centrist government.

[ . . . ] *<ONE of the PEOPLE KILLED> / was <Filimon DELGADILLO, / the MAYORAL CANDIDATE of BELAUNDE’S PARTY, / POPULAR ACTION, / in HUAMANGUILLO>*.

[“Peru rebels said to kill 22 in voting,” Philadelphia Inquirer, 11/15/83, p. 7-A—token provided by Gregory Ward]
Despite the fact that the blotting-paper carpet in 36a and the people killed in 36b represent explicitly evoked information, these phrases seem unacceptable without a pitch accent. Note, however, that in both 36a and 36b the evoking phrase is fairly distant from the connecting element; thus, it may be that recency of mention is relevant for deaccentability (cf. chapter 4). In any case, it appears most accurate to say that prior evocation in the discourse is a necessary, but not sufficient, criterion for the deaccentability of the connecting element in the preposed constituent.

Recall now that the preposed constituent may also contain phrases representing relatively unfamiliar information, as in 31, repeated here with likely phrasing and accents marked:

31. Parents assume that children are being socialized through language into their particular shared cultural group. This process includes explicit teaching and correcting and the creation of social contexts in which learning will naturally take place. <CRITICAL ALSO to this process> / is <the ASSUMPTION that, / whatever the DAY-to-DAY FRUSTRATIONS and IRRITATIONS in COMMUNICATING with a CHILD, / NEGATIVE EVALUATIONS will be SUSPENDED / when a MATTER of REAL IMPORTANCE to a child ARISES>. For minority ethnic group workers, there are no such assumptions.

We would expect that the portion of the preposed constituent that represents unfamiliar information would not be deaccentable, and in fact this is the case; in 31, critical and also, neither of which has been explicitly evoked, must both receive a pitch accent. However, this process, as the explicitly evoked connecting element, may be deaccented.

5.4.2 Postposed constituent. We would also expect that if the postposed constituent (generally an NP) represents relatively unfamiliar information, that it would not be deaccentable. Again, however, it is often the case that the NP has its own internal discourse-familiarity structure. As was demonstrated above (ex. 32, repeated here with likely intonation marked), entities represented within the postposed NP may be quite familiar; it is the entity represented by the NP itself that is claimed to be relatively unfamiliar.
32. Greetings from Apple Computer, 
<ENCLOSED> is <a PUBLICATION / I think you will find INTERESTING>.

Here, a publication I think you will find interesting represents new information, and in an oral production its head noun publication may not be deaccented. However, the pronouns I and you within this NP represent situationally evoked information, and may be deaccented.

I examined the 80 tokens in the smaller corpus to determine whether the head noun in each postposed constituent could be deaccented in an oral production, with encouraging results. A total of 64 did not permit this deaccenting, while 14 did. In the remaining two, the postposed constituent was a full clause, as in 37:

37. <IMPLICIT in this ANALYSIS> / is <that THIS is the SOLE FUNCTION of this particular type of TRANSFORMED SENTENCE /—to signal COUNTER EXPECTATION>.

[Gary 1976:18—token provided by Gregory Ward]

Here, with a postposed clause rather than a postposed NP, there is no single head noun to evaluate.

Most of the 14 tokens permitting deaccenting of the postposed NP's head noun fell into two classes. First, nine of these NPs were of the form NP-PP, with of as the head of the PP, as in 38:

38. (a) "Glad to meet you, Nat. We like a man with a fast mind. Trust Mike Conway to choose well."
   "Yes, Dad, Mike didn't choose too bad, did he?"
   <BESIDE the man's FACE> / appeared <the OVAL face of his DAUGHTER>.
   [Upfield 1988:109—token provided by Beth Levin]

(b) They walked carefully across the twins' vegetable garden, picking their way through rows of cabbage, beets, broccoli, pumpkins. <LOOMING on their LEFT> / were <the TALL stalks of CORN>.
   [L'Engle 1962:49—token provided by Beth Levin]

The deaccentability of face in the postposed NP in 38a can be straightforwardly accounted for, in that a face has been mentioned in the preposed constituent; nonetheless, the particular face represented by
the postposed NP—that of the daughter—is new to the discourse, and in fact daughter may not be deaccented. Tokens such as 38b are not so easily accounted for. Although stalks represents new information in the discourse, it seems to be deaccentable. Note, however, that corn is not. Here, I think, stalks is to be taken as merely descriptive of ‘corn’. In each of these nine cases, the noun within the PP (e.g., corn) cannot be deaccented.

In another three of the tokens with deaccentable postposed head nouns, the postposed NP contains a relative clause, as in 35c, repeated here as 39:

39. First would apply a fronting rule, perhaps Topicalization, that would apply to (15) An elegant fountain stands in the Italian garden to yield (16) In the Italian garden stands an elegant fountain. [ . . . ] SECOND, / <to THIS structure> would APPLY, OPTIONALLY, / <a rule we may call VERB SECOND, / that places a VERB PHRASE consisting simply of a VERB / immediately AFTER the PREPOSED CONSTITUENT / to yield (18) / In the ITALIAN GARDEN stands an ELEGANT FOUNTAIN, / whose DERIVED STRUCTURE would be (19)>

Here, the head noun rule may be deaccented, but crucially, Verb Second may not. Again, notice that the notion ‘rule’ has been evoked; thus it is not surprising that the word rule in the postposed NP is deaccentable. What is new is the particular rule being referred to as Verb Second, and, predictably, this information cannot be deaccented.

The final two tokens whose postposed head noun may be deaccented are given in 40:

40. (a) You can drive as fast as you like in the outside lane on a West German highway and may feel like the king of the road—until you look in the rear mirror. <ZOOMING IN on you like a GUIDED MISSILE> / comes <a RIVAL contender>, BULLYING you to get OUT of the WAY. [=27]

(b) She had to circle the block to get back to Whitechapel Road and then—God willing—the smaller street where the Starving Ox was located. For a panicky moment she thought she’d misjudged where she was and would be forced to shoot over the Thames into
South London on the Tower Bridge. Then the road branched and led her the right way; <on a CORNER in FRONT of her> / appeared <an establishment with DINGY AMBER LIGHTING / and a WOODEN SIGN cut out in a BOVINE SHAPE>.

[Muller 1988:16—token provided by Beth Levin]

It seems to me that contender in 40a may be deaccented only if rival is accented—suggesting that you are one contender, in contrast to the new rival contender. In this case, the new information is that represented by rival, not contender. Similarly, in 40b what identifies the entire NP—an establishment with dingy amber lighting and a wooden sign cut out in a bovine shape—as new information is not the word establishment; presumably there were any number of other establishments on the street. Instead, it is the description represented by the PP that provides the new information in the larger NP and identifies the establishment.

Thus, in all cases the postposed constituent receives an accent on the new information. Notice that, although the preposed constituent typically also receives an accent, it is possible to have a completely deaccented preposed constituent, but it does not seem possible to have a completely deaccented postposed constituent:

41. [Did you say there’s a WOLF in the PARK?]
   (a) No; in the park is a DOG.
   (b) No; #in the PARK is a dog.
   (c) No; a wolf is in the GARDEN.
   (d) No; #in the GARDEN is a wolf.

Thus, even when the entire inversion is a single intonational phrase, the nuclear accent falls on the postposed constituent.

In short, although there remains a great deal of research to be done, a preliminary investigation of the intonation of inversion provides some additional support for the discourse-functional account proposed here. Particularly revealing are the results for the connecting element within the preposed constituent, which was shown to be deaccentable only when it represents information evoked in the discourse.

5.5 CONCLUSIONS

I have argued that inversions can be classified into two major categories, which I have termed BI (for inversion around be) and NBI (for non-be inversion). NBI is much more constrained than BI, in that
Verbs and Related Issues

its preposed constituent is consistently either a locative PP, a locative VP, or adverbial thus, so, or as. There seems to be no similar constraint on BI regarding either the semantic or the syntactic type of its preposed constituent.

The verbs appearing in NBI are always passive or unaccusative, and moreover seem further restricted to verbs of existence and appearance. This restriction, in turn, seems to be due to pragmatic factors, in particular a constraint requiring that the verb in an inversion be informationally light in context. In order to satisfy this constraint, the verb must represent evoked or inferrable information, although the context that lends it this status may include the rest of the inversion in which the verb appears.

Given that both the preposed constituent and the verb in an inversion represent relatively discourse-old information, it might seem advantageous to consider inversion an OP-marking (or focus-presupposition) construction. However, the data show that this approach is unwarranted. A felicitous inversion may lack the relevant OP if some element within the preposed constituent represents new information; if the preposed constituent represents inferrable, rather than evoked, information; or if the verb is licensed on the basis of information presented within the inversion itself.

Finally, a brief survey of the intonation of inversion has provided some support for the discourse-functional analysis proposed here. The correspondence is imperfect, however; for example, the constraints on deaccentability are stricter than those on occurrence in preposed position in an inversion. Also confounding the data is the fact that relatively new information may appear within the preposed constituent, while relatively familiar information may appear within the postposed constituent, and this is reflected intonationally. Nonetheless, in every instance in which the connecting element was judged deaccentable, that element represented explicitly evoked information. Thus, it appears that evocation in the discourse is a necessary (but not sufficient) condition for deaccentability of the connecting element. Moreover, every postposed NP contained a noun which was non-deaccentable. In most cases this was the head noun, but there were also specific classes of examples in which it could be a more embedded noun representing discourse-new information. The correlation of intonation patterns with discourse-familiarity remains an important area for future research.58
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Summary and Conclusions

In this work I have presented a discourse-functional account of inversion in English. Inversion is here defined as a sentence in which the logical subject appears in post-verbal position while some other, canonically post-verbal, constituent appears clause-initially. This definition excludes such superficially similar constructions as subject-auxiliary inversion, preposing, quotation inversion, and there-insertion, all of which were shown in chapter 2 to be distinct. Based on a study of 1778 naturally-occurring tokens of inversion in context, I have argued that inversion serves an information-packaging function, linking relatively unfamiliar information to the prior context via the clause-initial placement of information that is relatively familiar in the discourse.

Prince (1992) classifies the information represented by an utterance in terms of two crosscutting dichotomies: discourse-old/discourse-new and hearer-old/hearer-new. These divisions reflect the fact that what is new to the discourse may not be new to the hearer. An examination of the corpus shows that of 1778 tokens, not a single one combined a discourse-new preposed element with a discourse-old final element, although all other possible combinations were represented. Moreover, more than three-fourths of the classifiable inversions in the corpus contained preposed discourse-old information in combination with postponed discourse-new information. The data also show that all combinations of hearer-status were felicitously represented in inversions. Consequently, I have concluded that it is not the (assumed) hearer-familiarity of the information represented in the inversion that is relevant; rather, felicitous inversion depends on the discourse-
familiarity of the information represented by the preposed and postposed constituents. Thus, inversion serves an information-packaging function: that of presenting information which is more familiar in the discourse before information which is less familiar. With respect to those tokens whose preposed and postposed constituents represented equally discourse-old or discourse-new information, it was suggested that the choice between inversion and canonical word order in such cases will be found to depend on finer distinctions of discourse status, potentially including salience or recency of mention.

These results were then applied to an investigation of the status of inferrables, an issue left unresolved in Prince 1992. The data indicate that evoked elements and inferrable elements are treated alike with respect to inversion; both are treated as discourse-old information. That is, for purposes of inversion at least, inferrable discourse elements appear to be treated exactly as though they had been explicitly evoked. The data also suggest that the discourse-familiarity of a containing inferrable depends on the discourse-familiarity of the element inferenced off of.

The corpus also showed a significant asymmetry in terms of morphological definiteness; nearly 90% of the preposed constituents were definite, while only about half (51%) of the postposed constituents were definite. These results are apparently due to the fact that while inversion is sensitive to discourse-familiarity, definiteness is sensitive to hearer-familiarity; that is, hearer-old elements are typically definite, while hearer-new elements are typically indefinite. Thus, since preposed position in an inversion favors discourse-old information, which is necessarily also hearer-old, this position also favors definites. However, there is no corresponding tendency for the postposed constituent to be indefinite, since this position favors discourse-new elements, which may be either hearer-old or hearer-new. However, pronouns, which represent discourse-old information, tend not to appear in postposed position in inversion, which favors discourse-new elements.

I have classified inversion into two major categories, which I have termed 'be inversion' (BI) and 'non-be inversion' (NBI). NBI is much more constrained than BI, in that it nearly always contains a preposed locative PP or VP; BI shows no such restrictions. NBI also seems to be restricted to unaccusative verbs of existence and appearance. I have argued that this constraint is due to pragmatic factors: Many authors have noted that be is semantically 'empty' or, in the terms I have adopted here, informationally light; I have argued that the verbs appearing in NBI are likewise informationally light, representing
evoked or inferrable information in context and therefore contributing no new information to the discourse. That is, all verbs appearing in central position in inversion\(^{39}\) share the property of being informationally light; in the case of BI, the verb is inherently light, while in the case of NBI, the verb is rendered contextually light.

In Birner and Ward 1989 it was claimed that non-locative inversion is a focus-presupposition construction, marking an open proposition whose variable is instantiated by the postposed constituent, which is focused. Given that both the preposed constituent and the verb in an inversion have been shown to represent relatively familiar information, this account might seem to be supported by the data. However, the data in fact contradict such an analysis; the corpus included both locative and non-locative inversions that were felicitous even in the absence of the relevant OP. A felicitous inversion may lack the relevant OP if some portion of the preposed constituent represents new information, if the preposed element is inferrable rather than evoked, or if the informationally light status of the verb is due to information that appears within the inversion itself.

Finally, an examination of 80 tokens selected from the larger corpus uncovered interesting correlations between the discourse status of the elements of an inversion and their intonational realization in oral discourse. In all of the tokens whose connecting element was deaccentable, that element represented evoked information; thus, it seems that prior evocation in the discourse is a necessary condition for deaccentability of the connecting element in an inversion. Also, all of the postposed NPs examined contained a non-deaccentable noun, typically but not exclusively the head noun, representing relatively new information.

6.1 IMPLICATIONS FOR FUTURE RESEARCH

If inversion, as I have argued, permits relatively familiar information to precede relatively unfamiliar information in discourse, the next question to ask is why a speaker would wish to structure information in this way. Penhallurick (1984) states that the tendency for given information to precede new information results in greater processing ease, allowing hearers to continuously relate incoming new information to information that is already in their consciousness. While this view is intuitively satisfying, it leaves open a number of questions, including the nature of consciousness and the specific processing mechanisms in question.

Assuming that interlocutors attempt to present and process information in a structured way (Reinhart 1981), one fruitful avenue for
The Discourse Function of Inversion in English

continuing research is the relationship between this structure and the functions of marked syntactic constructions. Prince (1992) frames the notion of discourse-old and discourse-new elements in terms of the discourse model (Webber 1979, inter alia); an entity that is discourse-old is one that currently exists in the speaker's model of the current discourse (and therefore, the speaker will assume, in the hearer's model as well). Entities that exist in the discourse model are those that have been evoked in the physical context or in the prior discourse-stretch. It should be noted that a so-called 'discourse entity'\textsuperscript{60} may in fact be a property, state, action, etc. rather than an individual (Webber 1979, 1981). For example, the preposed discourse-old 'entity' in a VP inversion may be an action, while that in an AdjP inversion may be a property. For this reason, I have generally chosen to use the term 'element' rather than 'entity', as the latter suggests an individual object.

While Prince's (1992) distinction between discourse-old and discourse-new information is readily capturable in most model-theoretic approaches to discourse,\textsuperscript{61} the results of the present study raise the additional question of how inferrable elements are to be represented in such a system. As demonstrated in chapter 4, inferrable elements seem to be treated as discourse-old with respect to inversion; however, it is not clear that such elements should be considered to actually be in the discourse model prior to the utterance, given the potentially infinite number of elements that may be considered inferrable in a given context. Instead, it may be that inferrables represent new information being treated as if it were in fact familiar, which in turn (assuming the appropriate inferential connections can be made) causes the hearer to add the inferrable information to the discourse model and treat it as if it were discourse-old. Such a process would correspond to the formal semantics notion of 'accommodation' (Lewis 1979, Webber 1991, inter alia).\textsuperscript{62} Accommodation allows a definite noun phrase to be used to refer to a new entity, whose existence is felt to be presupposed and which is then added to the model in order to satisfy the presupposition. Although it is beyond the scope of this work to investigate further connections between discourse status and model-theoretic semantics, this remains an intriguing area for future study.

Finally, it is interesting to compare the results of this study with those of Prince (1992). Just as this study has found that discourse-familiarity accounts for the distribution of preposed and postposed constituents in inversion, Prince found that discourse-familiarity accounts for the distribution of NPs in subject vs. non-subject position in canonical-word-order (CWO) sentences. However, Prince found that discourse-old entities tend to be represented by subject NPs in CWO
sentences, while the present study has shown that discourse-new entities tend to be represented by the postposed subject NP in an inversion. This contrast suggests that discourse-familiarity in fact correlates not with subjecthood, but rather with relative sentence position. That is, the findings of the two studies considered in combination confirm that, in the case of CWO and inversion at least, discourse-old information tends to precede discourse-new information in a sentence.

There also exist other useful correlations between Prince’s results and those of this study. For example, Prince found interesting but inconclusive evidence that among the class of discourse-old entities, pronominal status may be significantly correlated with subjecthood, suggesting that salience may also be relevant, as was similarly suggested above for inversion. Clearly the issue of relative salience within the class of discourse-old information is a fruitful topic for further research.

Prince also found that the greater likelihood that a subject will be definite than a nonsubject was entirely accounted for by the discourse-familiarity results; that is, when discourse-familiarity was taken into account, the statistical preference of definite NPs for subject position disappeared. Similarly, the results of the present study indicate that the definiteness results with respect to inversion can be readily explained as a reflex of the discourse-familiarity facts.

Although many more constructions must be studied before a definitive conclusion can be reached concerning the correlation between discourse-old information and sentence-initial position in general, the results of these studies offer encouraging evidence that the distinctions proposed in Prince 1992 do in fact correspond to those considered by speakers in forming their utterances. If this is so, it provides a promising direction for future research, including research into other marked syntactic constructions and crosslinguistic studies of the correlation between discourse-familiarity and sentence position. Indeed, this new direction for research on information packaging has the potential to allow linguists at last to accurately characterize the longstanding but empirically elusive intuition that given information tends to precede new information in discourse.
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Appendix

Coding Factors and Results

In order to gather empirical evidence for the various hypotheses (both my own and others’) regarding the discourse function of inversion, I conducted a study of 1778 tokens of English inversion. Each was coded for the characteristics listed below. I present the coding criteria and the results in each category; in some cases I also provide examples and/or brief discussion.

Acceptability in canonical word order (CWO). I coded as acceptable those inversions that could plausibly appear in the same context in CWO, even if they seemed slightly odd or unwieldy. I coded as unacceptable those tokens that either were clearly ungrammatical in CWO or were clearly unacceptable in CWO for semantic or pragmatic reasons, including the examples in 1-2:

1. (a) Nevertheless, the court recognized that Bouknight’s 5th Amendment rights might limit the state’s use of any testimony in a later criminal proceeding.
   \[<Joining O’Connor’s opinion> were <Chief Justice William Rehnquist and Justices Byron White, Harry Blackmun, John Paul Stevens, Antonin Scalia and Anthony Kennedy>.\]
   \[“Woman ordered to tell location of abused son,” Chicago Tribune, 2/21/90, sec. 1, p. 12\]

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2. (a) Once into the drawing-room, one saw why. *In here* had been *activity*; there was much to show for it.

[Bowen 1968:118—token provided by Beth Levin]

(b) [ . . . ] #Activity had been in here; there was much to show for it.

Using the above criteria, I judged 1581 tokens acceptable in CWO, and 197 unacceptable. Conditions under which the CWO counterpart of an inversion might be unacceptable are discussed in chapter 2.

*Source.* Each token was classified as either written or spoken, depending on its original source. For the purposes of this study, written accounts of actual speech were counted as ‘spoken’, while speech within a fictional work (e.g., attributed to a character in a novel) was counted as ‘written’, since although it is intended to simulate actual speech, the accuracy of such simulations has not been established. In my corpus, 1661 tokens were from written sources, 107 from spoken sources, and 10 from indeterminate sources. As noted in chapter 1, it should not be assumed that the preponderance of written tokens reflects a higher percentage of written vs. spoken inversions in general; since the corpus does not represent a truly random sample of English, it is likely that the ratio of written to spoken tokens reflects in part the difficulty of obtaining, on the fly, spoken tokens with context.

*Syntactic categories of preposed and postposed constituents.* I recorded the syntactic types of the preposed and postposed phrases. Of the 1778 tokens in the corpus, 1736 contained a postposed NP, 12 a postposed clause, and 30 some other (or multiple, or indeterminate) constituent. Inversion with a postposed clause is illustrated in 3:

3. (a) Students in our senior seminar course for majors write a term paper, and their writing skills are inferior—punctuation, spelling, style, thought development. *Even more discouraging* is *that many of them tell me this is their first term paper*.

[Professor quoted in “Super U,” Chicago Tribune Sunday Magazine, 10/8/89, p. 17]

(b) In the city and the suburbs here, federal judges in recent years have banned the creche from Chicago’s City Hall, allowed separate displays of the nativity
Of the preposed constituents, 1286 were PPs, 282 VPs, 112 AdjPs, 34 NPs, 16 AdvPs, and 48 some other (or multiple, or indeterminate) constituent. See chapter 2 for discussion and examples.

Discourse status of information represented by preposed and postposed constituents. Here I used Prince’s 1981b scale of assumed familiarity, which can be mapped straightforwardly onto her current matrix, as discussed in chapter 4. Since this category represents the crux of my research, its coding is discussed in detail in the text, but I will here review briefly the values coded for and the results.

I coded as ‘evoked’ those elements that were under discussion, recently mentioned in the current discourse, or salient in the context of the discourse (including the physical/situational context). I coded as ‘unused’ those elements that were no longer, or never had been, evoked in the discourse, but which I believed the speaker could plausibly assume were familiar to the hearer. Among the ‘inferrables’ I counted information which could plausibly be considered inferrable from information assumed to be in the hearer’s discourse model[64]; I included in this category spatial and scalar relationships. I coded as ‘brand-new’ that information which had not been evoked in the current discourse and could not plausibly be assumed to be familiar to the hearer or inferrable. It was coded as ‘brand-new anchored’ if it was linked to another, more familiar entity by means of an anchor within the same preposed or postposed constituent; such information was coded as ‘brand-new anchored’ regardless of whether the anchor itself was evoked, unused, or inferrable.

The results are presented in the following chart:
Fig. A-1. Familiarity (by classes in Prince 1981b)

<table>
<thead>
<tr>
<th>Preposed Element</th>
<th>EV</th>
<th>UN</th>
<th>IN</th>
<th>CI</th>
<th>BA</th>
<th>BN</th>
<th>??</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV</td>
<td>29</td>
<td>0</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>56</td>
</tr>
<tr>
<td>UN</td>
<td>100</td>
<td>4</td>
<td>96</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>11</td>
<td>218</td>
</tr>
<tr>
<td>Post-posed</td>
<td>42</td>
<td>0</td>
<td>41</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>90</td>
</tr>
<tr>
<td>CI</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Element</td>
<td>BA</td>
<td>219</td>
<td>9</td>
<td>192</td>
<td>3</td>
<td>43</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>BN</td>
<td>214</td>
<td>19</td>
<td>187</td>
<td>9</td>
<td>36</td>
<td>20</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>??</td>
<td>71</td>
<td>6</td>
<td>61</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>240</td>
</tr>
<tr>
<td>Total</td>
<td>679</td>
<td>38</td>
<td>605</td>
<td>13</td>
<td>87</td>
<td>31</td>
<td>325</td>
<td>1778</td>
</tr>
</tbody>
</table>

**Key:**

- EV = Evoked
- UN = Unused
- IN = Inferrable
- BA = Brand-new Anchored
- BN = Brand-new
- ?? = Could not determine
- CI = Containing Inferrable

See chapter 4 for discussion.

**Topic.** I coded here for whether the apparent topic of the next clause was represented in the inversion, and if so, where. I did not code for the relationship of the constituents of the inversion to the preceding topic, since the coding system used for discourse status (see above) provided, to my mind, a more clearly defined way of getting at the relevant relationships.

I adopted the loosest possible working definition of ‘topic’, considering a discourse element the new topic if the next clause was in any way about that element (cf. Gundel 1977). I checked for next-clause topichood of the elements represented by entire preposed constituent, the constituents embedded within the preposed constituent, the entire postposed constituent, and the constituents embedded within the postposed constituent. In 515 cases the postposed constituent represented the new topic, and in 144 additional cases the postposed constituent either contained (a constituent representing) or otherwise evoked the topic of the next clause. In 47 cases the preposed constituent represented this topic, and in 127 additional cases it contained or otherwise evoked this topic. In 360 cases the topic of the next clause was neither represented in, nor evoked by, the inversion, and in 585
cases there was not sufficient context available to make a determination. These results are summarized below:

<table>
<thead>
<tr>
<th>Topic of next clause</th>
<th>Number of tokens</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preposed element</td>
<td>47</td>
<td>3</td>
</tr>
<tr>
<td>Portion of preposed element</td>
<td>127</td>
<td>7</td>
</tr>
<tr>
<td>Postposed element</td>
<td>515</td>
<td>29</td>
</tr>
<tr>
<td>Portion of postposed element</td>
<td>144</td>
<td>8</td>
</tr>
<tr>
<td>Neither</td>
<td>360</td>
<td>20</td>
</tr>
<tr>
<td>Insufficient context</td>
<td>585</td>
<td>33</td>
</tr>
<tr>
<td>Totals</td>
<td>1778</td>
<td>100</td>
</tr>
</tbody>
</table>

The tokens in 4 provide examples of each type of potential relationship between the inversion and the following topic:

4. (a) *<Not among the items being looked into> are <memos obtained by the Tribune showing that the French and Gallo viruses were compared in his lab and found to be the same at a time when Gallo was preparing a paper for publication in Science that stated that the two might be different viruses>*.

    Nor, apparently, does the NIH plan to investigate a number of other reported discrepancies between Gallo’s published research and data in his laboratory records.

    [“U.S. agency probing AIDS virus discovery,” Chicago Tribune, 2/25/90, sec. 1, p. 6]

(b) Much more prominent than theory is methodology—i.e., argumentation and syntactic reasoning—because *<an important goal of the book> is <guiding readers to think of grammatical analyses as empirically motivated>*.

    There is more in this book than can be properly covered in a one semester course.

    [Kaplan 1989:x]

(c) The man who thought exercise was a waste of time, who “lived on cholesterol,” who routinely worked 14-hour days even on Sundays, no longer exists.
Instead, <sitting in the hotel dining room> is <a trim, tanned Californian who exudes good health>. He stays at this particular hotel because of its fitness center, he explained as he ordered a heart-healthy breakfast: high-fiber cereal and skimmed milk, decaffeinated coffee, margarine for his English muffin.

["Coronary victim fights back with magazine," Chicago Tribune, 2/14/90, sec. 5, p. 1]

(d) The concepts of reference and denotation have to do with word-meaning. <Other concepts important to word-meaning> are <synonymy, homonymy and antonymy>. Synonyms are words with the same meaning, like stop and cease.

[Kaplan 1989:33]

(e) <Included on the menu> are <traditional choices such as French onion soup, smoked salmon with caviar, beef with three mustard sauces and salmon with herbs>. The waiter recites a long list of intriguing daily specials, which are thankfully printed as well.

["Carlos’ new chef keeps excellence as top menu item,” JeanMarie Brownson, Chicago Tribune, 7/7/89, sec. 7, p. 29]

In 4a, the preposed phrase not among the items being looked into represents the topic of the next clause (roughly, ‘things the NIH is not investigating’); in 4b, only a portion of the preposed constituent—the book—represents the topic of the next clause. Similarly, in 4c, the entire postposed NP a trim, tanned Californian who exudes good health represents the topic of the next clause, while in 4d only a portion of the postposed NP does. Finally, in 4e neither the preposed nor the postposed constituent of the inversion represents the topic of the following clause.

Open proposition. Open propositions, or OPs, are defined by Prince (1986) as that portion of the propositional content of an utterance that the speaker believes the hearer shares at the time of the utterance. The OP is obtained by replacing the element bearing nuclear accent with a variable whose instantiation corresponds to the new information of the utterance. In Birner and Ward 1992, it was claimed
that felicitous use of certain types of inversion depend on the (plausible) salience of the relevant OP in the discourse. (See chapter 5 for discussion and examples.) To test this hypothesis, I determined for each token whether, in context, it was plausible that the necessary OP could be assumed by the speaker to be salient for the hearer.

I judged that such an OP could plausibly be assumed to be salient for 1153 tokens (65%), that for 285 (16%) such an OP could not plausibly be assumed to be salient, and that for 340 (19%) there was insufficient context to make a determination. An example of a token for which it seems the relevant OP can plausibly be assumed to be salient is given in 5:

5. So it is not surprising that anger over erratic postal service in some city neighborhoods seems to be nearing a peak. Nowhere is this clearer than in the overstuffed files of constituents' postal complaints in U.S. Rep. Sidney Yates' (D-Ill.) office.

<In them> are <many versions of the same story>: people furious at and fed up with the manner in which their mail is (mis)handled.

["ZIP lock: Special delivery from residents: Bagfuls of gripes," Chicago Tribune, 2/12/90, sec. 5, p. 1]

Here it seems likely that the proposition 'something is in them' would be salient for the reader prior to the inversion. Contrast 5 with 6:

6. <From the lips of a cab driver> came <an enlightened expression that I thought should be shared>.

[Chicago Tribune, sec. 1, p. 24, 3/1/90]

Here the inversion is the first sentence of a letter to the editor, and it does not seem plausible that the relevant proposition, 'something came from somewhere,' can be assumed to be salient for the reader prior to the inversion.

The percentage of OP-less tokens among be inversions in the corpus was much lower than the percentage of OP-less tokens among other inversions (10% vs. 25%, respectively, out of the 515 be tokens and the 923 be-less tokens for which a determination could be made). A probable reason for this result is discussed in chapter 5.

Verb type. For each inversion, I noted what the main verb was, as well as whether it was transitive; whether it was passive; whether it was
a verb of location, motion, time, emission, emergence, or existence; whether the verb agreed with the postposed constituent; and its tense.

The vast majority of the tokens were intransitive; the only two that appeared to contain a transitive verb involved the complex predicates *take place* and *take root*. There were 112 tokens (6%) in the passive, compared with 1666 (94%) active. Of these 1778 tokens of inversion, 654 (37%) were instances of inversion around *be*; of the remaining 1124 tokens, 603 of the main verbs were judged locative,\(^6\) while 410 were judged to be verbs of motion, 39 verbs of emission, 21 verbs of existence, and 9 temporal verbs; and 13 were judged to be none of the above. These classifications must be viewed as preliminary, however, given the relative lack of definition of the classes listed. It is argued in chapter 5 that all of these verb types as used in inversion constitute verbs of appearance and existence. There were 21 cases (1%) in which the verb agreed with the preposed constituent (or at least failed to agree with the postposed constituent).\(^6\) In 1162 cases (65%), the sentence was in the past tense; it was in the present tense in 603 cases (34%), and it was in the infinitive in 13 cases (1%).

The results of the study with respect to verbs and verb types are discussed in detail in chapter 5.

**Definiteness.** I also noted whether the preposed and postposed constituents were morphologically definite or indefinite, except where these notions were inapplicable (e.g., for preposed adjectives). Of the 1485 relevant tokens (excluding those whose preposed constituent did not contain an NP and therefore could not be assessed for definiteness), the results are as follows:

<table>
<thead>
<tr>
<th>Final element</th>
<th>Definite</th>
<th>Indefinite</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial element</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definite</td>
<td>684</td>
<td>79</td>
<td>763</td>
</tr>
<tr>
<td>Indefinite</td>
<td>648</td>
<td>74</td>
<td>722</td>
</tr>
<tr>
<td>Total</td>
<td>1332</td>
<td>153</td>
<td>1485</td>
</tr>
</tbody>
</table>

In 1332 cases (90%), the preposed constituent was definite, while in 153 cases (10%), the preposed constituent was indefinite. The definiteness results for the postposed constituents were much more symmetrical, with 763 postposed definites (51%) and 722 postposed indefinites (49%). These results are discussed in detail in chapter 4.
Embeddedness. Since many claims have been made concerning the ability of inversion to occur in an embedded clause (see chapter 3), I noted those inversions that were in fact embedded (including, for example, inversions in relative clauses). There were 121 such instances out of 1778 inversions (7%).

Polarity. I noted the polarity of each inversion, since it has been observed (Aissen 1975, Green 1982, Levine 1989, Rochemont and Culicover 1990, inter alia) that negation of the verb in inversion seems impossible:

7. *Into the room didn’t walk John.
   [=Rochemont and Culicover 1990:107, ex. 24]

Rochemont and Culicover (1990), who claim that 8a below is derivationally ambiguous (see chapter 2), predict that “the restriction against negation in an apparent instance of [locative inversion] is relaxed just in case the post-verbal subject is sufficiently heavy” (1990:107), in which case the sentence is not an inversion, but is actually an instance of presentational there-insertion (where the presence of there is optional); as an example they give 8b:

8. (a) Into the room walked everyone she had met at the party.
     (b) Into the room didn’t walk any of the most interesting people that she had met at the party.
     [=Rochemont and Culicover 1990:107, ex. 26-27]

However, my informants and I find 8b as unacceptable as 7. Inversion with a negated verb does seem more acceptable in the context of contrastive stress, as in 9:

9. She told me there was a cockroach on the kitchen floor, so I went in to kill it, and ended up laughing at what I found. 
   On the floor wasn’t a cockroach, but rather a large black spider.

The acceptability of 9 suggests that the restriction against negation may be at least in part pragmatic; nonetheless, my corpus of 1778 inversions does not contain a single example with a negated verb. Negation of the preposed and postposed constituents is possible, however; the corpus contains 19 such tokens, as illustrated in 10.
10. (a) Raub told Dingell, who heads a subcommittee responsible for overseeing NIH, that the matters to be investigated included "questions about how many isolates [Gallo had] from AIDS patients and when this occurred," and "questions about LAV growth and usage" in Gallo's lab.

<Not among the items being looked into> are <memos obtained by the Tribune showing that the French and Gallo viruses were compared in his lab and found to be the same at a time when Gallo was preparing a paper for publication in Science that stated that the two might be different viruses>.<152>

["U.S. agency probing AIDS virus discovery," Chicago Tribune, 2/25/90, sec. 1, p. 6]

(b) The "symphony of chocolate"—a sampler plate—is simply outstanding. . . . The dish includes pots de creme, chocolate sorbet, chocolate raspberry mousse, layered pistachio ice cream and dark chocolate terrine, and a layered paper-thin chocolate wafer with white chocolate mousse.

<No less wonderful> is <the fresh fruit tart with a cookie crust and pistachio custard or the marbelized white and dark flourless chocolate cake garnished with ribbons of milk, dark and white chocolate>. [JeanMarie Brownson, "Carlos' new chef keeps excellence as top menu item," Chicago Tribune, 7/7/89, sec. 7, p. 29]

(c) This appendix lists pieces excluded by Auden from his Collected Shorter Poems 1927-1957 (other than the four restored poems noted in the editor’s preface), although published in his earlier volumes. <Not listed> are <poems published only in periodicals, or in privately printed pamphlets such as the 1928 Poems printed by Stephen Spender>; nor are those poems listed that were printed only as parts of longer works such as The Orators or the notes to ‘New Year Letter’ in The Double Man. [Mendelson 1976:677]
(d) Now, the warm silence pressed in, thick as a fog. From below, from Mrs Abney's domain, came no sound. Perhaps she had taken herself out or was still asleep.

[Pilcher 1984:69—token provided by Beth Levin]

Of the 16 inversions in the corpus containing a negated preposed constituent, all were instances of inversion around be, including a variety of preposed constituent types, as illustrated in 10a-c; on the other hand, the three tokens containing a negated postposed NP were all instances of PP inversion around some other verb, as in 10d.

Locativity. For each inversion, I determined whether the preposed constituent was semantically locative—i.e., denoting or indicating a spatial or temporal location or direction (see discussion in chapter 2). Of the 1778 total tokens, 1534 (86%) contained locative preposed constituents and 244 (14%) contained non-locative preposed constituents. However, the distribution of the non-locative tokens was not symmetrical across types. For example, 224 of the 244 non-locative inversions (92%) had be as their main verb, and of the 1096 tokens with a preposed PP and a main verb other than be, only 4 (0.36%) did not contain a locative preposed constituent. See chapter 5 for detailed discussion.

Formal weight. It has been claimed that the formal 'weight' of a constituent is a factor in its appearance in preposed or postposed position in an inversion (see chapter 3); therefore I noted for each inversion which, if either, of these two constituents was heavier. Since to my knowledge the complex issue of precisely how relative weight is determined has not been adequately addressed (e.g., the potential relevance of word count, constituent count, and/or syntactic complexity), I used a simple syllable count. By this criterion, I determined that in 1314 cases the postposed constituent was heavier, in 210 cases the preposed constituent was heavier, and in 246 cases the two were roughly equal in weight, with eight cases being indeterminate due to incomplete tokens.
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Notes

1 Recent research shows that the correlation between definiteness and hearer-familiarity is actually imperfect. See Birner and Ward 1994 for discussion.

2 See Green 1982 for a detailed discussion of inversion types with respect to their use in 'colloquial' or 'literary' contexts.

3 A more elaborate taxonomy based on interactions between syntactic, semantic, and pragmatic factors is presented in chapter 5.

4 It should also be understood that the logical subject needn’t appear in the immediately post-verbal position; for example, a parenthetical may appear between the verb and the subject.

5 A second function of preposing, that of marking an open proposition as salient shared knowledge, will be discussed in chapter 5.

6 Penhallurick (1984) argues that, in fact, it is the backing of the subject that triggers the fronting of the preposed constituent. See the discussion of Penhallurick 1984 in chapter 3.

7 See Hartvigson and Jakobsen 1974 and Lakoff and Brugman 1987 for detailed discussions of the functions of SAI.

8 The corpus contains only one token (out of 1500) of another potential inversion with a preposed S:

   i. Harry says to the young people, “You should have eaten some, the kohlrabi gets pulpy if you let it grow too big.”
      “It never has any taste, Dad,” Nelson says.
      “Yeah. I guess nobody much likes it except me.”
      \(<\textit{He likes to nibble,}>\textit{ is }<\textit{one reason he's fat}>\).
      [Updike 1981:157]
However, it is not at all clear that such a sentence is best treated as an inversion. In (i), it seems that *He likes to nibble* may in fact be the logical subject, of which ‘(that’s) one reason he’s fat’ is being predicated.

9 It is, of course, perfectly possible for such sentences to end with a high boundary tone. A likely intonation for the utterance of the post-quotation material in 24a-b is L* L H%, with an intermediate phrase boundary between the quotation and the verb; see Beckman and Pierrehumbert 1986 for discussion. See also Gussenhoven 1984 for a differing view, in which the verb and post-verbal material constitute a post-nuclear ‘tail’ which is an integral part of a ‘nuclear tone’.


11 Although Rochemont and Culicover use the term ‘inversion’, it should be noted that their syntactic account involves a rather more complex series of movements than simple inversion of the subject and verb.

12 Notice also that the verbs in these examples can appear in acceptable inversions, demonstrating that the problem is not due to differences in the classes of verbs that can appear in these constructions.

13 See Bolinger 1977 for arguments that there are subtle differences in the meaning and use of these two constructions.

14 See below for discussion of the definition of ‘locative’.

15 In chapter 5 I will distinguish a subclass of locative inversions around verbs other than *be*, but it will also be shown that this class represents neither all non-*be* inversions nor all locative inversions, nor does it comprise only PPs.

16 See also Clark (1978) for a cross-linguistic study of ‘locationals’ and discussion of the relationship among existential, locative and possessive constructions (cf. also Bolinger 1977). Unfortunately, Clark’s study of the word order and verbs appearing in these three construction types does not address English inversion.

17 We are grateful to Jeff Kaplan and Julia Hirschberg for helpful discussion on this point.

18 We are indebted to David Dowty for suggesting this approach to us.
Notes

19 See also Heycock 1991 for discussion of the syntax of ‘reverse copular constructions’ (what I am here terming NP inversions); Heycock analyzes the initial NP as a predicate, and discusses certain features distinguishing these from other copular constructions (cf. Rothstein 1983).

20 Green (1985:143) similarly notes that there exist so-initial sentences with more than one auxiliary before the subject, indicating that these are inversions.

21 The constructions in 77 merit further study to determine how they are related to the as-clause construction discussed by Stowell (1987).

22 Langendoen 1973 argues that the structure-preserving constraint is incorrect, and that Emonds’ ‘PP substitution’ (Langendoen’s ‘locative inversion’) is not a root transformation but rather a result of the application of a fronting rule followed by a rule he calls ‘verb second’, which inverts the subject and verb. (See chapter 2 for a discourse-functional refutation of such a two-step analysis.) Bowers 1976 similarly argues that locative inversion involves a two-step process, but proposes a base-generated empty COMP node for the PP to move to, combined with a movement of the subject NP to the direct object position, an analysis consistent with the structure-preserving constraint. However, Bowers’ analysis, as he himself notes, ultimately requires him to accept a monostratal theory of grammar in which, as Langendoen (1979) points out, “the distinctions that are central to [the structure-preserving] hypothesis (namely, among structure-preserving, root, and local transformations) are obliterated” (1979:424). Iwakura (1978) also counters Langendoen 1973, though still embracing the premise that locative inversion is a two-step process. His account retains the structure-preserving constraint by redefining the term “root transformation” in such a way as to accommodate the counterexamples. However, as Langendoen (1979) notes, Iwakura’s analysis itself is subject to counterexample; moreover, the new definition is considerably more cumbersome and results in a lessening of explanatory power. Langendoen (1979) offers a new analysis, utilizing a base-generated topic constituent, which he claims obviates the need for the structure-preserving constraint. See also Newmeyer 1987 for an analysis wherein the structure-preserving constraint is claimed to be unnecessary, the relevant facts being derived from independently motivated syntactic principles.
Curiously, Hooper and Thompson argue that certain other transformations (direct quote preposing, complement preposing, and adverb dislocation) serve to “give the complement sentence added importance by moving it to the beginning of the sentence” (1973:470). While it may seem unlikely that a position at the beginning of the sentence confers added importance in some cases, while a position at the end of the sentence does so in others, Hooper and Thompson claim that in the case of fronted complements, the preposed complement is initially taken to be the ‘primary assertion’, hence the increased importance.

Gary also states that the ‘counter-expectation’ ascribed to these inversions is the same as the ‘denial of expectation’ that Lakoff 1971 discusses with respect to the meaning of but in sentences like (i):

i. John is tall but he’s not good at basketball.

Thus, Gary claims that these inversions should be able to occur in clauses introduced by but. However, the matter is clearly more complex, as evidenced in (ii):

ii. #John looked everywhere for his dog, but under the porch hid the dog. (cf. [. . . ] but the dog hid under the porch.)

Here the felicity of but in no way predicts the felicity of the inversion. See Birner 1988 for a critique of Lakoff’s analysis of but.

Lumsden (1988) argues that a presupposition of the sort defined by Chomsky and Jackendoff need not always be present:

i. I think I’d better stop talking now because JOHN is at the door.
   [=Lumsden 1988 ex. 70]

In (i), focus on John does not require that ‘someone is at the door’ be presupposed, Lumsden claims; that is, “elements in a sentence may be neither focused nor presupposed” (1988:234). However, the possibility remains that some larger constituent (e.g., John is at the door) is actually the focus in this case. This is not to say that Jackendoff’s formulation is unproblematic; see Ward 1988 for a critical discussion.

Rooth (1992) presents a somewhat different account of focus (within the framework of alternative semantics) which nonetheless shares certain features of an open-proposition analysis.
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27 Coopmans 1989 follows Rochemont 1986 in assuming that the post-verbal NP is located in ‘constructional focus position’, where it receives an interpretation as presentational focus. However, the function of inversion is incidental to his analysis, which is centrally concerned with the syntax of the construction. See Rochemont and Culicover 1990 for a critical discussion.

28 It should also be noted that there is significant disagreement in the literature concerning the definition of the term ‘topic’. See Chafe 1976; Gundel 1977, 1985; Reinhart 1981; and Ward 1988, inter alia.

29 Bolinger (1977) similarly argues that inversion serves a ‘presentative’ function, though his use of the term ‘presentative’ differs somewhat from Bresnan’s use of ‘presentational’. See chapter 2.

30 The sole exception would be in cases where all the information in the sentence is ‘brand-new’. See discussion below.

31 Removing the relative clause, therefore, results in a sentence which is somewhat less acceptable as the first sentence of a narrative:

   i. '?Into the consulting room of a fairly mad physician hurtled a haggard middle-aged woman, towing her husband, a psychotic larrikin about seven feet tall.

To the extent that such an utterance is acceptable, it has a feel of beginning the narrative in medias res. For this reason, replacing a fairly mad physician with a definite NP results in a far more acceptable beginning sentence:

   ii. Into Dr. Johnson’s consulting room hurtled a haggard middle-aged woman, towing her husband, a psychotic larrikin about seven feet tall.

Here Dr. Johnson is treated as though it represents familiar information, giving the illusion that the reader has jumped into the middle of the narrative.

32 Babby 1980 presents a theme-based analysis of existential sentences in Russian, including the Russian counterparts of English PP inversions. See also Firbas 1966b, where it is argued that such sentences in English reflect a theme-rheme distribution of information.
Note that the situation is no better when comparing pre-verbal and post-verbal elements in inversion; that is, either constituent may felicitously be formally heavier:

i. (a) The BMOC is Garson McKellar (Tim Quill), the handsome scion of a Kennedy-esque political family who is the star of the varsity debate team. No quarterback ever had half of Garson’s problems, fighting as he must each day to clear a path through the hordes of beautiful co-eds begging for his favors. <Into this heady atmosphere> strides <Tucker Muldowney (Kirk Cameron), a maddeningly self-confident, gee-shucks freshman from Oklahoma who has entered Kenmont on a debating scholarship>. ["Resolved: ‘Listen’ is a boring movie," Chicago Tribune, 5/8/89, sec. 5, p. 2]

(b) <Listed first among the authors, the position traditionally reserved for the researcher who has made the greatest contribution to the work,> was <Francoise Barre>. ["The Great AIDS Quest: Science under the microscope," Chicago Tribune, 11/19/89, sec. 5, p.4]

Although the post-verbal NP in i(a) is formally heavier than the pre-verbal PP, and the pre-verbal past participle in i(b) is formally heavier than the post-verbal NP, both are felicitous inversions.

Kuno (1971) uses a similar assumption in arguing that the “basic word order” of existential sentences is locative + subject:

Why, then, is it that in so many languages locatives seem to appear before subjects in existential sentences? This seems to be due to the fact that there is a strong tendency in a continuous discourse to start sentences with old information, i.e. with something already known and to introduce new information toward the end of the sentence. In most existential sentences, locatives are definite, and subjects are, by definition, indefinite. Therefore, the natural word order is locative before subject. (1971:375)
See also Horn 1986 for discussion of the “conspiracy involving the correlation of sentence position, thematicity or topichood, and assumed familiarity” (1986:172).

35 Of course, it should be clear from this discussion that it is not the case that ANY mention of an evoked entity within the preposed constituent renders (the information represented by) the entire constituent familiar; for example, the preposed constituents in the following examples were coded as ‘brand-new anchored’:

i. (a) I gotta tell you something. Right now we have a very special treat for you, because <on the phone with me> is <one of the hottest young stars in town>. [WJMK disc jockey, 5/4/89]

(b) George, can you do me a favor? <Up in my room, on the nightstand,> is <a pinkish-reddish envelope that has to go out immediately>. [T.L., telephone conversation, 7/24/89]

In these cases, it is not the salient ‘me’ (or ‘my’) which is under discussion; this element acts instead as an anchor connecting the phone and the room, respectively, to the speaker. Since neither the phone nor the room was previously evoked or inferrable, both preposed constituents were coded as ‘brand-new anchored’.

36 Prince (1992) argues that for an entity to be introduced as inferrable, the speaker must believe a) that the hearer believes it to be “plausibly related” to some other discourse-old entity, and b) that the hearer will be able to infer its existence.

37 Other scalar relationships include the set/subset, part/whole, type/subtype, and entity/attribute relations; see Hirschberg 1985 and Ward 1988 for discussion.

38 I ignore for the moment the category of ‘inferrables’, which will be discussed at length below.

39 This is consistent with the findings of Penhallurick (1984), who examined 24 inversions from three sources and found that none of the 24 postposed NPs had been referred to in the preceding page of text—i.e., in Prince’s terms, none constituted discourse-old information.

40 It could be argued that salience itself is the crucial determining factor, rather than discourse-familiarity, but this analysis would not account for
the distribution of inferrables, discussed below. In any case, further psycholinguistic research is necessary before it can be determined conclusively whether salience is relevant to inversion at all.

41. This result argues against the treatment of containing inferrables presented by Prince (1992), who collapses the category of 'containing inferrable' with that of 'unused'.

42. By 'morphological definiteness' I mean definiteness as defined on formal, morphological grounds, without regard to the cognitive status of the entity represented by the NP.

43. For preposed constituents that were not themselves NPs but which contained an NP (e.g., VPs and PPs), I used the NP within the preposed constituent for the purpose of determining definiteness.

44. Put another way, 2095 out of 2970 pre- and postposed constituents (71%) in these tokens were definite; of these 2095 definite constituents, 1332 (64%) appeared in preposed position. The reason these figures for the distribution of definites do not show a greater disparity between preposed and postposed position is that definites may indeed appear in postposed position; what is interesting is the disparity between definites and indefinites in preposed position.

45. See also Birner and Ward 1994 for discussion of the mismatch between hearer-familiarity and definiteness.

46. See also Clark 1978 regarding the tendency for the first element in 'locational constructions' to be definite.

47. Similarly, Zwicky 1986 argues that only unaccented personal pronouns are subject to this restriction.

48. However, see Bresnan 1990, 1992 and Hoekstra and Mulder 1990, inter alia, for accounts analyzing the pre-verbal PP of locative inversion as a subject.

49. Among 112 passives in the corpus, there is a single counterexample, given in (i):
i. For his camp Venters chose a shady, grassy plot between the silver spruces and the cliff. *<Here, in the stone wall,>* had been wonderfully carved by wind or washed by water *<several deep caves above the level of the terrace>*. They were clean, dry, roomy.

[Grey 1980a:58—token provided by Lori Levin]

Thus, the *by*-phrase restriction does not seem absolute.

50 I refrain from terming it ‘locative inversion’ for the simple reason that there also exist cases of BI that are locative in nature; hence the term would be misleading. See chapter 2 for discussion.

51 Coopmans (1989) argues that locative inversion only occurs with PP adverbials that are subcategorized by the verb. A similar claim is presented by Lumsden (1988), who notes the distinction between (i) and (ii):

i. ??To our amazement occurred a riot.
ii. To our right occurred a riot.

The difference, according to Lumsden, is that the PP in (ii) is both verb-phrasal and locative.

52 See Williams 1984 for arguments that in most instances of what is here termed main-verb *be*, the *be* is actually an auxiliary.

53 Rochemont and Culicover (1990), for example, maintain that the behavior of "standardsly unergative" verbs such as *walk* and *run* constitutes a regular class of counterexamples to the claim that locative NBI occurs only with unaccusative verbs. They present instead an analysis wherein the restriction on the verb falls out from syntactic considerations in combination with a requirement of presentational focus. As argued in chapter 4 and below, however, presentational focus is not in fact a defining feature of locative NBI.

54 If this is so, and if unaccusative verbs are those whose subjects are internal arguments at d-structure, then, as Coopmans (1989) points out, 'inversion' is somewhat of a misnomer, since the subject is never in preverbal position and therefore need never invert around the verb.

55 See Babby 1980 regarding a similar restriction on existential sentences in Russian.
In a similar vein, Ward (1988) observes that adverbial preposing, unlike most other types of preposing, does not require the presence of a salient OP. For example, consider (i):

i. In the VIP section of the commissary at 20th Century-Fox, the studio's elite gather for lunch and gossip. The prized table is reserved for Mel Brooks, and from it he dispenses advice, jokes and invitations to passers-by.

Here, even though it represents familiar information (a 'backward-looking center', in Ward's account), the entire PP (from it) does not; rather, according to Ward, the PP seems to function as a bridge between the salient NP and its evocation in the prior context.

Although for ease of reading I have marked entire words as accented, obviously the accent is associated with a single syllable within the word.

One promising avenue for research is the correlation between the type of pitch accents occurring in an inversion and the discourse-familiarity of the elements with which they are associated. See Pierrehumbert and Hirschberg 1990 for discussion of the relationship between pitch accent type and the structure of information in a discourse.

That is, all verbs appearing between the preposed and postposed constituents. I note this qualification in order to specifically exclude the clause-initial participle of VP inversion, to which the claim being made here is not intended to apply.

Cf. Karttunen's (1971) 'discourse referents'.

That is, discourse-old entities would correspond to existing discourse entities, representable as filecards (Heim 1982), coathooks (Webber 1979, 1981), etc., depending on the particular theory under consideration.

I am indebted to Bill Ladusaw (p.c.) for pointing out the connection between inferrable elements and accommodation.

A more appropriate breakdown may be 'planned' vs. 'unplanned' discourse; see Rubin 1978, Tannen 1982. See also Green 1982 for a discussion of 'colloquial' vs. 'literary' uses of inversion.

Prince (1992) argues that for an entity to be introduced as inferrable, the speaker must believe a) that the hearer believes it to be "plausibly
related” to some other discourse-old entity, and b) that the hearer will be able to infer its existence.

65 I am using here a rather narrow definition of ‘locative,’ excluding for the moment verbs of time, motion and emergence, which were coded separately for maximum clarity.

66 See Levine 1989 for a GPSG-based account of subject-verb agreement in inversion.
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Sources for Tokens


Sources for Tokens


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