On the Syntactic Marking of Presupposed Open Propositions*
Ellen F. Prince
University of Pennsylvania

1. Introduction.

A major goal of linguistics is to find a correlation between form and understanding. That is, how can we account for the relationship between the linguistic form of an utterance and the discourse model that it corresponds to in the speaker's mind and, hopefully, in the hearer's mind? Of course, all predictable understanding is relevant, both the truth-conditional meaning whose explication is the job of semantics and the non-truth-conditional inferences whose explication is taken to be the job of pragmatics, following a Gricean division of labor. It is a subset of the non-truth-conditional inferences that is the subject of this paper, more specifically a subset of the inferences that correlate with the syntactic form of a sentence uttered.

Beginning with the early functional syntax studies by Kuno, Bolinger, and others more than a decade ago, a good deal of research has been carried out that shows that particular syntactic forms correlate with particular non-truth-conditional inferences. Understandably, the work has been mostly descriptive in nature, more concerned with the necessary first steps of establishing what sorts of inferences may correlate with linguistic form than with finding general principles of such correlations. Thus the picture that one currently has is a very fragmented one, within a single language as well as cross-linguistically or universally. That is, it seems as though any syntactic form can in principle correlate with any understanding. This may of course be the case; however, one would like to investigate the possibility that there do exist general principles underlying such correlations, perhaps of a universal nature.

In what follows, I shall very tentatively propose one possible universal generalization concerning syntactic form and non-truth-conditional understanding. And my tentativeness is real, not simply a nervously modest hedge: what I shall propose is rough hewn and requires deep crosslinguistic research, but, as I shall try to show, it is plausible on the basis of a sampling of the data and it provides an agenda for further research.

2. 'Information-packaging.'

The class of inferences to be discussed here falls under the rubric of 'information-packaging' (Chafe 1976, inter alia). That is, as is well known, information in a discourse does not correspond simply to an unstructured set of propositions; rather, speakers seem to form their utterances so as to structure the information they are attempting to convey, usually or perhaps always in accordance with their beliefs about the hearer: what s/he is thought to know, what s/he is expected to be thinking about. And 'information-packaging' clearly seems to be universal (Ariel 1986). In particular, pieces of information that are relevant to such 'packaging' are, among other things, propositions.

For example, the use of a sentential subject has been shown to correlate with the speaker's belief that the proposition conveyed is taken to be salient shared knowledge, i.e. a certain type of 'presupposition'; see Horn 1977, 1986, Prince 1981. Furthermore, it turns out that two types of propositions may be marked as presupposed: whole presupposed propositions, as, for example, in the case of sentential subjects, and presupposed propositions containing a variable; see Wilson and Sperber 1979. It is the latter type, variable-containing, or 'open', presupposed propositions that will be discussed here.

3. The linguistic marking of open presuppositions.
As is well known, presupposed open propositions, henceforth OPs, may be marked both by stress, e.g. 1a, and also by syntactic form, e.g. 1b. Such 'focus-presupposition' constructions as 1a (Halliday 1967, Chomsky 1971, inter alia) induce the inference that the speaker is taking an OP like 1c to be salient shared knowledge, where the stressed constituent, *the SHIRT*, is the informative instantiation of the variable. (In what follows, I shall for the most part not argue that the English constructions in question *are* 'focus-presupposition' constructions but simply cite the studies in which the relevant arguments have been presented or implied.)

(1)   a.   She gave the $SHIRT_i$ to Harry.
        b.   It was the $SHIRT_i$ that she gave 0_i to Harry.
        c.   She gave X_i to Harry.

Note that marked stress occurs in both the canonical sentence in 1a and in the syntactically-marked sentence in 1b. There is, however, a difference: for canonical sentences like 1a, the speaker has other stress options and it is only *this* option that marks 1c as presupposed, while, for most noncanonical sentences marking OPs like the IT-Cleft in 1b, there are no stress options—the focal constituent is *automatically* and, therefore, redundantly, stressed; if *the SHIRT* in 1b were destressed, the resulting sentence would not be understood as an IT-Cleft. Thus I shall call sentences like 1a 'stress-marked' OP constructions and sentences like 1b 'syntactically marked' OP constructions, despite the occurrence of marked stress in both types.

4. Syntactic marking of presupposed OPs: preliminaries.
IT-Clefts like 1b are not the only constructions that mark OPs as presupposed. Consider 2:

(2)   a.   What-i did she give 0_i to Harry?
        b. $What_i$ she gave 0_i to Harry was a $SHIRT_i$.
        c.   Can you imagine?! Such a rich woman and after all I've done for her, **a $SHIRT_i$ she gave my Harry 0_i**, when he was bar mitsved! A lousy shirt!

      d.   A: I heard she gave a few$_i$ dishes to Harry.
           B: No, **a whole SET$_i$ she gave him 0$_i$**.

That is, direct Questions like 2a, WH-Clefts like 2b (Chafe 1976, Prince 1978, inter alia), Yiddish-Movements like 2c (Prince 1981, Ward 1985b), and Focus-Movements like 2d (Gundel 1974, inter alia) also mark an OP as being presupposed, each of the sentences of 2 being felicitously utterable just in case the speaker is warranted in taking something like 1c to be shared knowledge.[1] Interestingly, Yiddish-Movement seems unique among these English constructions in that it requires minimally not that the OP be salient, i.e. appropriately in the hearer's consciousness, but simply that it be known (Prince 1981, Ward 1985b). Perhaps this is what prevents this pragmatic borrowing from becoming a fully standard English construction.

If one were to seek formal generalizations about syntactically-marked OP constructions, one might conclude, on the basis of IT-Clefts, Questions, WH-Clefts, Yiddish-Movements, and Focus-Movements, that all contain a WH-type trace and that the trace represents the variable. This is not quite correct, however; consider 3:

(3)   a.   A: What$_i$ did she give 0$_i$ to Harry$_j$?
           B1: **To Harry$_j$ she gave a SHIRT$_i$ 0$_j$**.
           B2: #**A shirt$_i$ she gave 0$_i$ to HARRY$_j$**.
    b.   She gave X$_i$ to Harry$_j$.

In the question in 3a, the OP in 3b is presupposed. The Topicalization in 3aB1 is a felicitous response while the Topicalization in 3aB2 is not. Note that, in the felicitous response, the trace does not represent the variable and that, in the unfelicitous response, it does. That is, as argued in Prince 1981 and Ward 1985b, Topicalizations are felicitous in discourse just in case the fronted constituent (which binds the trace) bears a certain anaphoric relation—identity or set—to something already in the discourse model and, more relevant here, the substitution of a variable for the *tonically stressed* constituent produces an OP which is taken to be salient shared knowledge in the discourse.

Thus, like IT-Clefts, WH-Clefts, Yiddish-Movements, and Focus-Movements, Topicalizations both have a WH-type trace and instantiate a presupposed OP, the instantiation being represented by the tonically stressed constituent. However, Topicalizations differ from the former with regard to the relation between the trace and the instantiating constituent: in IT-Clefts, WH-Clefts, Yiddish-Movements, and Focus-Movements, the trace is *bound* by the instantiating constituent or something coreferential with it, while in Topicalization the trace is bound by some *other* constituent. Therefore, Topicalization supports the hypothesis that OP constructions contain a WH-type trace but disconfirm the hypothesis that the trace represents the variable.

Furthermore, Topicalization-type constructions like Epitomization and VP-Preposing (Ward 1983, 1985a,b) work the same way. Consider first the Epitomization in 4:

(4) a. A: 'Is he cute?'
         B: 'Robert Redford$_i$ he's NOT 0$_i$.' (Cited in Ward 1985b:283)
     b. He is X-handsome.

The felicity conditions on Epitomizations are fairly complex; roughly, they have been shown to be felicitous just in case it is possible to take as presupposed an OP conveying that some entity is to be measured with respect to some scalar attribute, e.g. handsomeness, as in the question in 4aA and the OP in 4b. The instantiation works by implicature: some other entity representing the epitome of the high end of the scale, e.g. Robert Redford, is invoked, and the non-identity of the two entities is asserted, the implicated understanding being that the original entity is to be evaluated at the low end of the scale in question. What is relevant here, however, is simply that once again we find an OP construction containing a trace which is not related to the variable in the OP.

Now consider the VP-Preposing in 5:

(5) a. 'It was necessary to pass, if I was to stay at Oxford, **and pass I DID$_i$**, after a week in which...' (Waugh 1945:45; cited in Ward 1985b:226)
     b. I X$_i$ pass.

As shown in Ward 1985a,b, VP-Preposings are felicitous just in case they represent a proposition which is presupposed in the pragmatic sense (i.e. taken to be in the discourse model) but which has not been entailed and whose negation has not been entailed, or, put differently, which has neither been asserted nor denied. It is therefore an OP of sorts, the variable representing affirmation/denial, and the tonically stressed constituent, either the tensed verb or modal or the negative element, instantiates this variable, providing an affirmation or denial of the proposition. Note that, while VP-Preposing contains a trace, the trace is not related to the instantiation of the variable.

Now consider Locative/Directional-Adverb Preposing, exemplified in 6. The functions that have been ascribed to it in the literature are 'emphasis' (see discussion in Green 1980) and 'contrary to expectation' (Gary 1976).

(6) 'Outside stood a little angel.' (Cited in Green 1980:594)

Now 'contrary to expectation' entails 'expectation', which sounds suspiciously like 'presupposition'. In fact, it is not the proposition represented by the sentence as a whole which is felt to be 'contrary to expectation' but simply the stressed constituent *within that proposition*. In fact, the coherent prior contexts for 6, both the naturally-

occurring one (7a) and invented ones (8a,b), that Green 1980 provides suggest that it is absolutely analogous to Topicalization and the other Preposings, in terms both of the anaphoric relations of the preposed constituent and of the status of the rest of the proposition:

(7)   a.   'One night there was a tap on the window. Mrs. Rabbit peeped through the window$_i$. **Outside$_i$ stood a little ANGEL$_j$**.' (Green 1980:595)

        b.   X$_j$ stood/was located on the other side of the window/outside$_i$.

(8)   a.   'The guest house$_i$ was densely populated in with ceramic, stone, and wrought-metal sculptures$_j$. There was an enormous stainless steel frog$_j$ and two tiny elves$_j$ in the foyer$_i$, and **outside$_i$ stood a little angel$_j$**...' (Green 1980:596)

        b.   'When I arrived at the Pearly Gates, St. Peter$_j$ was seated at a desk in a little sentry box$_i$. **Outside$_i$ stood a little angel$_j$**, intently observing the proceedings.' (Green 1980:596)

        c.   X$_j$ stood/was located at member-of-set-of-places$_i$.

That is, the preposed constituent may be in an identity relation with some entity in the prior context, as in 7, or in a set relation, as in 8, the stressed constituent is a new instantiation of a variable in an OP, and the OP can be assumed to be salient shared knowledge. (See also Linde 1974 for an analogous use of Locative-Adverb Preposing in descriptions of apartment layouts.)

Note, in passing, that the preposed Locative/Directional Adverbial appears to be necessarily a VP-, rather than a sentence-, adverbial. Consider 9:

(9)   a.   John lies here.

        b.   Here John lies.

        c.   Here lies John.

(10)   a.   John is situated here in a horizontal position.

        b.   John prevaricates here.

Sentence 9a is ambiguous, meaning both 10a and 10b. In 10a, the adverbial *here* appears to subcategorize the verb; in 10b, it does not. Note that the Topicalization in 9b preserves the ambiguity. In contrast, the Locative-Adverb Preposing in 9c has only the reading of 10a.

Clearly, there is more to be said about Directional/Locative-Adverb Preposing; in particular, nothing I have discussed bears on the concomitant Inversion, although I in fact believe that is not unrelated. However, it does seem that this trace-containing construction shares with the other trace-containing constructions discussed above the function of marking an OP as shared knowledge.[2]

Interestingly, the pattern seen in Topicalization and analogous Preposing constructions is not limited to them. Consider the Gapping in 11:

(11) a. '...all plants$_i$ in order to live must transpire$_k$ a remarkable quantity of water$_j$ through the pores in their leaves and stems. When we consider that **a grass$_i$ transpires$_k$ its OWN WEIGHT in water$_j$ daily, a stalk of corn$_i$ 0$_k$ more than a GALLON$_j$ a day, and an apple tree$_i$ 0$_k$ TWO THOUSAND GALLONS$_j$ in a single growing season**—we can see...' (Chidamian 1958:10)
      b. Member-of-set-of-plants$_i$ transpires$_k$ X-quantity of water$_j$

Gappings are felicitous just in case they can be taken to instantiate an OP corresponding to the full conjunct, where the leftmost constituents bear the same sort of anaphoric (set) relation to something in the prior context found in Topicalization and where the rightmost constituents instantiate the variable in the OP. The OP is taken to be salient shared knowledge, at least at the point in time that the first Gapped conjunct is uttered. (See Kuno 1976 for a different but, I believe, consistent account; see also Levin and Prince 1982.) Thus, the Gapping in 11a is felicitous just in case the OP in 11b can be taken to be salient shared knowledge.

Now Gapping is not a product of a movement operation and does not, therefore, contain a WH-type trace. It does, however, contain an empty category (or string thereof), and syntactic similarities between Gapping and trace-containing constructions have already been noted (Neijt 1981, Jacobson 1982). Therefore, it seems reasonable to generalize that Gappings thus represent another gap-containing construction which marks an OP as salient shared knowledge, where the tonically-stressed constituents represent the instantiations of the variable in the OP, and where the gap is unrelated to the variable. Henceforth, when I speak of 'gap-containing constructions', I shall in fact mean 'trace-containing constructions' plus Gapping.

Thus it appears that a possible generalization is that, in English, syntactically-marked OP constructions contain a gap, and, if they provide an instantiation of the variable, that instantiation is represented by the tonically-stressed constituent. However, the gap may or may not be bound by that constituent (or something coreferential with it). The questions are: First, do all English gap-containing constructions mark a presupposed OP? Second, do all syntactically-marked OP constructions contain a gap? Third, is the situation in English peculiar to this language or is it a more general—or even universal—phenomenon? In what follows, I shall try to show that these at least are answerable questions, and I shall try to suggest where the answers may be found.

5. Does 'gap-containing' entail 'OP-marking'?

With respect to the question of whether all English gap-containing constructions mark a presupposed OP, the answer is clearly no, even limiting ourselves to the constructions already mentioned. That is, consider 12:

(12) a. 'The leaders of the militant homophile movement in America generally have been young people. **It was they who fought back during a violent police raid on a Greenwich Village bar in 1969, an incident from which many gays date the birth of the modern crusade for homosexual rights**.' (Phila. Bulletin, 1/3/76, p. 3L)
 b. '**It was ten years ago this month that young Irwin Vamplew was bopped on the head by a nightstick while smashing windows in Berkeley in order to end the war in Vietnam**. So you can imagine the elation of his parents when he finally emerged this week from his decade-long coma. His first words, naturally, were: "Down with the Establishment!"' (Phila. Inquirer, 2/6/77, p. 7D)

Clearly, the IT-Clefts in 12 cannot be said to mark an OP as shared knowledge in the discourse; their point, in fact, is precisely to inform the reader of the 'presupposed' information. As noted in Prince 1978, such Informative-Presupposition IT-Clefts are distinguished from the OP-marking Stressed-Focus IT-clefts in that they have a tonic stress in the subordinate clause and in that they seem to focus (in the syntactic sense) only subjects and sentence-adverbials.

Now consider 13:

(13) a. Yesterday I heard some terrible news.
 b. On November 7, 1942, a little boy was born.

Equally clearly, the Adverb-Preposings, or Topicalizations of sentence-adverbials, in 13 do not mark an OP as shared knowledge.[3] As noted in Ward 1985b, this is frequently the case of topicalized adverbials/PPs which do not subcategorize the verb, the clearest case being sentence-adverbials. Whether this is also true of subjects, as in the case of IT-Clefts, is not obvious, since we cannot determine when a matrix subject has been topicalized, it being in leftmost position both in canonical order and when topicalized.

Thus we find that two English gap-containing constructions which generally do mark OPs as shared knowledge do not necessarily do so when their gap is a sentence-adverbial or, as far as we can tell, a (matrix) subject.

Let us quickly summarize what we have seen thus far in the table in 14:

(14)   Table: OP constructions in English.

	Full prop.	Gap= Stressed C	Categ. of gap	OP presup.	Variable
IT-Cleft (S-F)	yes	yes	any	yes	t=s.c.
WH-Cleft	yes	yes	any	yes	t=s.c.
Focus-Movement	yes	yes	any	yes	t=s.c.
Yiddish-Movement	yes	yes	any	yes	t=s.c.
Topicalization (VP)	yes	no	[VP]	yes	s.c.
Epitomization	yes	no	[VP]	yes	s.c.
VP-Preposing	yes	no	VP	yes	s.c.
Dir./Loc.-Adv. Prep.	yes	no	VPAdv	yes?	s.c.
Gapping	yes	no	V...	yes	s.c.
IT-Cleft (I-P)	yes	no	Subj,SAdv	no	-
Topicalization (SAdv)	yes	no	SAdv	no	-
Questions	no	no	any	yes	t

A very clear pattern emerges from the table in 14. First, those constructions in which the gap is bound by the tonically stressed constituent or something coreferential with it—Stressed-Focus IT-Clefts, Focus-Movement, and Yiddish-Movement—always mark an OP as shared knowledge.

Consider the other constructions now, leaving Questions aside for the moment. Those constructions in which the gap is not bound by the tonically stressed constituent or something coreferential with it mark an OP as salient shared knowledge just in case the gap is a VP, as in VP-Preposing, or is dominated by VP (and subcategorizes V), as in Topicalization within the VP, Epitomization, Locative/Directional-Adverb Preposing, and Gapping. Those constructions in which the gap is not coreferential with the tonically stressed constituent and in which it is not a VP or dominated by VP, i.e. in which it is a subject NP or a sentence-adverbial, do not mark an OP as salient shared knowledge, as in Informative-Presupposition IT-Clefts and Topicalization of sentence-adverbials.

Finally, in all constructions in which an OP is marked as shared knowledge, the variable in that OP corresponds to the tonically-stressed constituent, which in some cases is coreferential with the gap.

Now let us consider Questions, the one construction which does not follow this pattern. A quick check of the first column, whether the sentence in fact conveys a complete proposition, suggests that a different account entirely is in order for Questions. That is, unlike all the other constructions, a Question *directly* represents

an OP. From this, of course, it does not follow that it should presuppose it, i.e. mark it as shared knowledge. But the illocutionary point of questions is in fact to elicit the instantiation of the variable in the OP. Following anybody's speech act theory, this would be deviant if in fact the OP were not construable as shared knowledge. This suggests that the marking of OPs as presupposed in the case of Questions has a special story—the OP itself is marked directly, semantically; the presupposing of it follows from the felicity conditions of the posing of questions. We would thus expect that indirect questions, which likewise directly mark OPs but which may not call for an answer, should not mark the OPs as presupposed. A discourse analysis of indirect questions is in order here, but, intuitively, this sounds correct on the basis of examples like 15a, where 15b,c need not be assumed to be shared knowledge:

(15) a. I was just wondering **what my mother is going to serve us Friday night**. We're going to New York for the weekend—I'm hungry already.
      b. My mother is going to serve us X Friday night.
      c. My mother is going to X Friday night.

In addition, Questions differ from all the other OP-marking constructions in that the variable does not correspond to the tonically-stressed constituent, as seen in the last column of the table in 14. Moreover, Questions do not require that the OP they represent be salient but simply shared. This is different from all the other Standard English constructions considered, Yiddish-Movement being nonstandard.

Thus it seems safe to exclude Questions and to restrict our claims to those constructions which in fact (semantically) represent a full proposition. Then, those constructions in which a gap is coreferential with the tonically-stressed constituent always mark an OP as shared knowledge, and those constructions in which a gap is not mark an OP as shared knowledge just in case the gap is a VP or is dominated by VP. In all cases, of course, the instantiation of the variable in the OP is represented by the tonically-stressed constituent.

6. Relative clauses: a problem.
I have postponed mentioning the big problem with this analysis, to which I shall now turn. Relative clauses have long been known to be 'presuppositional' (Keenan 1971, inter alia), but in a different way—they are presuppositional in that they are parts of referring expressions and are thus not affected by the negation of the sentence in which they occur. For example, the relative clauses in 16a and 17a 'presuppose' 16b and 17b, respectively, as a result of their referential status; however, it does *not* seem that they also presuppose the OPs in 16c and 17c, respectively:

(16) a. A guy who my aunt's neighbor met in PARIS did/didn't get into Penn.
      b. There is a guy who my aunt's neighbor met in Paris/My aunt's neighbor met a guy in Paris.
      c. My aunt's neighbor met a guy in X/My aunt's neighbor Xed a guy.[4]

(17)   a.   My landlady, who I want you to meet SOMEDAY, drives/doesn't drive.
     b.   There exists my landlady and I want you to meet her someday/I want you to meet my landlady someday.
     c.   I want you to meet my landlady at X-time/I want you to X my landlady.

Clearly, much more research is needed to determine why relative clauses do not fit the pattern seen for other gap-containing constructions. One possibility, given that questions may also fail to fit the pattern, is that movement to Comp produces a different pragmatic effect from movement to XP or 'Topic' position (with Gapping having the same effect as movement to XP position). Another possibility is that relative clauses are a 'grammaticized' exception. Of direct relevance would be a thorough analysis of the discourse environments of two types of relative clauses, those containing gaps and those containing resumptive pronouns, in the speech of people who have both, in order to see if at least a statistical difference exists correlating gap-containing clauses with presupposed OPs. For the time being, however, relative clauses simply do not seem to fit the patterns found in other gap-containing constructions.

7. Does OP-marking entail gap-containing?
The second question, whether all syntactically-marked OP constructions contain a gap, clearly requires a huge amount of research on discourse competence before it can be answered.[5] At this point, however, the only possible syntactically-marked OP constructions I know of which do not contain a gap are, first, Yiddish Verb-Topicalization to be discussed below, where the need for a gap can be said to have been overridden by morpho-syntactic factors, and, second, a class of apparent Left-Dislocations like the one in 18a which have been argued (Prince 1985) to be in fact Topicalizations with a resumptive pronoun due to island constraints:

(18)   a.   A: 'You bought Anttila?'
        B: 'No, this is Alice Freed's copy.'
        A: '**My copy of Anttila$_i$ I don't know WHO$_j$ has it$_i$**.' (GC to EP)
     b.   X$_j$ has member-of-set's$_i$ copy of Anttila.

8. Crosslinguistic evidence.
I shall now present some crosslinguistic evidence, mainly from Yiddish, to show that the pattern seen is not unique to English. First, Yiddish appears identical to English with respect to the OP-marking function of Topicalization of elements in VP (19aB1) and of Yiddish-Movement (19aB2), Focus-Movement (20aB), and Topicalization of sentence-adverbials (21):

(19) a. A: vos$_i$ hot zi geshonken 0$_i$ ayer zun$_j$?
              What$_i$ has she given 0$_i$ your son$_j$?
        B1: **mayn zun$_j$ hot zi geshonken a HEMD$_i$ 0$_j$.**
              My son$_j$ has she given a SHIRT$_i$ 0$_j$.
        B2: **a HEMD$_i$ hot zi geshonken 0$_i$ mayn zun$_j$!** a shmatevate hemd!
              A SHIRT$_i$ has she given 0$_i$ my son$_j$! A lousy shirt!
        B3: #**mayn ZUN$_j$ hot zi geshonken a hemd$_i$ 0$_j$.**
        B4: #**a hemd$_i$ hot zi geshonken 0$_i$ mayn ZUN$_j$!**
     b. She gave X$_i$ to B's son$_j$.

(20) a. A: zi hot geshonken a por$_i$ teler ayer zun?
              She has given a few$_i$ plates your son?
        B: **neyn, a gantsn SERVIZ$_i$ hot zi im geshonken 0$_i$.**
              No, a whole SET$_i$ has she him given 0$_i$.
     b. She gave X-plates$_i$ to B's son.

(21) a. nekhtn$_i$ hob ikh derhert a modne mayse 0$_i$.
            Yesterday$_i$ have I heard a strange story 0$_i$.
     b. dem 7tn yuni$_i$ iz goboyrn gevorn a kleyn yingl 0$_i$.
            the 7th June$_i$ is born become a little boy 0$_i$.
            'On June 7th a little boy was born.'

That is, Topicalization within the VP, Yiddish-Movement, and Focus-Movement are felicitous in Yiddish when the tonically-stressed constituent represents the instantiation of an OP that is shared knowledge in the discourse, but this is not necessarily the case when sentence-adverbials are topicalized.

Relevant to the present discussion, it has been widely argued that German and Dutch are underlyingly Infl-initial and that non-inflected non-dummy sentence-initial constituents are the result of Topicalization; Thrainsson 1984 gives compelling syntactic arguments for extending this to Icelandic, which, in certain important respects, is syntactically very similar to Yiddish (cf. Maling and Zaenen 1981). Not surprisingly, therefore, Yiddish is equally well handled by such an Infl-initial analysis. However, Travis 1984 argues against an underlying Infl-initial structure for Yiddish (and ultimately for all Germanic languages) on the basis of two arguments. One is a syntactic argument, based on a claim in Lowenstamm 1977 that Topicalization cannot occur in relative clauses. This claim is simply incorrect. The details need not concern us here; I simply point out the following wellformed counterexamples:

(22) a. '"anyo" iz dos **vos in posek shteyt "tsvi vekhamer**".'
            "agneau" is the what in verse stands "deer and ass".
            '"Agneau" is that which is literally/properly/by the book "deer and ass"
            [Hebrew].' (Sholom Aleichem:107)

b.   '...a luksus **vos fun tsayt tsu tsayt derloybt men zikh**.'
    ...a luxury what from time to time permits one REFL
    '...a luxury which from time to time one permits oneself.' (oyfn shvel:5)

Travis' other argument against an underlying Infl-initial structure for Yiddish is as follows: non-subject clitic pronouns may not be topicalized, while sentence-initial subject clitic pronouns are acceptable; therefore, she concludes, sentence-initial subject clitic pronouns cannot have been topicalized and must have been generated in initial position. However, the acceptability or non-acceptability of destressed clitic pronouns need not necessarily have a syntactic explanation. In point of fact, topicalized constituents in both English and Yiddish, while not tonically stressed, do carry a fall-rise contour just in those cases where the sentence represents the instantiation of a presupposed OP (Chafe 1976, Hirschberg and Ward 1985).

Thus an equally plausible story is that Yiddish is underlyingly Infl-initial, that whatever (non-dummy) constituent is in first position (in a Verb-Second clause) has undergone Topicalization, and that only the Topicalization of constituents which are neither subjects nor sentence-adverbials necessarily results in the marking of a presupposed OP. If so, we have evidence that Topicalization, at least in Yiddish, is like the IT-Cleft in English in terms of treating subjects and sentence-adverbials the same, as opposed to constituents dominated by VP.

With respect to VP, Yiddish has a Topicalization-like construction involving the tensed V, as in 23:

(23) a. A: [Is this your house?]
        B: **izn$_i$ iz$_i$ es mayn tatns$_j$ shtub**, nor...
           is-inf.$_i$ is$_i$ it my father's$_j$ house, but...
           'As for being, it's my father's house, but...'
    b. It is$_i$ X's$_j$ house.

Constructions like 23, subsumed under Topicalization on discourse grounds in Waletzky 1980 and argued to be Topicalization on syntactic grounds in Davis and Prince 1986, involve a fronted stem of the tensed verb with the infinitive ending adjoined. Note that the true infinitive of *iz* 'is' is *zayn* 'be', not *izn*. In fact, this 'Verb-Topicalization' is pragmatically identical to other Topicalizations, both in terms of the anaphoric relations of the leftmost constituent to the prior context (identity or set-relation) and in that it marks an OP as being salient shared knowledge in the discourse. Note that 23 is analogous to 18 in that it should have a gap on discourse grounds but the gap is disallowed on independent syntactic grounds.

In addition, while Yiddish does not have an IT-Cleft construction, nor, I believe, WH-Clefts, it does have Gapping, and again the situation appears the same as in English; cf. 24:

(24) a. '[By us at weddings everyone$_i$ gives$_k$ the couple a present$_j$.]
         eyner$_i$ shenkt$_k$ zilberne leflekh$_j$, der tsveyter$_i$ 0$_k$ zilberne goplen$_j$,...'
         one$_i$ gives$_k$ silver spoons$_j$, the second$_i$ 0$_k$ silver forks$_j$,... (RP:18).
      b. Member-of-set-of-everyone$_i$ gives$_k$ X-present$_j$.

Finally, Yiddish has another apparent deletion construction, a kind of Topic-Drop, by which salient subject pronouns in pre-Infl position in main clauses may be deleted, as in 25:

(25) '...az zi$_i$ vet zayn dayn vayb, vet zi$_i$ dir$_j$ krikhn unter di negl.
      ...when she$_i$ will be your wife, will she$_i$ you$_j$ crawl under the nails.
      0$_i$ iz efsher nokh a mol azoy shtark vi ikh.
      0$_i$ is maybe again so strong as I.
      0$_j$ host gezen ire hent$_k$?
      0$_j$ hast seen her hands$_k$?
      0$_k$ zaynen efsher nokh a mol azoy grob vi mayne.'
      are maybe again as coarse as mine. (GF:88)

Clearly, this construction does not mark an OP as being shared knowledge; the same is true of course for Pro-Drop at least in Spanish and Italian. Note, of course, that the Pro-Drop-like construction in Yiddish, as well as true Pro-Drop elsewhere, involves subjects.

Now let us consider a very different sort of phenomenon, the Japanese wa-construction. Following Kuno 1973, *wa* + Subject in a nonexistential sentence may have a thematic understanding; *wa* + a nonsubject induces an inference of contrast. In an existential sentence, *wa* + Locative may have a thematic understanding; *wa* + a nonlocative induces an inference of contrast. Now, contrast, as argued in Prince 1981, is simply a special case of the OP phenomenon, obtaining when there is an OP taken to be salient shared knowledge, when the proposition is predicated on the members of a set of entities, when the variable is instantiated differently for each member, and, most significantly, when the difference in the instantiations is considered relevant. While I do not know what the current accepted syntactic analysis is of *wa*-constructions, it is of interest that they always produce an OP effect in situations similar to the constructions discussed above for Yiddish and English, namely, when they involve a constituent which is neither a subject nor a sentence-adverbial.

9. Summary.
In conclusion, I have tried to show that there is a strong and rich correlation between the syntactic phenomenon of containing a gap and the discourse phenomenon of marking an OP as shared knowledge and that this phenomenon is certainly not unique to English. However, the precise nature and extent of this correlation cannot be known without much more research on the interrelations of

discourse and syntax, on which forms warrant which inferences, and under what conditions.

Among other things, assuming that the generalization holds that gap-containing constructions crucially involving a subject or a sentence-adverbial do not necessarily mark an OP as shared knowledge while other gap-containing constructions do, one would like a more precise characterization of the relevant syntactic environments. That is, is it really relevant that some constituent is a VP or is dominated by a VP? Or perhaps it is something more general: for example, whether the constituent involved is an immediate constituent of S or not. Obviously, research on languages with grossly different syntactic structures is needed here.

In addition, it is of interest to investigate pidgins and creoles. It is known that creoles, in contrast to pidgins, have rich syntactic variation. Is it the case that some of this variation serves to mark shared knowledge, in particular OPs? In a different developmental domain, at what age do children use syntax to perform this function? Does it correlate with literacy, or is it uniform throughout the speech community?

Finally, one wonders why this situation should obtain. Is it simply for some strange reason of iconicity that speakers may use gap-containing sentences to mark that an OP is being taken as shared, even when the gap in no way corresponds to the variable, or is there some more substantive motivation?

As I warned at the outset, I do not have the answers. But I have tried to show that the already existing data is compelling enough to lead us to pose the questions.

Notes

[1] I am ignoring here the preference for double-NP constructions in 2b,c over NP-PP constructions; see Erteschik-Shir 1979, Oehrle 1982. Likewise, it need not concern us here that the variable in the OP relevant to Focus-Movements (e.g. 2c) is not an entity but the value of an attribute of an entity; see Prince 1981.

[2]However, as pointed out to me by Anita Mittwoch, sentences like the following do not appear to have any obvious OP-marking function:

    (i)   There goes my bus.
    (ii)   Here comes John.

[3] Presumably, it is this discourse fact that leads to their frequently being distinguished from Topicalizations, to which they are presumably identical on purely syntactic grounds.

[4] In fact, it is the case that when the tonic stress falls on the last stressable syllable, there is a vertical choice of constituents that can be taken to represent the variable, here [PARIS], [in PARIS], or [met 0 in PARIS]. See Wilson and Sperber 1979.

[5] By 'syntactically-marked' here, I mean to exclude not only prosodically-marked sentences but also lexically-marked, e.g. sentences containing lexical 'givenness-markers' (Ariel 1986).

References

Ariel, M. 1986. Givenness marking. Tel-Aviv Univ. Ph.D. diss.

Chafe, W. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In Li, C., ed. *Subject and topic*. NY: Academic Press. Pp. 25-55.

Chomsky, N. 1971. Deep structure, surface structure, and semantic interpretation. In Steinberg, D. and Jakobovits, L., eds. *Semantics: an interdisciplinary reader in philosophy, linguistics, and philosophy*. NY: Cambridge Univ. Press. Pp. 183-216.

Davis, L.J. and Prince, E.F. 1986. Yiddish Verb-Topicalization and the notion 'lexical integrity'. In Farley, A., Farley, P., and McCullough, K.-E., eds. *Papers from the 22nd Regional Meeting*, Chicago Linguistic Society.

Gary, N. 1976. A discourse analysis of certain root transformations in English. IULC Linguistics Club.

Green, G. 1980. Some wherefores of English inversions. *Language* 56.582-601.

Gundel, J. 1974. The role of topic and comment in linguistic theory. Univ. of Texas Ph.D. diss.

Halliday, M.A.K. 1967. Notes on transitivity and theme in English. Part 2. *Journal of Linguistics* 3.199-244.

Hirschberg, J. and Ward, G. 1985. Implicating uncertainty: the pragmatics of Fall-Rise intonation. *Language* 61.4.

Horn, L. 1977. Présupposition, thème, et variations. Ms.

Horn, L. 1986. Presupposition, theme, and variations. In *Papers from the Parasession on Pragmatics and Grammatical Theory, 22nd Regional Meeting*, Chicago Linguistic Society.

Jacobson, P. 1982. Evidence for gaps. In Jacobson, P. and Pullum, G.K., eds. *The nature of syntactic representation*. Dordrecht: D. Reidel. Pp. 187-228.

Keenan, E.L. 1971. Two kinds of presupposition in natural language. In Fillmore, C. and Langendoen, D.T., eds. *Studies in linguistic semantics*. NY: HRW. Pp. 45-54.

Kuno, S. 1973. *The structure of the Japanese language*. Cambridge, MA/London: MIT Press.

Kuno, S. 1976. Gapping: a functional analysis. *Linguistic Inquiry* 7.300-18.

Levin, N.S. and Prince, E.F. 1982. Gapping and causal implicature. Presented at the LSA Annual Meeting. San Diego, CA.

Linde, C. 1974. The linguistic encoding of spatial information. Columbia Univ. Ph.D. diss.

Lowenstamm, J. 1977. Relative clauses in Yiddish: a case for movement. *Linguistic Analysis* 3.3.197-216.

Maling, J. and Zaenen, A. 1981. Germanic word order and the format of surface filters. In F. Heny, ed. *Binding and filtering*. London: Croon Helm. Pp. 255-78.

Neijt, A. 1981. Gaps and remnants—sentence grammar aspects of Gapping. *Linguistic Analysis* 8.69-93.

Prince, E.F. 1978. A comparison of WH-Clefts and IT-Clefts in discourse. *Language* 54.883-906.

Prince, E.F. 1981. Topicalization, Focus-Movement, and Yiddish-Movement: a pragmatic differentiation. In Alford, D. et al., eds. *Proceedings of the 7th Annual Meeting of the Berkeley Linguistics Society*. Pp. 249-64.

Prince, E.F. 1985. Fancy syntax and 'shared knowledge'. *Journal of Pragmatics* 9:65-81.

Thrainsson, H. 1984. V/1, V/2, V/3 in Icelandic. Ms.

Travis, L. 1984. Parameters and effects of word order variation. MIT Ph.D. diss.

Waletzsky, J. 1980. Topicalization in Yiddish. In Herzog, M. et al., eds. *The field of Yiddish*. IV. Phila., PA: ISHI. Pp. 237-316.

Ward, G. 1983. A pragmatic analysis of Epitomization: Topicalization it's not. *Papers in Linguistics 17*.

Ward, G. 1985a. A pragmatic analysis of Proposition Affirmation. Presented at the LSA Annual Meeting, Seattle, WA.

Ward, G. 1985b. The semantics and pragmatics of Preposing. Univ. of Penn. Ph.D. diss.

Wilson, D. and Sperber, D. 1979. Ordered entailments: an alternative to presuppositional theories. In Oh, C.K. and Dinneen, D., eds. *Syntax and semantics*. XI. Presupposition. NY: Academic Press. Pp. 299-323.