

Subordination at the Interface: the Quasi-Subordination Hypothesis*
Veneeta Dayal and Jane Grimshaw
Department of Linguistics
Rutgers University

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1) Introduction

The subordination of clauses, and the recursion which results, lies at the heart of linguistic representation. Yet there are many aspects of subordination that are not fully understood. An enduring puzzle is that some clauses which appear to be structurally subordinate nevertheless pattern with main clauses in certain, but not all, respects. This paper posits that such clauses, which we term “quasi-subordinate” or “QS”, have both a syntactic and a pragmatic status which is intermediate between subordinate and main, in a way that can be precisely characterized in terms of the interface between the dynamics of discourse, the lexical semantics of sentential complement-taking predicates, and constraints on syntactic structure. In this way, we address the question of what it means to be “like” a main clause while not being one. The research aims to contribute to the theory of subordination from multiple perspectives, since the critical principles lie at the interface between syntax, pragmatics and semantics.

A main clause θ , declarative or interrogative, when used as a speech act of assertion or question ascribes to the speaker the role of *source* or *seeker* of information. The assertion/question is successful if the context supports the conditions for the speech act. When θ occurs as a complement, it is the subject or other argument of the embedding predicate who is potentially a source/seeker. The information state of the speaker and hearer are not implicated. This is the standard case where the complement manifests the syntax expected of subordinate clauses. The research presented here focuses on cases in which θ is quasi-subordinate, and identifies the semantic and pragmatic factors allowing the assertion/question associated with θ to become part of the discourse. These include the relationship of the discourse participants to the subject, established pragmatically in the case of a third person subject, semantically in the case of first or second person subjects. They also include the lexical semantics of the embedding predicate and its composition with negation and modals. Our claim is that QS clauses show main clause properties because the discourses they figure in lead to their being treated like main clauses. A theory that accords formal significance to structural as well as discourse status derives syntactic differences between subordinate and quasi-subordinate clauses. The theory builds on prior and current research on complementizer omission and subject-auxiliary inversion and shows the advantages of an interface hypothesis over other approaches.

The idea that some clausal complements are “like main clauses” is far from new. It has been widely observed that “root” phenomena, such as topicalization, are found in certain kinds of subordinate contexts. (See the references in Sections 3 and 6.3.) The question is what it means to be “like” a main clause while not being one. Our proposal aims to provide an explicit answer to this question which links the discourse phenomena with the formal reflexes of the not-fully-subordinate character of these complements. They are quasi-subordinate because of their role in discourse, and they have the syntax they do because they are quasi-subordinate. In large measure the research rests on interfaces which have not so far been systematically addressed, although the literature contains a number of key insights which first drew our attention to the import of this topic.

We begin this paper with a description of the pragmatic/semantic analysis that we are positing, and then show the consequences of the analysis for the syntax of quasi-subordinates, illustrating the general idea in the case of *that* omission and subject auxiliary inversion in English. We argue that only an interface

hypothesis can make connections between the many apparently disparate phenomena that reflect the intermediate status of QS clauses, and exemplify the point with a few specific alternative hypotheses found in the literature. Finally we lay out the way in which we propose to pursue the research program further: resolving some fundamental issues that arise in the context of our work on *that* omission, developing a more systematic and articulated theory of the lexical semantics of the predicates which embed clauses; extending the general theory of Quasi-Subordination to “root phenomena” more generally, and deepening and broadening the theory of discourse dynamic subordinate clauses through a detailed re-examination of scope marking.

2. The Dynamics of Discourse: Main Clauses and Subordination

A quasi subordinate clause, in our terms, is a subordinate clause that participates dynamically in discourse in the same way as a main clause. Such subordinate clauses, even when they display root clause properties, are syntactically embedded under the matrix predicate. This is attested by variable binding and sequence of tense effects, for example, that are not disturbed by the emergence of root clause phenomena. The ability to show root clause phenomena is not syntactically but pragmatically conditioned and best understood in terms of interface interactions.

In this section we elaborate on this notion of quasi subordination, adopting the general framework of discourse dynamics proposed by Stalnaker (1978) and summarized in Chierchia and McConnell-Ginet (1990) and Kadmon (2001). We also make crucial use of Speech Act theory deriving from Searle (1965), discussed recently in Krifka (2001) and elsewhere. The key idea is that discourse involves the incremental build-up of information that can be characterized as the set of propositions that are in the “common ground” of the participants. Together they define a set of worlds that may be considered the set of live options in the discourse, the “context set”, namely those worlds in which the propositions of the common ground are true. An utterance of a sentence is a move to shift the common ground within the principles of discourse. We illustrate this with a declarative and an interrogative.

Let us assume a context in which the discourse participants have no information on what the weather is going to be like. The speaker can say (1a) thereby placing the proposition “it will rain tonight” on the table, so to say. Unless it is challenged, the proposition that it will rain tonight will enter the “common ground”. This is a fairly non-controversial view of the dynamics of simple assertion:

- 1) a. It will rain tonight
- b. Susan said/believes (that) it will rain tonight.

Now take an utterance of (1b) with the proposition “it will rain” embedded beneath a verb of verbal expression, or attitude. A natural context for such an utterance could be one where Susan’s beliefs or statements are under discussion (e.g. she has many weird beliefs.) Again, if this is accepted as a fact, a proposition about Susan’s beliefs about the weather will be added to the common ground. Crucially, no proposition concerning weather will be added.

Next let us consider an utterance of the same sentence in a somewhat different discourse context. If tonight’s weather is under discussion, maybe because plans for the evening are being made, Susan’s beliefs or statements about the weather might be relevant to shaping views about weather. This may be so, for example, if Susan is someone who is known to be well informed on such matters. In this situation, then, it is the content of Susan’s beliefs/statements that is the “main point” of the assertion, to use a term from Simons (2007). The impact of this utterance on the discourse is significantly different. Along with the fact of Susan believing/saying that it will rain, the proposition ‘it will rain’ is also placed on the table and is added into the common ground. Here the subordinate clause indirectly participates dynamically in the discourse. The participation is indirect because whether the embedded proposition is integrated into

the common ground depends on how discourse participants relate to Susan. Susan's role in this situation is comparable to that of the speaker for the main clause: we refer to this role as that of "Source". It is the views and statements of the Source (realized in various grammatical forms depending on the predicate) which participate dynamically in assertion.

Turning our attention to interrogatives, we suggest that a parallel situation exists. Interrogative syntax is canonically associated with the speech act of questioning.

- 2) a. Will it rain tonight?
- b. Susan asked/is wondering if it will rain tonight.

In a context where the speaker does not know, but wants to know, the weather conditions, and believes that the hearer has that information, the utterance of (2a) will be a successful speech act of questioning. The hearer could well respond to this question by stating (1a), *it will rain tonight*, adding that assertion to the discourse, as discussed earlier. This is all quite standard and non-controversial.

Let us now consider (2b), with the interrogative embedded under *ask*, in a context where Susan's activities are under discussion. In such a context, the speaker and hearer's knowledge about the weather conditions are not relevant. What may be relevant is Susan's lack of information about weather conditions, her desire for this information, her belief that her interlocutor could supply that information. In such a context, the utterance of (2b) would not prompt the hearer to make an assertion about the weather. The embedded interrogative is a true subordinate clause; it is not discourse dynamic.

However, consider now the utterance of this sentence in a slightly different context. If the speaker is Susan's secretary, let's say, the hearer may well assume that the speaker does not have this information, wants this information in order to report back to Susan, and is conveying to the hearer Susan's desire for information in the hopes that he will be able to help. We refer to the role of Susan here as that of "Seeker". As for Sources, the speaker is the Seeker in main clause questions, and an argument of the embedding predicate can have this role in quasi-subordination. In such a context, the cooperative hearer may well respond to the speaker's statement (a declarative) with the assertion in (1a). Here we say that the embedded interrogative is discourse dynamic. It is syntactically embedded but still places a question on the table. (3) illustrates the proposal.

in showing the usefulness of formal pragmatics in making headway in dealing with problems that appear syntactic in character. Our approach also bears on the view expressed in Krifka (2001), and elsewhere, that there may be speech act operators represented in the syntactic structure and furthermore that such operators may occur in embedded contexts. Whether this is strongly supported by our research is not yet clear: it is an issue we will be tracking closely.

3. The Syntax of Quasi Subordination

The Interface hypothesis connects pragmatics and syntax. The pragmatics makes a subordinate clause discourse dynamic, like a main clause. This identifies it as a candidate for main clause syntax. We can thus connect the insights from two schools of study: the discourse/function perspective and formal/syntactic perspective.

One way in which the problem of less than perfect subordination came to the forefront was in response to the “Root Transformation/RT” proposal of Emonds (1976), the first principled assault on the problem of main and subordinate status in generative grammar. Emonds proposed that some structural configurations (in his theory those due to RTs) can be found only in main clauses. A number of scholars took issue, arguing that the configurations can be found in *some* subordinate clauses, see Hooper and Thompson (1973), Green (1976). The root transformations, including prominently V2 in Germanic, have since received considerable attention.

We have studied two cases of main clause syntax found within subordinate clauses as instances of Quasi subordination. These are the case of subject-auxiliary inversion/I to C in English interrogative subordinates and the omission of the complementizer *that* in sentential complements. Our view is that these, plus a number of other syntactic properties which we will explore under the grant (see Section 6) are all ultimately connected to Quasi-Subordination. We summarize the results of our investigations into inversion and C omission here. A high priority of our proposed research is to return to RTs and explore their distribution from this new perspective.

QS status, we believe, allows SCs (subordinate clauses) to have the syntax of MCs (main clauses). The discourse-dynamic status of a QS clause corresponds, in this theory, to a syntax which is both main clause like and subordinate clause like. It is an obvious but rarely addressed fact that *that*-less subordinate clauses look just like main clauses. We propose that these clauses are Quasi Subordinate, and thus participate in semantic and syntactic patterns which are otherwise found only in main clauses.

- 6) a. He was tired. He said he was tired

It is important to be clear that these are subordinate clauses and not main. For example, the complement of *say* shows the pronoun patterns of subordinates (*He said he was tired*, but not **He said I was tired*, except as a quotation.) They satisfy the requirements of their embedding predicate: *He said he was tired*, **He said*. They allow extraction and variable binding: *Where did he say he was going? Every girl said she was tired.*

The same points hold, *mutatis mutandis*, for interrogatives. In one dialect of English (McCloskey 2006) *some* subordinate interrogatives have inversion, thus resembling their main clause counterparts.

- 7) a. Who was she dancing with? They wondered/asked who was she dancing with.

As with *that*-less clauses, these are truly subordinate clauses, as McCloskey argues.

We are exploring the hypothesis that the discourse status of Quasi-subordination is reflected formally in

the syntax, because QS clauses are analyzed as BOTH main and subordinate in a sense we will make precise. A formal optimality theoretic version of this proposal is presented in Grimshaw (2006). The constraints studied in that work are fully general constraints on structure: three alignment constraints which align heads, specifiers and complements to the left edge of maximal projections, and two constraints requiring that phrases contain particular elements: a head and a specifier. These constraints have location specific versions, which are responsible for differences between main and subordinate clauses. The version we present here retains the key logic but is significantly simplified. For present purposes the core idea can be rephrased like this. There is a constraint CompSC which requires a C in a subordinate clause, and one which forbids it in a main clause NoCompMC. In the simple case, a main clause therefore has no C, and a subordinate clause has one: *He was tired, he said that he was tired.*

8)

main clause	assessed by MC constraints only	NoCompMC	He was tired
subordinate clause	assessed by SC constraints only	CompSC	... that he was tired

Quasi Subordinate clauses, we propose, are evaluated by BOTH the main clause constraints and the subordinate clause constraints. When the main and subordinate constraints disagree, ranking between them determines the grammatical outcome. A QS clause, therefore, will resemble a main clause or a subordinate clause, depending on the ranking. In informal standard English, QS propositional/declarative clauses look like main clauses, because they obey the main clause constraint (bolded in (9).)

9)

quasi-subordinate clause	assessed by BOTH MC and SC constraints	NoCompMC CompSC	... he was tired
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(Since the grammar of formal standard English has the opposite ranking, *that* is retained in the formal register. This explains the extensive evidence from corpus studies such as Elness (1984), Thompson and Mulac (1991), which shows massive correlations between omission and register/style. Grimshaw (in prep. a) discusses this in detail.)

There is a constraint which requires inversion in a main clause InvMC and one which forbids inversion in a subordinate: NoInvSC. MC interrogatives have inversion, subordinate interrogatives do not.

10)

main clause	assessed by MC constraints only	InvMC	Who was she dancing with?
subordinate clause	assessed by SC constraints only	NoInvSC	... who she was dancing with

In standard English, there is no inversion even in QS interrogatives, because NoInvSub chooses the structure without it. But in the variety studied by MCluskey (2006), the MC constraint dominates the SC constraint, and inversion results.

11)

quasi subordinate clause: No inversion dialect	assessed by BOTH MC and SC constraints	NoInvSC InvMC	... who she was dancing with
quasi subordinate clause: Inversion dialect	assessed by BOTH MC and SC constraints	InvMC NoInvSC	... who was she dancing with

Thus in informal Standard English QS declaratives look like main clauses while QS interrogative clauses follow the SC constraint and hence look like subordinates, as do QS declaratives in formal Standard English.

4 Consequences and Predictions: the distribution of *that*, and inversion

4.1 Complementizer Omission

Our preliminary research shows that if *that*-less clauses are QS, while true subordinate clauses must have a complementizer, the pattern of *that* omission emerges quite directly. This is explored in detail in Grimshaw (in prep. a) We focus here on the predictions which relate to the lexical semantics of the embedding predicate.

The QS hypothesis immediately explains why true factive predicates do not allow C omission. No clause whose propositional content is already in the common ground is ever Quasi-Subordinate. Obligatoriness is widely recognized for emotive factives, and holds also for other factives we have investigated, such as the psychological predicates illustrated in (12a,b). Sentential subjects as in (12c) do not allow omission for the same reason: their content is also presupposed.

- 12) a. The teachers regretted **that/*Ø** the boys failed the exam
- b. The teachers hate it **that/*Ø** the boys failed the exam
- c. **That/*Ø** the boys failed the exam was made public

Omission is ungrammatical in complements to adjectives like *aware*, but not *sure*. This supports an analysis in which the former is not QS and the latter is, as expected if *aware* is factive, but *sure* merely characterizes the belief state of a Source. (Research on *that* in complements to adjectives is limited, especially in comparison to semantically similar verbs and we intend to investigate them more closely.)

- 13) a. The teachers were aware **that/*Ø** the boys failed the exam
- b. The teachers were sure **that/Ø** the boys failed the exam

Complements to nouns are generally accepted as requiring *that* (Stowell 1981), and this is as we expect if they are not QS: they do not report an event in which a Source expresses an opinion in cases like (14a). When they are used to report an opinion omission is grammatical (14b)

- 14) a. The belief/report **that/*Ø** the boys failed the exam was widespread
- b. The students' opinion is **that/Ø** the exam was too difficult

The complementizer is obligatory for complements to manner-of-speaking predicates (Zwicky 1971, Bolinger 1972, Stowell 1981) and in subjunctive complements, neither of which is QS.

- 15) a. The teachers grumbled **that/*Ø** the boys went on vacation
- b. All the teachers required **that/*Ø** All the teachers required **that** the boy retake the exam

A particularly subtle case involves the “non-stance verbs” of Cattell (1978). These verbs do not have QS complements. Grimshaw (in prep. a.) argues that they describe events in which the Source made a statement but not with the intention of asserting it. In this view they are the embedded counterpart of a main clause *comment*, such as “The students failed the exam” said to a colleague who is looking at the very same report as the speaker. In this situation the speaker’s intention is not to modify the common ground, i.e. not to inform. (See Abbott (2008) for other such cases.) The verb *comment* is used precisely

to report such events. As predicted, such predicates require the complementizer.

16) The teachers commented **that/*Ø** the boys failed the exam

The QS hypothesis is an *interface* solution for the omission of *that*, which occurs as a reflex of the discourse status of QS clauses, in interaction with the syntactic constraints which require main clauses to lack complementizers and true subordinates to have them. Both the syntactic and the pragmatic components of the theory are essential. In contrast, prior proposals regarding *that* omission address issues of structure or issues of discourse, but not the relationship between the two. Configurational accounts largely focus on the “missing” C. (Bare IP accounts such as Webelhuth (1992), Doherty (1997), Grimshaw (1997) do not address restrictions governing the occurrence of the IP.) The C is taken to have properties (e.g. requiring government or being a PF affix) which allow it to occur only within *complements*. Prominent examples include Stowell (1981), Iatridou and Kroch (1992), Pesetsky (1995), Bošković and Lasnik (2003). However, clauses with all the hallmarks of complement status (such as selection and obligatoriness) can require *that*, as Grimshaw (in prep. a) shows. See also Dor (2005) for related comments. The complement versus non-complement distinction is not sufficient to explain the observed omission patterns. At a more fundamental level, such proposals do not relate the absence of *that* in some subordinate clauses to its absence in main clauses. They offer no way to treat *that* omission as a main clause phenomenon, or to relate it to the discourse status of the clause itself.

In contrast, research focused on discourse structure, such as Bolinger (1972), Elsness (1984), Underhill (1988), Thompson and Mulac (1991) examines many factors which correlate with omission, such as the frequency of the embedding predicate, the properties of its subject, style and register. To varying degrees they also emphasize the role of a notion of “assertion” in characterizing *that*-less clauses. This work, however, does not posit grammatical devices or principles which would enforce the presence or absence of *that*. Dor (2005:347) states “The predicates which can embed the bare clause, without the complementizer, are those which entail that a cognitive agent (in the majority of cases, their subject) has made an epistemic claim concerning the truth of the proposition denoted by the embedded clause”, but the actual proposal offers no explanation for this link between subordination beneath these predicates and *that* omission, or between omission in SCs and the syntax of MCs. It could equally plausibly be said that inclusion of the complementizer occurs in the context of a truth claim. We view our own hypotheses as rooted firmly in these lines of investigation, but with an explicit discourse theory, an explicit syntax, and an explicit connection between them.

The analysis of *that* omission has been very fruitful. It is governed by a complex interaction of factors from several domains, and some of these fall quite neatly together under the QS proposal. However, there remain puzzles, problems and unclarities that we believe contain the clues to a more sweeping understanding of subordination. Among the issues that need to be addressed are:

- whether there are additional structural requirements on complementizer omission, adjacency to a predicate, for example.
- Whether there is decisive evidence in favor of or against the existence of a null C element (see Bošković and Lasnik (2003). This issue is related to the very general theoretical question of the status of missing functional heads.
- Whether the grammar of *that* in other configurations, including complements to the degree head *so* and relative clauses, can be understood in the same way. Can its behavior be deduced from the QS theory plus the fact that it is in a relative clause, for instance, or is it necessary to stipulate differences between the different instances of the morpheme?

We have some new tools to use in investigating omission, so we will use them to explore aspects of omission that have not yet been fully explained.

4.2 The distribution of Inversion

The subordinate interrogative in (7) also shows main clause syntax, in the form of inversion, as we noted above, in the English dialect analyzed by McCloskey (2006). Speakers of standard English share (strongly and uniformly) the *relative* judgments reported for this Irish English dialect. The examples we use here accord with McCloskey's analysis and show the key (relative) judgements for speakers of standard English.

Like *that* omission, inversion is not completely free. (17a) illustrates the well-formedness of inversion under *ask* and *wonder*. Such interrogative selecting predicates (also *inquire/investigate*) by virtue of their lexical meaning express lack of knowledge and desire for knowledge on the part of the Seeker, and are therefore able to take QS interrogative complements. If we change the embedding predicate to verbs like *know/discover/find-out*, which combine with propositions as well as questions, we find that quasi-subordination is no longer possible and inversion is ungrammatical.

- 17) a. They wondered/were asking who was she dancing with at the party.
b. *They know/discovered who was she dancing with at the party.

While the standard English dialect hides it (at least in absolute judgments), the inversion dialect reveals that QS interrogatives and true subordinates are syntactically distinct. (The Belfast dialect reported in Henry (1995) allows inversion in all subordinate interrogatives: this can be analyzed as the consequence of a ranking in which the (general) constraint requiring that phrases have heads dominates constraint requiring left-edge position for heads.)

The predicates which do not embed QS complements attribute knowledge not ignorance to the Seeker with regard to the embedded question, eliminating an essential condition for the speech act of questioning, namely ignorance. Hence the embedded clause cannot be discourse dynamic. When the embedding predicate is modified to allow for ignorance on the part of the Seeker, inversion again becomes possible.

- 18) a. They wanted to know who was she dancing with at the party.
b. They don't know who was she dancing with at the party

We find similar effects with *that* complements. In response to Speaker 1's question, Speaker 2 can reply using the verb *discover*, but Speaker 3's variant is not possible, although it uses the same embedding predicate. Why not? The Source in Speaker 2's answer has the relevant information, but the Source in Speaker 3's answer is explicitly stated not to have it. Hence the conditions for a response to the question are not satisfied.

- 19) Speaker 1: How many students passed the exam?
Speaker 2: They just discovered that 80% of them passed
Speaker 3: #They never discovered that 80% of them passed

These data underscore the importance of an interface approach to quasi-subordination.

The interface approach to quasi-subordination may also provide a new perspective on several other phenomena involving embedded interrogatives that we hope to investigate during the grant. For example, indirect questions embedded under *wonder/ask* can host the so-called aggressively non D-linked expression *what on earth/what the hell*. This is not possible in complements of verbs like *know/say* unless they are negated or combined with a modal like *want to know/say*. Another phenomenon that might benefit from an interface approach are Spanish questions with double complementizers (Suñer

1993). Their sensitivity to verb classes is similar, though not exactly the same. A third phenomenon which we discuss at some length in Section 6.2 is Scope Marking. There is variation across languages with respect to the predicates that allow scope marking. We believe this is a particularly fruitful area of investigation for an interface approach to embedded questions.

5. The Interface Nature of Quasi-Subordination

The QS hypothesis has a pragmatic component, a semantic component, and a syntactic component. The semantics identifies the individual denoted by the subject noun phrase as Source/Seeker, for example, and ascribes knowledge or lack of knowledge to that individual. The pragmatics determines the value discourse participants give to the Source/Seeker, though in the case of the 1st person pronoun, the semantics predetermines the pragmatics. The syntactic form of the result is determined by these factors plus the formal grammar of the language. Is it really critical to look at the interface in this way?

Let's consider first the possibility of a purely lexical-semantic solution. If quasi-subordination was a matter of lexical selection by an embedding predicate, the shift in possibilities between *find-out* and *want-to-find out*, or from *just discovered* to *never discovered* would not be expected. Moreover the lexical semantics has never been shown to *determine* the syntactic shape of a complement, merely to correlate with it.

Can the pragmatics predict the distribution of *that* and inversion? We don't see how. The vocabulary of the theory allows us to state the generalizations governing where these formal structures occur, but the theory of discourse doesn't control the nature and position of functional heads. In order to do that, it must interact with the theory of syntax. This is particularly clear in light of the fact that the syntactic patterns which reflect pragmatic status are variable across dialects and across languages. The theory of discourse dynamics is not responsible for the fact that the complementizer can be omitted in, say, English, but not in general in, say, German.

What about the possibility of a purely structural account? Or one which appeals to both structure and lexical meaning? There is an additional phenomenon which strongly supports the idea that semantics and pragmatics are critically involved. Subordination under 1st person present tense predicates participates most freely in main clause syntax. This is true for the literature on omission of *that*, on inversion in interrogatives and on root transformations in subordinate clauses in general. See especially Hooper (1975), Thompson and Mulac (1991), Green 1976, Meinunger (2006).

This result is inevitable in the interface theory of Quasi Subordination. When a clause is directly asserted, the Speaker and the Source are identified; there is, obviously, no embedding predicate; and the proposition is asserted to be true at the time of the utterance. For a subordinate clause, when the Speaker and the Subject are grammatically identified, and the utterance time is identified with the time of evaluation of the complement proposition, the ability of the subordinate clause to participate dynamically in the discourse should be maximized – as close as possible to that of a main clause. The contextual flexibility associated with the third person subject is eliminated.

20) I believe that it is raining/she is an idiot

Similarly, in a direct question, the Speaker and the one who wants to know, the Seeker, are the same person, and in a subordinate interrogative with a 1st person Seeker the Seeker and the Speaker are identified.

21) I've been asking all day when it's going to rain.

The conclusion that the speaker would like an answer, now, is virtually inevitable. Tense is critical: a simple past virtually eliminates the possibility of the statement being interpreted as a question. Lack of knowledge and desire for knowledge at a time in the past does not entail that the conditions for the speech act of questioning hold at the time of the utterance.

Lexical and/or structural accounts seem unlikely to illuminate the special behavior of 1st person present tense cases. Even if such accounts posit different syntax for 1st and other persons, as Giorgi and Pianesi (2004: 203) do, there are still questions to be answered. Why should the person of the subject of the verb affect its complementation? Why should it be 1st person rather than 3rd person that has the special syntax?

This is why we are convinced that an interface hypothesis must be correct. The pragmatic account explains the distribution of the formal effects: it makes clauses Quasi Subordinate hence, matrix clause like. It entails that 1st person present tense subordinations are the best exemplars of main clause effects. Clauses embedded under present tense predicate with 1st person Sources and Seekers are Quasi Subordinate clauses *par excellence*.

Other current syntactic models exploit the possibility of multiple syntactic projections above IP to describe main clause phenomena in subordinate clauses, and posit a special syntax for the clauses which we analyze as QS. McCloskey (2006) proposes that inversion is grammatical if there is an extra functional layer above the embedded CP, see also Suñer (1993), Sawada and Larson. (2004). Haegeman (2006: 150ff.) proposes that some clauses allow topicalization, because they have a functional head for illocutionary force, roughly as suggested in Rizzi (1997). Emonds (2004) posits “root-like indirect discourse embedding” with a layer of structure which has no category, and allows all movement including root transformations.

However, the “extra projection” strategy is limited in scope as a solution to the generalizations which we explain by Quasi Subordination. First of all, it is a descriptive device with little theoretical underpinning. Perhaps the theory of Quasi Subordination can provide the needed theoretical foundation. The “extra projection” model has not been connected up in any way to the distribution of *that*. Our project is the first, as far as we know, to insist that complementizer omission is a main clause phenomenon to be analyzed with the others. The main clause behavior shown in subordinated declaratives involves *omission* of C, and trying to explain this by positing an extra projection seems rather unpromising, and in fact no such proposal has been put forward.

Finally, the evidence for the posited projections seems to us inconclusive. For example, McCloskey’s argument provides equal support for the extra layer in those subordinate interrogatives which do not allow inversion, and for those that do. (22) is fashioned after his (72b), but it shows that two heads, bolded in (22), can be present in the subordinate interrogative even when it is the complement to *know*, in a non QS configuration.

22) Only the President knows **if** in the event that a member of Portmarnock Golf Club had a sex change operation, **whether** he/she would still be eligible for membership.

While extra structure may very well be present in these complements, at least some of the time, we still need a theory of when and why such a special option is available. The purely syntactic theory does not offer this.

6. Extensions

There are several ways in which this hypothesis can be extended and expanded. Three important foci of our current research are the embedding predicates themselves, scope marking, and root phenomena more generally.

6.1 Embedding Predicates

One of the key factors which affects the (quasi-)subordinate status of a complement is the embedding predicate. Many arguments in the subordination literature are framed based on just a handful of subordinating verbs and thus have dubious validity. It is clearly not possible to develop precise models of subordination, dynamic or otherwise, without a semantic analysis of the predicates which take subordinate clauses and a connected theory about where the “fault lines” in the lexicon are. In her work on *that*, Grimshaw has discovered predicate groups which are not studied at all in the formal literature. Two examples are *bitch* and *counter*, each representative of a small group of predicates with complex meanings, which resemble manner-of-speaking predicates in encoding meaning components in addition to the “say” or “express” piece of their meaning. Such verbs do not allow C omission. It is important to understand the role of lexical semantics and syntax for embedding predicates, and how it relates to subordination, from both a theoretical and a more practical perspective. The theoretical question concerns the factors that drive the behavior of a predicate. Does the semantics of the predicates just mentioned prevent them from having dynamic complements, and if so, why is this, exactly?

Some predicates which do not fall cleanly within the QS hypothesis nevertheless allow omission. A compelling example is *wish*, as in *The students wished (that) the exam had been easy*. This does not report a situation in which the students held or stated that the exam was easy, so why is omission allowed? Part of the answer may lie in the fact that the proposition “the exam was easy” is certainly not in the common ground. Understanding this case, and related ones involving verbs like *pretend* should clarify the principles involved and perhaps uncover yet another of the factors which interact to govern omission.

6.2 Partial Wh Movement/Scope Marking and Quasi Subordination

Partial wh movement or scope marking, we believe, is another phenomenon on which our perspective could shed light. This construction is represented schematically in (23):

$$23) \quad [_{CP-1} wh_1 \dots V_{-wh} [_{CP-2} wh_2 \dots (wh_n) \dots]]$$

A particularly interesting feature of this construction is that CP₂ can have the syntax of main clauses or subordinate clauses but the interpretive possibilities are the same.

Our current view is that CP₂ in scope marking interacts dynamically with discourse. Consider the following, where (24c) has to be read like a sequential scope marking construction which is after the same information as (24b), not as two separate questions:

- 24) a. Is it raining outside?
b. Does Bill think it is raining outside?
c. What does Bill think? Is it raining outside?

If the context is such that speaker and hearer are looking out of the window and can see that it is a bright sunny day, (24a) will be infelicitous. The preparatory conditions for questioning, ignorance about the content of the proposition, will not be satisfied. (24b), however, is perfectly acceptable and could be plausibly uttered if the speaker were to see Bill walking towards the building with rain gear, or if she had just received a text message from Bill saying that he was bringing umbrellas for everyone. Interestingly, even though (24c) seems to be after the same information as (24b), namely Bill’s thoughts about the

weather, it is infelicitous in the same way as (24a). This shows that the second question in scope marking is discourse dynamic, a conclusion that harks back to Herburger (1994), who claimed that scope marking had a *de re* reading (see also Dayal 2000 and Reis 2000). Our hypothesis here is that scope marking preserves the role of the speaker as *Seeker* but replaces the hearer with the subject of the matrix clause in the role of *Source*.

CP₂ of an English scope marking construction is not subordinate. We believe that even when CP₂ is syntactically subordinate, it is discourse dynamic. This is in keeping with the claim in Reis (2000) that syntactic subordination in scope marking may have developed diachronically from the non-subordinated version. We would like to see if this approach can resolve two outstanding problems in the literature on scope marking having to do with restrictions on the class of acceptable matrix verbs.

The first restriction is that the matrix verb must be able to select a –wh complement (*think, believe, know* but not *ask, wonder, inquire*) even though the complement is +wh. Two explanations have been given for this. One posits that the selecting predicate must be able to select –wh complements because the embedded wh is forced to scope out at LF, making the complement in effect –wh. The other is a type-theoretic account in which the quantification over proposition taking verbs like *think* requires the second question to denote a set of propositions, a question, in order to provide the appropriate restriction on the quantification. The restriction of a quantification over question taking verbs like *ask* would have to be of a higher order. Both explanations are satisfactory but do not extend to the fact that acceptable embedding verbs cannot be negated, for which separate independent explanations have been proffered. Considered from the perspective of quasi subordination, the embedding predicates for scope marking appear to be the mirror image of the embedding predicates for inversion:

	Ask	Know	Not know	Want to know
Inversion	√	X	√	√
Scope Marking	X	√	X	X

A uniform account for the restrictions on scope marking predicates afforded by quasi subordination is that conferring the role of informant on the subject (as opposed to the hearer) means that the subject’s knowledge, beliefs etc are taken to be relevant to the discourse. Lack of knowledge or desire for knowledge is inconsistent with this role.

The second restriction has to do within the class of non-negated –wh selecting predicates. While languages like Hindi appear to be fairly liberal, German allows only a small set of verbs. Simplifying the discussion in Reis (2000), they can be described as verbs of saying, thinking, believing (*sagen*: ‘say’, *glauben, denken, meinen*: ‘think’, ‘believe’, *schaetzen*: ‘guess’) but not strong factive predicates (*bedauern*: ‘regret’, *dich erinnern*: ‘remember’) or preference or adjectival predicates (*sich entsetzen*: ‘be appalled’). To us, this is reminiscent of the class of verbs that *that* omission is sensitive to. We would like to see to what extent they may be amenable to the same explanation.

We note that the fairly sizable literature on scope marking has focused almost exclusively on its formal syntactic and semantic properties. Scope marking, however, is known to be more acceptable in informal speech, a fact we think supports our view of scope marking as quasi subordination. Bringing pragmatics into the picture, we believe, shifts the way in which scope marking is understood and provides a better window into its formal properties, as will a comparison between two structures that share the same pragmatic status but a distinction in subordination.

6.3 Root phenomena

As we mentioned before, a line of research starting with Emonds (1976), Hooper and Thompson (1973), and Green (1976) has uncovered a variety of phenomena largely limited to main clauses, often referred to as “root” phenomena. Examples include Subject Auxiliary Inversion, as discussed in Sections 3 and 4. Tag Question Formation, Topicalization, and Germanic V2.

A few of these are illustrated in (25).

- 25) a. (*The paper reported that) he won the election, didn't he?
- b. (*John thinks that) in came the milkman.
- c. (*They regretted that) this race, Seabiscuit should certainly win (it).
- d. (*They imagined that) Seabiscuit, he should certainly win the race

There is however, widespread agreement (see Heycock 2005) that some subordinate clauses do admit these structures under some conditions. We hypothesize that the distribution of root phenomena is tightly connected to quasi-subordination. The predicates which allow QS complements seem to be those which allow root phenomena in their complements. The contexts in which Topicalization is allowed in English (see Haegeman 2006 for a recent study), those in which *that* is omissible (Dor 2005, Grimshaw in prep. a) those in which C is omissible in Italian (Poletto 2000), and those in which V2 is allowed in Germanic (Vikner 1995, Meinunger 2006) are all related. For example, the “semi-factives” *realize*, *know* etc. (Karttunen 1971) differ from factives in allowing omission: *The teachers realized knew that/*Ø the boys failed the exam*. These predicates also differ from true factives in allowing root transformations in their complements (see Hooper and Thompson (1973) 480-481, 483-4; Hooper 1975 for this and related properties of the factive/semi-factive split). A second reason for positing a connection between QS status and root phenomena is the fact that the discourse effect of the 1st person Source and the present tense discussed in Section 5 is also found for root transformations in subordinate clauses (Hooper and Thompson (1973:477-8), Meinunger (2006).

Intriguingly, it appears that QS status and root properties do not coincide perfectly. A preliminary investigation to be reported in Grimshaw (in prep b.) suggests that “Slifting” (Ross 1973, Hooper 1975), exemplified by *Seabiscuit had won the race, the newspapers said*, is allowed by a more inclusive set of predicates than *that* omission is. One example is manner-of-speaking predicates which require *that* when followed by their complement (see Section 4.1) but allow Slifting: *Seabiscuit had won the race, the jockey shouted*. Our initial hypothesis is that there is no uniform set of “root phenomena” with a single distribution. It appears that whether a particular phenomenon is legitimate in a particular case depends on the interaction of multiple factors involving the pragmatics, semantics, lexical semantics and syntax of the clause.

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