CHAPTER 1: THEORETICAL ASSUMPTIONS

1.0 Introduction

When is it possible to consider that a child has completed the process of acquiring the syntax of her native language? In particular, is it correct to assume that syntactic acquisition is essentially complete by about the age of five, as has been variously claimed in the literature, or is it more accurate to assume that a child continues to acquire basic knowledge of the syntax of her native language until well into her school years?

Since the inception of generative theory, children’s early and relatively effortless mastery of syntax has been taken as an important hallmark of first language acquisition. That is, in contrast with other areas of linguistic development which have been observed to follow a more protracted course – such as, for example, the development of pragmatic competence – the relatively rapid and relatively uniform course of syntactic acquisition has long prompted speculation that this process can be viewed as special in some respect. Within the context of the principles and parameters (P&P) theory of language acquisition (N. Chomsky 1981, 1995a), this view is encapsulated in the proposal that the acquisition of syntax is facilitated by innate, language-specific knowledge, which is termed Universal Grammar (UG).

One line of research that has been inspired by P&P theory involves the experimental investigation of children’s early adherence to hypothesized principles of UG. The results of this research enterprise are capably reviewed in a number of sources, including, inter alios, Crain (1994) and Crain and Thornton (1998), and therefore I will not provide a detailed discussion of these findings here. Instead, I wish simply to draw attention to the fact that there is a growing body of experimental evidence that confirms what has been anecdotally observed over the years, which is that even children as young as three demonstrate a relatively sophisticated command of the syntax of their native language.
Nevertheless, it does not automatically follow that early displays of adult-like syntactic competence indicate early mastery of all aspects of native language syntax. In the acquisition literature, it has long been recognized that there are certain constructions in the English language which are not readily mastered by young children and which therefore remain problematic beyond the pre-school years. In some cases the observed difficulty is reasonably attributed to the idiomatic status of a particular construction in the language, but, in other cases, the source of the difficulty is not as readily apparent. It will be the purpose of this thesis to provide a detailed examination of the acquisition of one structure of the latter type. This is the easy-to-please or tough-movement construction, exemplified in (1) below:

(1) A giraffe is hard [PRO to kiss e].

For adult speakers of present-day English (PdE), the sentence in (1), hereafter termed a tough construction (TC), can be given a single interpretation only. This is one in which the grammatical subject of the sentence, the determiner phrase (DP) a giraffe is interpreted as the logical object of the embedded verb to kiss. Thus, although a correspondence generally holds in English between the grammatical subject of a sentence and the logical subject of the matrix predicate, as in (2), below,

(2) A mouse finds it difficult [PRO to kiss a giraffe].

Mouse = grammatical subject of the sentence
logical subject of the matrix verb finds

the correct interpretation of the TC in (1) requires that a listener appreciate that the two functions are in fact dissociated in constructions of this type. Since correct interpretation of the TC requires a child to recognize that this type of sentence represents an exception to the well-established correlation noted above, one line of thought holds that children experience difficulty with interpretation of the TC simply because it must be learned as an exception. However, it has also been suggested in the literature that the TC may pose a problem for children because the derivation of this construction involves syntactic knowledge that can reasonably be considered complex, as compared to that deployed in the derivation of other constructions (see,
e.g., C. Chomsky 1969 or Goodluck and Behne 1992). Note that implicit in the latter claim is the assumption that children will acquire basic aspects of syntactic competence before more complex aspects of the same, and that, consequently, syntactic learning may continue well into the school years.

The issue of children’s relatively delayed acquisition of the TC has in fact been the focus of active experimental investigation for well over thirty years. However, according to my own interpretation of the literature, there has yet to emerge any clear consensus of opinion regarding the source of the difficulty that children experience in their acquisition of these structures.

The first to investigate this issue experimentally was Carol Chomsky (op.cit.), in a study which inspired an active line of research into the acquisition of syntax beyond the pre-school years. Her study involved children between the ages of five and ten, who were tested for their knowledge of four structures, including the TC, which Chomsky identified as “syntactically complex,” according to the application of certain criteria outlined in the original paper. With regard to the TC in particular, she assessed her subjects’ comprehension of the structure through the use of a deceptively simple experimental technique: The child was presented with a blindfolded doll and was then asked, “Is the doll easy to see or hard to see?” Because the doll was presented in plain sight of the subjects, the only acceptable response for an adult speaker of English would be “easy to see.” Nevertheless, a number of Chomsky’s subjects, including some 8-year-olds, responded “hard to see” and, when pressed to explain their response, invariably referenced the doll’s inability to see due to the blindfold covering her eyes. Thus, it seemed that these children could only access an interpretation of the TC in which the matrix DP the doll serves as both a grammatical and logical subject, consistent with the standard expression of grammatical relations in English. Chomsky concluded that since some of her subjects had not yet acquired adult-like ability to interpret the TC by the relatively advanced age of eight, it was apparent that “fairly basic syntactic learning” continues well into the school years (op.cit.:32).
The years following Chomsky’s study witnessed not only a number of replications of her experimental methodology but also a number of more sophisticated attempts to investigate the acquisition of the TC experimentally. Throughout this time, the basic claim that children are relatively delayed in their acquisition of the TC has retained widespread acceptance in the literature. Yet, according to my own reading of the various published studies, I do not believe that any has as yet offered a satisfactory explanation of why children are delayed in their acquisition of these structures. Certainly, as I earlier stated, I detect no consensus of opinion on this issue, in spite of the fact that nearly forty years has elapsed since Chomsky conducted her original study.

Chomsky (op.cit), as earlier noted, favoured a linguistic explanation for the non-target-like performance of certain of her subjects, who were deemed to lack the requisite syntactic ability to interpret the TC. Cromer (1970) espoused a similar view, which remained fairly consistent over the nearly twenty years that he conducted research in this area. In more recent years, H. Goodluck and colleagues (see, e.g., Goodluck and Behne op.cit.) have maintained that it is syntactic complexity which explains the difficulty that children experience with their interpretation of the object-gap purpose construction (OPC) and other syntactically related constructions, such as the TC.

Other theorists, however, have explained children’s non-target-like interpretation of the TC in terms of general cognitive limitations. For example, Cambon and Sinclair (1974), who worked within a Piagetian framework, proposed that one of the reasons children initially misinterpret the TC is because at a certain age they lack the ability to “decentre” and adopt the viewpoint of another. Alternatively, Macaruso, Shankweiler, Byrne, and Crain (1993), working within a generative framework, studied groups of good and poor readers and argued that it is not deficient syntactic ability that causes children to misinterpret the TC but more likely limited processing ability. Finally, McKee (1997a,b), another generative researcher, concurred with Macaruso et al. that it is unlikely that children lack the requisite syntactic knowledge to interpret the TC. In contrast to those authors, however, she suggested that deficient...
lexical knowledge of the *tough* adjective is the most plausible explanation for children’s non-target-like interpretation of the construction.

In the present work, I further explore the question of why the TC resists early acquisition, offering new evidence drawn from my own experimental evaluation of children’s comprehension of the TC and other syntactically related structures. In particular, I seek to address the following broad research questions:

(3) a. Is acquisition delayed because the TC is syntactically complex?

b. Is acquisition delayed because children require some time to learn the correct lexical properties of the *tough* adjective?

c. Is delayed acquisition of the TC linked to delayed acquisition of other syntactically related structures in the language?

d. How can evidence drawn from the experimental study of the acquisition of the TC be used to inform wider theories of language acquisition and, in particular, generative theories of the same?

e. How can evidence drawn from the study of second language (L2) acquisition of the TC be used to inform our understanding of first language (L1) acquisition of the TC?

f. How can evidence drawn from the experimental investigation of the acquisition of the TC be used to inform existing syntactic theory?

1.1 Organization of thesis

With reference to the investigative goals listed in the previous section, I detail the basic theoretical assumptions that I adopt in §1.2 of the present chapter. Section 1.2.0 begins with a defense of the view that sentence pairs such as (4a&b), below, are equivalent in their truth conditions:

(4) a. A giraffe is hard to kiss,

b. It is hard to kiss a giraffe.
I next consider the discourse function served by the syntactic operation of tough-movement (TM), arguing that TM is motivated by a speaker’s desire to topicalize an embedded object argument. After Foley and Van Valin, Jr. (1985), I distinguish two types of topicalization in English, the first involving the syntactic promotion of a core constituent, as illustrated in the TC, and the second involving promotion of a peripheral constituent, as illustrated in the left-dislocation construction.

In §1.2.1, I detail my views regarding the lexical specification of arguments and predicates, arguing for separate specification of the s- and c-selection (for semantic and categorical selection) properties of a predicate. In §1.2.2, I outline my theoretical position with regard to the licensing of syntactic constituents. Taking the complementation patterns attested in the degree construction (DC) as an illustrative example, I argue, after Rothstein (1991a/b, 2001), that c-selection should be recognized as a means of licensing arguments in the syntax, in addition to theta-role (θ-role) assignment and predication.

In §1.3, I identify the semantic and syntactic features by which the tough predicate can be uniquely distinguished in English. In §1.3.0, I outline the relevant semantic criteria by which six core members of the class can be distinguished, these being the adjectives easy, hard, difficult, simple, tough, and impossible. After critical consideration of several alternative proposals, I endorse Cormack’s (1998) analysis of the s-selection properties of the tough adjective, in which the adjective is held to s-select one argument of the semantic type entity and another of the semantic type proposition. Additionally, I argue that the s-selection properties of the tough adjective remain constant regardless of variation in the syntactic realization of the two arguments.

In the same section, I re-introduce a distinction originally drawn by Lasnik and Fiengo (1974:559-67) between tough adjectives and certain tough lexemes that have developed a related but distinct sense, termed the tough on reading. I demonstrate how the syntactic distribution of the tough on version of the adjective - which importantly does not include participation in the TC - fundamentally differs from the distribution of the difficulty version. I also detail how a failure to distinguish between...
the two different lexical items has lead to various inaccurate analyses of the syntactic properties of the *tough* adjective in the literature.

Section 1.3.0 closes with a critical evaluation of certain construction-specific and semantically based accounts that have been offered to explain the causative interpretation that speakers of English characteristically assign to the subject argument of the TC. On the basis of evidence reviewed in Goh (2000b), I explain why I favour a pragmatic explanation of the phenomenon.

Section 1.3.1 contains an analysis of the syntactic properties of the *tough* adjective, with my primary aim being that of identifying the set of syntactic criteria by which the TC can be uniquely distinguished from other structurally similar constructions in English. The latter constructions include the *infinitival relative construction* (IR), the *object-gap purpose construction* (OPC), the *object-gap degree construction* (ODC), and the *adjunct-object deletion construction* (AODC), all of which will feature in later discussion in the thesis.

In §1.3.1.0, I consider the appropriate categorial analysis of the *tough infinitive* (*i.e.* the propositional complement of the *tough* adjective), arguing that it is *inflection phrase* (IP), rather than *complementizer phrase* (CP) or *verb phrase* (VP), as has been elsewhere argued in the literature. In §1.3.1.1, I turn to the issue of the appropriate grammatical analysis of the same constituent, reviewing competing arguments that have been offered for an adjunct versus complement analysis. I explain why I think that the constituent is correctly analyzed as a complement, regardless of its specific categorical realization. I thus reject the claim that the *tough* adjective is associated with a *dual subcategorization*, as has been argued by, for example, Jones (1991), Wilder (1991), or Hornstein (2001), with the adjective c-selecting a complement clause in some circumstances and an adjunct clause in others.

In §1.3.1.2, I demonstrate how the availability of long-distance extraction serves to distinguish the TC and ODC from the AODC in some dialects of English. In §1.3.1.3, I describe another well-recognized syntactic criterion for identification of the TC, reviewing Cinque’s (1990) proposal that the TC is uniquely associated with an
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obligatory object gap, as compared to either the ODC or OPC. While Cinque argues that the obligatory status of the gap in the TC accrues from the fact that the tough adjective fails to theta-mark (hereafter, \(\theta\)-mark) an external or subject argument, I point out that the obligatory presence of a gap in the AODC (cf. *Mary is pretty to look at (*her)) undermines this claim, as the matrix predicate in this construction quite clearly does \(\theta\)-mark an external argument.

In §1.3.1.4, I explore the thematic status of the subject position in the TC, an issue which has served as a long-standing point of contention in the literature. I argue that the subject of the TC is strictly grammatical, that is, not thematic. Nevertheless, I also point out that a fairly wide range of constituents are licensed to appear in the subject position of a sentence that features a tough adjective, with thematic licensing of the subject indicated in some cases and syntactic licensing in others. Notably, I reject one central tenet of Government and Binding (GB) Theory, which takes the co-occurrence of the tough adjective with an expletive subject as indicative of the inability of the adjective to \(\theta\)-mark an external argument. As I illustrate, if the nominal subject of a tough adjective carries the semantic import of a proposition (cf. *School is hard), then the adjective quite clearly may assign its theme role directly to an external argument.

Chapter 2 offers a detailed consideration of the syntax of the four constructions that feature in my experimental study of the acquisition of the TC, which include the OPC, IR, and ODC. In §2.2, I review existing theory, with particular focus on the null operator analysis of the TC and related constructions originally proposed by Chomsky (1977, 1981, 1982). Section 2.2.0 contains a critical review of the null operator analysis in the Extended Standard Theory (EST), followed by a critical review of the GB interpretation of this analysis in §2.2.1. In §2.2.2, I present my own recommendations for modification of the null operator analysis, and in §2.2.3, I provide a selected review of recent Minimalist adaptations of this analysis.

In §2.3, I examine evidence pertaining to the syntactic distribution of the tough predicate in previous stages of English, using data drawn from existing sources and from my own search of relevant corpora. Adopting the basic assumptions of the null operator analysis outlined in §2.2.1, and drawing on historical insights detailed in the
present section, I offer my own proposals for the structural representation of each of the four featured constructions, beginning with the TC in §2.4 and continuing with the IR, OPC, and ODC in §2.5.

In Chapter 3, I critically review previous experimental studies of the acquisition of the TC and syntactically related constructions. I seek first to draw insight from the findings obtained in these studies for the theory of the acquisition of the TC that I propose in Chapter 5 and, second, to provide a critical evaluation of the design and methodology employed in the various studies. In §3.2.0, I begin with a consideration of children’s naturalistic production of the TC and syntactically related constructions, and in §3.2.1 and 3.2.2, I continue with a review of experimental work that has investigated children’s acquisition of these same constructions.

In §3.2.3, I look at experimental investigation of the acquisition of the TC by child speakers of French, arguing that the results obtained in these studies offer valuable insight into which aspects of the acquisition of the TC are reasonably considered universal and which are reasonably considered language-specific. Finally, in §3.3, I review two experimental studies of the acquisition of the TC by adult learners of English as a second language. I highlight evidence obtained in the two studies that is informative for the theory of the L1 acquisition of the TC that I propose in Chapter 5.

In Chapter 4, I review the design of and methodology employed in my experimental study of the acquisition of the TC and related constructions. In §4.0, I present the three experimental hypotheses I proposed to test. After providing a précis of the content of the chapter in §4.1, I follow in §4.2 with a presentation of the results I obtained in a pre-test which was designed to test children’s knowledge of tough adjectives as well as their recall memory for story events. One-hundred and twenty-two children between the ages of 3;0 and 7;6 participated in the pre-test, from which I selected forty-four children to participate in the main experimental study described later in the chapter. In §4.3, I review the basic features of my experimental design, and in §4.4, I discuss the results of a pilot study that I conducted with twelve child subjects and six adult controls shortly before the commencement of the main study.
In §4.5, I report the findings of the main study. First, I present the results of a statistical analysis of both group and individual performance, on the basis of which I argue that children’s non-target-like interpretation of the TC does indeed persist beyond the pre-school years, as has been elsewhere claimed in the literature. However, as I also explain, my findings do not support the claim that a child’s ability to assign a target-like interpretation to the TC is late-acquired; instead, they suggest that this ability exists for quite some time in parallel with the child’s ability to assign a subject (i.e. non-target-like) reading to the TC. Furthermore, I explain how my findings fail to provide support for the claim that children’s delayed acquisition of the TC is tied to the syntactic complexity of these and related null operator structures. In particular, I report that I found no necessary correlation between a subject’s performance on the TC and the same subject’s performance on the set of additional null operator constructions that were tested.

I end Chapter 4 with a discussion of the results of a post-test that I administered to assess the general vocabulary ability of my subjects. In §4.6, I point out that the results of this post-test, when analysed in conjunction with certain findings obtained in the main study, cast doubt on the validity of the claim that delayed acquisition of the TC is linked to a child’s deficient knowledge of the lexical properties of the tough adjective (cf. McKee 1997a).

In Chapter 5, I provide a more detailed evaluation of the theoretical significance of the experimental findings presented in the previous chapter. In §5.1, drawing on both synchronic and diachronic sources of evidence, I propose an original explanation of why children persist in assigning non-target-like readings to the TC until a relatively advanced age. In brief, I propose that children enter a prolonged developmental stage, termed the Intermediate stage, during which the child’s grammar licenses two interpretations of the TC, as compared to the single interpretation licensed by the adult grammar. The issue of the syntactic representation of the additional, non-target-like interpretation of the TC, which I term the subject reading, is considered in §5.2.

In §5.3, I address learnability issues raised by the account of the Intermediate stage that I have proposed. In §5.3.0, I examine the interpretive options that are associated
with the TC in languages other than English, arguing on the basis of the evidence heretofore cited that the reading of the TC that is allowed by the adult speaker of English represents a marked option both typologically and developmentally. In §5.3.1, I focus in particular on the implications raised by my account of the Intermediate stage for the Subset Principle (cf. Berwick and Weinberg 1984), which proposes limits on the grammatical options that a child may entertain in her acquisition of a first language. I conclude with a look at the various means by which the Intermediate could eliminate the unwanted reading of the TC from her grammar, ultimately endorsing an account proposed by Baker (1979) which takes the child’s use of indirect negative evidence as key. Finally, in Chapter 6, I provide a short summary of the main conclusions of this work.

1.2 Basic theoretical assumptions

1.2.0 Tough-movement

In the preceding section, I adopted the term tough construction (TC) to describe sentences such as (1), noting that sentences of this type are also commonly described as easy-to-please constructions. The term tough construction itself is derived from the transformational rule of tough-movement, which was originally proposed by Postal in 1971.¹ This rule took a sentence such as (5a) as its input and returned a sentence such as (5b) as its output:

(5) a. It is tough to lift boulders.
    b. Boulders are tough to lift.

Although this particular transformational rule was abandoned with the advent of GB Theory (N. Chomsky 1981), the term tough-movement (hereafter TM) nevertheless continues to be widely used in the literature as a convenient means of describing the type of syntactic relationship that was once proposed to hold between the two types of sentences listed in (5). In fact, the issue of whether the two types of sentences are

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¹ Postal’s account of the tough-movement transformation was itself based on a modification of a proposal earlier submitted by Rosenbaum (1967). Differences between the two accounts are no longer theoretically relevant, however, and it is therefore only the term itself that will be of interest here.
derivationally related is one that has been extensively debated in both the EST and in GB Theory. In Chapter 2, I provide a selected review of proposals that have been offered to address this issue, and so I prefer to reserve further examination of the derivational relationship of (5a) and (5b) for that later discussion. For the purpose of the present chapter, it will suffice to note that I believe that theoretical developments advanced within the Minimalist Program (N. Chomsky 2001) leave scope for a derivation of the TC that, like Postal’s original transformation, involves syntactic movement of the embedded object argument.

A separate theoretical issue concerns the question of what type of semantic relationship exists between the TC, (cf. (5b)), and its expletive-headed counterpart, (cf. (5a)). This issue is also one that has long been debated in both the generative as well as the non-generative literature (see, e.g., Oehrle 1979). According to my own evaluation of earlier arguments, I favour the position taken by Jacobson (1992) and Goh (2000a,b), who maintain that sentence pairs such as (5a&b) are truth-conditionally equivalent (see also Mair 1987:57). Unlike Jacobson, however, Goh further contends that any differences in meaning that a listener perceives between (5a) and (5b) can be explained solely in terms of pragmatic considerations. I find Goh’s arguments convincing and will return to a discussion of this issue in §1.3.0, where I examine the semantic properties of adjectives of the tough class. Before continuing with the present discussion, however, it is important for me to acknowledge that there remain certain well-recognized examples of tough sentence pairs for which the claim of truth-conditional equivalence cannot be maintained. An example of one such pair is illustrated in (6) below (reproduced from Partee 1977:300; her #27 and #28, respectively):

(6) a. Ten of the problems are impossible to finish.
   b. It’s impossible to finish ten of the problems.

As Partee observes, the only legitimate reading of (6a) is one in which the quantified DP, ten of the problems, takes wide scope over the adjective impossible. Consequently, the impossibility of finishing the problems must pertain to an attempt to work on a specific set of ten items. In the case of (6b), however, the quantified DP
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takes narrow scope over the rest of the sentence and, consequently, there is a shift in meaning; specifically, (6b) can refer to a situation in which every participant in an attempt to finish an unspecified number of problems will be expected to finish only nine problems or less. (As Partee further observes, a sentence such as (6b) is in fact ambiguous for some speakers, with the quantified DP allowed to take either wide or narrow scope; see Epstein 1984 and Browning 1987 for a more detailed consideration of this issue.)

Partee argues that the potential meaning difference that exists between (6a) and (6b) can be adequately explained according to the assumption that the former is not syntactically derived from the latter through tough-movement of the DP object but is instead exceptionally derived through direct merger of the quantified DP in the subject position from which it takes scope. For Partee, TM can apply only when the element to be moved has the status of a “free variable” (i.e. non-quantified variable), as in (5a) (op.cit.:301). It is thus possible for her to argue that sentence pairs such as (5a&b) are both syntactically and semantically related in a way that pairs such as (6a&b) are not.

Alternatively, Goh (2000b) has proposed a syntactic analysis of the TC that allows for the logical equivalence of both (5a&b), as well as (6a&b). According to the assumption that the scope of a quantified element is determined at the level of S-structure (for surface structure), rather than D-structure (for deep structure), Goh observes that it is possible to maintain that the logical equivalence of tough-moved sentence pairs is preserved at the level of D-structure, even in the case of pairs such as (6a&b). I find this approach somewhat less appealing than that taken by Partee, however, since it crucially relies on the theoretical notion of separate levels of S- and D-structure representation, a notion that has been abandoned in the Minimalist Program. Furthermore, even in GB Theory, I note that Goh’s proposal would require deviation from one standard tenet of the theory, which is that scopal relations are established at the representational level of logical form (LF), rather than at the levels of either S- or D-structure.
I now turn to two other pieces of evidence that have been argued to undermine the claim that sentence pairs such as (5a&b) are equivalent in meaning. The first concerns the types of tough sentences illustrated in (7a-c), each of which, as can be seen below, lacks a grammatical expletive-headed counterpart:

\[
\begin{align*}
(7) & \quad a. \text{ Tasha is being hard to please.}  \\
& \quad \quad \quad \quad (\text{cf. } *\text{It is being hard to please Tasha.})  \\
& \quad b. \text{ Tasha is deliberately hard to please.}  \\
& \quad \quad \quad \quad (\text{cf. } *\text{It is deliberately hard to please Tasha.})  \\
& \quad c. \text{ Tasha tries to be easy to please.}  \\
& \quad \quad \quad \quad (\text{cf. } *\text{It tries to be easy to please Tasha.})
\end{align*}
\]

The second piece of evidence concerns sentences such as (8a&b), below, which clearly do not share the same meaning; in particular, whereas in (8a) the property described as being easy to talk to is obligatorily ascribed to Elsa, the meaning of (8b) carries no such implication:

\[
\begin{align*}
(8) & \quad a. \text{ Elsa must be easy to talk to.}  \\
& \quad b. \text{ It must be easy to talk to Elsa.}
\end{align*}
\]

I contend, however, that the types of examples offered in (7) and (8) do not undermine the validity of the claim that sentence pairs such as (5a&b) are truth-conditionally equivalent. According to a line of argument that I develop in §2.2.0 of Chapter 2, I assert that the syntactic derivation of sentences such as those illustrated in (7) and (8) differs in some respects from that of the TC. Anticipating the discussion to be contained in that section, I propose that the examples in (7) and (8) involve a complex predicate adjective (e.g. hard to please, easy to talk to), which appears in conjunction with a form of the verb to be that is different than the copular form that appears in the TC.

Lastly, I address the issue of what discourse function is served through the use of the TC. If sentences such as (5a&b) share the same truth conditions, as I have argued, then what motivates a speaker to choose (5a) rather than (5b) in any given situation?
The standard view is that the choice is dictated by information-structuring needs, in particular, by a speaker’s desire to arrange given and new information (or topic and comment) in accordance with the conversational norms of English. As is well recognized, English speakers generally favour topic-comment ordering in declarative sentences, with new information reserved for the end of an utterance and given information serving as its starting point (see, e.g., Leech and Svartvik 1994:199-200). The TC thus provides an effective means of structurally positioning an embedded object argument in a manner consistent with its status as a discourse topic.\(^2\) Certainly, as Mair (1990:67) observes, it is far more natural for a native speaker to respond to the question “What do you think of these problems?” with a sentence such as (9a), where the given information is topicalized, rather than (9b), where it is not:

\[(9)\]  
\[a. \quad \text{They (these problems) are easy to solve.} \]  
\[b. \quad \text{It is easy to solve these problems.} \]

Mair cites two other pieces of evidence for the claim that the subject of the TC typically represents established rather than new information in the discourse. First, on the basis of his examination of both written and spoken data contained in the Survey of English Usage, University College London,\(^3\) he confirms what has been elsewhere asserted in the literature (see, e.g., Lasnik and Fiengo 1974:544-6), which is that indefinite referential DPs are generally excluded from appearing as subjects of the TC. His examples #134a&b (1990:67), reproduced as (10a&b), below, illustrate this point:

\[(10)\]  
\[a. \quad \text{The other boys are easy to solve.} \]  
\[b. \quad \text{It is easy to solve the other boys.} \]

\(^2\) A note is in order regarding the notion of discourse topic. As Jacobs (2001) observes, there is at present no generally accepted definition of the notion of topic in the linguistic literature. Moreover, he contends that there is no single functional or syntactic definition of topic that can successfully account for the range of cross-linguistic data so identified. In recognition of the controversies that surround this issue, I prefer to adopt a fairly general use of the term topic, in which the term is taken to refer to a constituent that is marked in some way as being prominent or salient in the discourse.

One important distinction that I do wish to draw, however, is between topicalized constituents in English that serve as sentential subjects, and as such are syntactically and prosodically integrated with a main clause, and topicalized constituents that are found in apposition to a main clause. Foley and Van Valin, Jr. (1985:300-1) term the first, which occurs in the TC, a core constituent and the second, which occurs in left-dislocation constructions (e.g. John, I like), a peripheral constituent. This distinction will be important for the syntactic analysis of the TC that I develop in Chapter 2.

\(^3\) Information regarding the history and scope of the Survey of English Usage can be accessed on-line at: http://www.ucl.ac.uk/english-usage/index.htm
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(10)  
a. It was a delight to talk to someone interesting.
b. *Someone interesting was a delight to talk to.4

Second, Mair reports a marked tendency in matrix clause environments for the subject of the TC to be pronominal or to include the use of some “anaphoric device,” such as the deictic modifier this or these (ibid.). Again, these tendencies are in keeping with the claim that the subject of the TC typically represents information that has been previously introduced in the discourse context.

The above evidence notwithstanding, Mair is also keen to point out that his findings include examples of the TC which do not conform to the generalizations noted above. For example, in matrix clause environments, he offers examples which involve the introduction of new rather than given information and in subordinate clause environments, examples which illustrate that the TC can be used solely to effect structural simplification (ibid.:70).

Mair’s research also provides insight into the issue of how frequently speakers employ the TC in both spoken and written English. Because my goal is to develop a theory of children’s acquisition of the TC, the frequency with which this form is attested in the primary linguistic data (PLD) is a legitimate concern. Mair’s findings indicate that adult speakers employ the TC far more readily than they do what he terms intraposed constructions, which feature an infinitive phrase as the grammatical subject of the sentence (e.g. [To complete the project on time] is going to be difficult). Nevertheless, on the basis of the relatively low number of occurrences of the TC that he found (i.e. 85 instances out of a corpus containing 875,000 words overall), he maintains that it would be misleading to consider the TC a frequently used pattern of infinitival complementation in English. (ibid.:58).

4 Of course, as Mair observes, a sentence such as (10b) is grammatical if the subject DP someone interesting is construed as having generic rather than non-specific reference, for example, if the DP is taken to refer to interesting people. This is entirely in keeping with the typically given status of the information that heads the TC, since the referent of the generic DP would presumably be established on the basis of the interlocutors’ common knowledge.
I believe it would be equally misleading, however, to conclude on the basis of Mair’s findings that the TC is only exceptionally used in spoken and written English. As is well recognized, English affords speakers a number of syntactic means by which they can assign pragmatic emphasis to a particular constituent (cf. Rothstein 2001), with the TC representing only one such option. The passive, for example, is another well-known means, albeit one that is largely restricted to the written language. At the very least, neither the passive nor the TC can be considered exceptional in terms of its production involving access to peripheral rather than core grammatical competence.

Before concluding the discussion in this section, I would like to outline the terminology that I will adopt in relation to the structures I have thus far considered. I have already identified a sentence such as (5b) as a tough construction or TC. I offer a preliminary definition of this term here, identifying the TC as a construction in which a matrix subject argument is referentially co-indexed with a direct object gap in an infinitival complement clause. I will offer a more precise description of the TC at the conclusion of §1.3.

As regards a sentence such as (5a), I will henceforth describe this as an expletive-headed tough sentence. For the purpose of the discussion contained in the following section, it will also be necessary to distinguish between the type of infinitive complement that appears in the TC and that which appears in the expletive-headed tough sentence. For the former, I will adopt the term tough infinitive, noting that according to my definition of the term, this constituent will obligatorily contain a direct object gap. With regard to the latter construction, I will refer to the complement clause as the tough associate of expletive ‘it’ or tough associate. This description derives from the discussion in N. Chomsky (1986b:132-3), where he asserts that nonargument it and a clausal complement can be considered referentially as well as syntactically linked in the same way that an argument DP is linked to
The appropriate syntactic analysis of the *tough* infinitive and *tough* associate will be further explored in §1.3.1.0 and §1.3.1.1.

### 1.2.1 Lexical specification

Following Clark (1993:3), I assume that an entry in the mental lexicon minimally includes specification of a word’s meaning, its syntactic features, its morphological properties, and its phonological form. In the psycholinguistic literature, it is customary to distinguish the first two types of lexical information as constituting a separate psychological construct, the *lemma*, and the latter two as constituting the *form* of the word, or *lexeme* (*ibid.*). For the purposes of the present work, it is the former level of lexical representation that will be of interest, although I will not be concerned to explore the issue of how this type of information might be represented in a psychologically real sense. Instead, according to a traditional distinction that is recognized in the generative syntactic literature, I will adopt the term *s-selection* (for *semantic selection*) as a means of describing the semantic properties that are associated with a particular predicate at the level of lexical representation, and *c-selection* (for *categorial selection*) as a means of describing its syntactic properties (Grimshaw 1979, N. Chomsky 1986b, 1995a).

As standardly described in the generative literature, *s-selection* refers to the selection that is made by a predicate for a pre-specified number of arguments. After Frege (1891, 1892; see also the discussion in Rothstein 2001:43), most generative theorists subscribe to the view that predicates can be considered functions which must combine

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5 According to Chomsky, the two constituents constitute a CHAIN, a term which applies equally to expletive-argument pairs, such as those discussed above, and to referential relationships created through movement (1986b:132). Chomsky proposes that the expletive and argument can be considered referentially linked according to the assumption that the θ-role assigned by the matrix predicate is assigned to the CHAIN rather than to the clausal associate directly. However, it is important to note that the type of referential relationship identified does not imply the existence of a binding relation. This is because the latter is specifically ruled out in the case of an expletive-argument CHAIN (*ibid.*:143-4).

6 In fact, it is overly simplistic to identify the lemma as the repository of all lexical meaning, since it is also standardly recognized that the meaning of a particular lexical item is linked to a conceptual representation that is presumed to be extra-linguistic in nature. As such, it more accurate to view any specification of meaning that may be held at the level of the lemma to represent a partial rather than a complete listing of the semantic and/or conceptual information that is associated with a word.
with a pre-specified number of arguments in order to be considered saturated in terms of their semantic requirements. Anticipating the discussion to be presented in later chapters of this thesis, I will also adopt a theoretical assumption that is associated with certain semantic frameworks, such as Combinatory Categorical Grammar (CCG). This concerns the notion that s-selection pertains not only to information regarding the number of arguments that are selected by a predicate but also to information regarding the order in which these arguments must combine with a predicate, according to the application of various semantic operations. Although I note that the latter consideration is one that is not generally entertained in the syntactic literature, N. Chomsky in fact acknowledges just such a possibility when he suggests that the grammar might allow a role for a process of “compositional s-selection” (1986b:92). Thus, the notion of compositional s-selection is compatible with the tenets of generative syntactic theory.

Again anticipating the discussion to follow in later chapters, I will adopt one further assumption that Cormack makes, although I wish to be clear that my adoption of this assumption does not imply my wholesale endorsement of the theory of CCG to which Cormack subscribes. Specifically, I maintain that the s-selection requirements of a predicate can be described in relatively restricted terms, with arguments taking the semantic value of either entity or of proposition, with the latter, but not the former, being assigned a truth value (1998:233). The two types of arguments represent basic or atomic elements in the theoretical framework that Cormack adopts (i.e. elements that are not subject to further semantic decomposition) and thus stand in contrast to predicates, which are given complex types in CCG.

In the generative literature, it is also standard to assume that the s-selection properties of a predicate involve some specification of both the number and types of thematic roles that a particular predicate assigns to its arguments. This is termed the theta (θ)
grid of the predicate, and, for some theorists, it represents the only aspect of s-selection that has relevance for the syntactic representation of a predicate.

I am aware, however, that the psychological validity of the notion of the theta-role (hereafter, 0-role) has been questioned on both empirical and theoretical grounds. Dowty (1991), for example, proposes that 0-roles are more appropriately viewed as representing collections of various semantic features, which may more or less approximate a prototypical ideal. For Dowty, the role of agent or patient is a gradable rather than uniquely identifiable concept, and he therefore questions whether this type of information can be accommodated to the standard notion of a thematic grid, or whether it might require some alternative specification. While I am sympathetic to the views expressed in Dowty, a full consideration of this issue is outside the scope of this thesis; therefore, for the purposes of the present work, I will simply accept the standard view that the thematic properties of a predicate are given some representation at the level of s-selection, remaining agnostic with respect to the issue of whether individual 0-roles can be uniquely defined.

I now turn to issue of the lexical representation of the subcategorial properties of a predicate. One long-standing debate in the generative literature concerns the issue of whether s- and c-selection can be directly related in terms of the syntactic representation of constituents. For example, Grimshaw (1979, 1981) has proposed that certain semantic categories such as object or action have a canonical structural realization (CSR) in the syntax, with the former categorically realized as a noun and the latter as a verb. According to the operation of what she terms the CSR principle, which is hypothesized to represent innate linguistic knowledge, Grimshaw maintains that children will assume that a regular correspondence holds between the two levels of specification, barring any specific evidence to the contrary (1981:174). 8

8 The above is not intended to imply, however, that Grimshaw views the c-selection properties of a predicate as being wholly predictable on the basis of its s-selection properties. In fact, she elsewhere maintains that the nature of UG is such that identification of the syntactic properties associated with a word will never be entirely deducible from its semantic properties, and that consequently the child will always be obligated to learn the two types of information separately (1981:168).
As Grimshaw concedes, however, there are certain lexical items whose syntactic properties appear to fall outside the scope of the CSR principle. For example, the verbs *to ask* and *to inquire* each s-select a propositional complement that has the CSR of an interrogative clause. However, in the case of the verb *to ask*, the complement may either take the form of a noun phrase (NP) or a CP (cf. *I asked [NP the time]* and *I asked [CP what time it is]*)). Consequently, Grimshaw argues that some independent lexical specification of the c-selection properties of these two semantically similar predicates is required, as their subcategorial requirements cannot be predicted on the basis of the CSR principle alone.

There are a number of authors who have taken issue with Grimshaw’s claim, however, including Pesetsky (1982a), N. Chomsky (1986b), and Bošković (1996). Each has argued that it is theoretically preferable, in part on the basis of considerations of cognitive economy, to eliminate lexical specification at the level of c-selection. Instead, these authors hypothesize that the type of information that is presumed to be held at this level can be derived solely on the basis of the interaction between the s-selection properties of a predicate and certain independently needed grammatical principles, such as Case Theory. Pesestsky (*op.cit.*), for example, has argued that the purportedly idiosyncratic or unpredictable aspects of the verbs *to ask* and *to inquire* can be shown to be predictable, once differences in the case-assigning properties of the two predicates are taken into account.

The arguments offered by the above authors notwithstanding, I am reluctant to abandon the view that the c-selection properties of a predicate require independent lexical specification. That is, I favour the position taken by, *inter alios*, Odijk (1997) and Rothstein (1991a/b, 2001), who argue that separate specification of c-selection is neither redundant nor eliminable. For example, Rothstein (2001) has challenged the claim that the subcategorial requirements of a predicate can be determined in part through the operation of case-assignment principles in the grammar. As she rightly observes, the syntactic distribution of clausal complements in the language cannot be satisfactorily explained according to such an account, as constituents of this type are not subject to case-marking. This observation is particularly pertinent to the present
work since the types of structures to be examined in this thesis involve clausal rather
than phrasal complements and are therefore outside the scope of theories of
categorical selection that rely on differences in the case-assigning properties of
individual predicates.

Furthermore, it has variously been mooted (see, e.g., N. Chomsky and Lasnik 1993,
reprinted in N. Chomsky 1995a, or Cormack 1998:29) that c-selection may not be
completely eliminable since there exist lexical items that are associated with
idiosyncratic case-assignment properties, such as, for example, exceptional case-
marking (ECM) verbs. Given that this type of information is more appropriately
considered syntactic rather than semantic, it has been argued that its representation is
more likely to be given at the level of c-selection.

In conclusion, according to my own evaluation of the various arguments reviewed
above, I maintain that a lexical entry – specifically, the level known as the lemma -
includes separate specification of both the s-selection and c-selection properties of a
predicate.

1.2.2 Syntactic licensing

Following the standard view expressed in the generative literature, I will assume that
a restricted set of licensing conditions, given by UG, regulate the appearance of
linguistic elements in a grammatically well-formed structure (N. Chomsky 1986b).
These licensing conditions are held to comprise part of the computational component
of the grammar. As detailed in the Minimalist Program, the computational
component is responsible for the generation of both PF (for phonetic form) and LF
(for logical form) representations of a linguistic expression, each of which must be
“optimally” derived (Chomsky 1995a,b). Each representation must additionally
satisfy certain interface conditions for an expression to be well formed (i.e. to
converge). According to the standard Minimalist view, I take these interface levels to
be A-P (for articulatory-perceptual), the level that sets conditions on the PF
representation of an expression (or derivation), and C-I (for conceptual-intentional),
the level that set conditions on the LF representation of the same. Notably, certain
standard tenets of GB Theory, such as the binding principles, have been re-interpreted in the Minimalist Program as representing interface conditions (N. Chomsky 1995a:211).

Where I will depart from standard assumptions of generative theory is with respect to the issue of how predicate-argument relations are to be defined. This is because I am sympathetic to certain objections raised by Rothstein (1995, 2001), which I will briefly outline here. Rothstein (2001:37-8) contrasts what she terms thematic accounts of predicate-argument relations (see, e.g., N. Chomsky 1986b, Williams 1980, 1987, or Browning 1987) with grammatical accounts of the same. As she explains, the two types of approaches share certain common assumptions. First, both recognize that arguments can be licensed in the syntax through either θ-role assignment or through the existence of a predication relation, where the latter is taken to refer to a general grammatical requirement that predicates must take subjects and that these two constituents must stand in a particular structural relation to one another (Williams op.cit.). Second, both theories take it as axiomatic that a particular syntactic constituent cannot serve simultaneously as both an argument and a predicate.

Where the two types of theories diverge is with respect to the issue of how arguments are to be distinguished from predicates. N. Chomsky (op.cit.) follows Williams (op.cit.) in maintaining that the distinction can be thematically defined, with predicates serving as θ-role assigners and arguments as θ-role assignees. In contrast, Rothstein (1995, 2001) proposes that the two types of constituents are more accurately distinguished on the basis of their intrinsic categorical properties and their syntactic distribution. Taking a specific example that will be relevant to later discussion, Rothstein (1991a:147-53; 1991b:102-5) identifies the degree construction as being particularly problematic for thematic accounts of predicate-argument relations. This is because the clausal complement of a degree head, such as too, may either be predicative, as in (11a), below, or non-predicative, as in (11b), where the former can be distinguished from the latter in terms of the presence of a gap or open position (i.e. ‘e’ in (11a)) that is bound by a phonetically null operator (Op).
that a full discussion of the null operator analysis of the degree construction will be offered in Chapter 2, §2.2.2.)

(11) a. Theresa is too intelligent [Op [to select e for guard duty]].
    b. Theresa is too intelligent [PRO, to make that kind of mistake].

As Rothstein observes, the two types of complement clause appear to serve the same semantic function in the sentences illustrated above. Therefore, she asserts, it is implausible to maintain that the choice of complement (i.e. argument or predicate) is driven by semantic or thematic considerations. Instead, she proposes that subcategorization or c-selection also serves as a third licensing mechanism in the grammar. Because I find this argument convincing, I will henceforth assume that syntactic licensing may include not only θ-role assignment and predication but also c-selection.

Finally, as regards the conditions under which adverbial or adjunct modifiers are licensed in a syntactic representation, I adopt the standard generative assumption that the presence of these constituents in a grammatical structure is not subject to the same stringent licensing conditions that apply to arguments. That is, while I assume that the semantic properties of a head play some role in determining whether an adjunct may appear and, if so, what form it may take, I maintain that heads neither θ-mark nor strictly subcategorize for adjunct constituents.
1.3 Identifying the distinguishing features of the class of tough predicates

1.3.0 Semantic properties

In this section, I identify the semantic properties of the lexical items that comprise the class of tough predicates in English. I assume that this class includes at least the six adjectives easy, hard, difficult, simple, tough, and impossible, each of which, I will argue, shares certain distinctive semantic and syntactic properties.

Before I begin my consideration of the semantic properties of the tough predicate, it is first important to acknowledge that this class is sometimes held to include a wider range of lexical items than simply the six adjectives I have identified above. For example, Lasnik and Fiengo (1974) include a number of what I will term evaluative predicates, such as the adjectives pretty or amazing, in the tough class. I will argue in the following section, however, that the distributional properties of these adjectives vary in certain critical ways from those of tough adjectives.

9 I must qualify inclusion of the adjective impossible, since I refer only to the sense of the adjective that denotes the extreme difficulty that a person experiences in performing some act. The same adjective can also be used with a sense pertaining to the possibility of accomplishing some task, as in (i) below, but this meaning of the adjective is barred from participation in the TC (cf. (ii), below):

(i) It is impossible/possible that Bill will finish that job on time.
(ii) *That job is impossible/possible that Bill will finish that job on time.

The two senses of impossible can also be told apart in terms of their differing c-selection properties. Specifically, the possibility sense of the adjective may take a full CP complement, as illustrated in (iii), below, and cannot co-occur with an experiencer prepositional phrase (PP), as illustrated in (iv):

(iii) It’s impossible [CP for there to be a resolution of the crisis before Thursday].
(iv) *It’s impossible [PP for the delegates] [CP for there to be a resolution of the crisis before Thursday].

The difficulty sense displays the opposite pattern of selection, as illustrated in (v):

(v) It’s impossible [PP for the delegates] [IP to resolve the crisis before Thursday].

10 I will define the evaluative class according to standard practice in the literature, that is, as pertaining to the subjective evaluation of either an entity or a proposition in the universe of discourse, with tough adjectives thus representing a subset of the larger evaluative class. Noonan (1985) identifies the evaluative class of adjectives as being associated cross-linguistically with the grammatical operation of object-subject raising, in which a complement object is syntactically promoted to serve as the grammatical subject of a sentence. As he points out, the specific lexical items that are licensed to participate in this operation vary considerably from language to language and in some cases may not even include the translation equivalents of English tough adjectives. He offers the example of Lango, a Nilo-Saharan language, which excludes the adjective tek (‘hard’) from object-subject raising and allows only the single predicate ber (‘good’) in such constructions (ibid.:72).
Moreover, there are also a number of nominal and verbal predicates that have been variously identified in the literature as belonging to the tough class. These include noun phrases such as (a) pleasure, (a) breeze, or (a) pain in the neck (cf. (12a), below) and verbs such as to cost, to require, or to take (cf. (12b), which is Goh’s #15a, 2000a:5):

(12) a. This award is an honour to receive.
    b. The airport took three hours to drive to.

The categorical status of predicates such as those illustrated in (12) predictably affects their syntactic distribution, with nominal and verbal predicates barred from participation in certain structures that feature tough adjectives (see, e.g. Culicover 1997:207). For example, nominal predicates such as an honour do not participate in what I will term split modification constructions (also discussed in Cormack 1998:248), as illustrated in (13) below, even though participation in such a construction is one of the hallmarks of the syntactic distribution of adjectives of the tough class:

(13) *an honour award to receive (cf. an easy award to obtain)

On the basis of the above considerations, I prefer, then, to restrict the focus of the discussion in this section, and in the thesis as a whole, to the six adjectives I earlier identified, which represent the prototypical members of the tough class.11 Turning now to the issue of the semantic properties of the tough adjective, the reader will recall that in §1.2.1, I proposed that the s-selection of a predicate includes specification of the basic semantic form or type that is taken by its arguments, as well as specification of the predicate’s thematic properties. After Cormack (ibid.:246-9) (see also Mulder and Den Dikken 1992:306, ftnt. 5), I assume that a tough adjective such as easy s-selects for two arguments, one an entity and the other a proposition.

11 Another legitimate reason for excluding nominal and verbal tough predicates from immediate consideration has to do with Mair’s (1987:60) observation that, in terms of actual occurrence, tough adjectives far outnumber the nominal and verbal predicates that share some of their distributional properties.

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One possible syntactic representation of the two arguments is illustrated in (14), below:

(14) It is hard [for a mouse,] [PRO, to kiss a giraffe].

As regards the type of thematic role that is assigned to the entity argument of the *tough* adjective, this role is sometimes termed *benefactive* (Wilder 1991), and sometimes *experiencer* (Landau 1999). I favour the second of these labels as I prefer to reserve use of the term benefactive for the thematic role that is assigned to the internal argument of an adjective such as *good*, for example, in a sentence such as *It is good for children to practice their maths*, where the meaning of the sentence clearly implies that the children obtain some benefit from the referenced activity. Note that, in contrast, the sentence *It is easy for the children to practice their maths* carries no necessary implication that the children benefit from participating in the activity but only that they experience it as being relatively unproblematic.

The issue of whether the entity argument of the *tough* adjective is assigned a benefactive or experiencer role has been clouded by the existence of sentences such as (15a&b), below, in which the interpretation assigned to the object in the first *for*-phrase is arguably more consistent with a benefactive than an experiencer role:

(15) a. It is a waste of time [for us] [for them to teach us Latin].
(N. Chomsky 1977:106)

b. It is easy [for the rich] [for the poor to do the hard work].
(Browning 1987:33)

I think it is significant, however, that although the preeminent defining feature of the syntactic distribution of the *tough* predicate is its participation in *tough*-movement, *tough*-movement is in fact disallowed in the case of (15a) or (15b), as illustrated in (16), below:

(16) a. *Latin, is a waste of time [for us] [for them to teach e].

b. *Hard work, is easy [for the rich] [for the poor to do e].
Since I have already noted that nominal *tough* predicates do not represent prototypical members of the *tough* class, I will focus the following discussion on sentence (15b). According to my own observation, native speakers often find such sentences - featuring two consecutive *for* phrases - quite clumsy, if acceptable at all, and are therefore more likely to use a paraphrase. For example, I personally find it more natural to express the meaning of (15b) through use of the sentence *It is easy for the rich to (just) let the poor do the hard work.*

Lasnik and Fiengo (1974:560-1) offer a plausible explanation for the non-availability of TM in the case of a sentence such as (15b). Specifically, the authors assert that some *tough* adjectives have developed what they term a related *tough on* sense, which does not share the same syntactic distribution as the *difficulty* sense of the adjective. As they point out, while there are some aspects of distribution that can be seen to overlap (*cf.* (17a) & (17b), below), the *tough on* sense of the adjective is actually barred from participation in TM (*cf.* (17c)). (NB: The examples below are adapted from Lasnik and Fiengo’s #A.2a, A.2b, and A.3a, *op.cit.*, which they attribute to Berman and Szamosi 1972. I have italicized the proposed *tough on* sense for clarity.)

(17) a. It would be tough [for John/*on John] for his wife to accept this view.

b. For his wife to accept this view would be tough [for John/*on John].

c. That view is tough [for John/*on John] to accept.

Mair (1990:243, ftnt. 5) has similarly claimed that *tough* adjectives can be used in English with “metaphoric shifts” in sense, with the result that these lexical items take on a meaning that is more characteristic of members of the *value-judgment class*. For example, he offers the sentence reproduced in (18), below, in illustration of this point:

(18) It was hard (on grandfather) that he lost all his savings in a bank crash.

As Mair notes, the adjective *hard* is not used in (18) to evaluate the difficulty of the act that is described in the embedded clause (*i.e.* losing one’s savings) but is instead...
used with a meaning more consistent with that of an evaluative (or value judgment) adjective, such as *devastating*.

There is, then, precedent in the literature for distinguishing two semantically related senses of the *tough* adjective, according to the adjective’s participation or non-participation in TM. Lasnik and Fiengo (*op.cit.*) propose one further reliable diagnostic for distinguishing between the two senses of the *tough* adjective, which they term *on substitution*. Specifically, they assert that it is only the *tough on* sense of the adjective that allows *on*, rather than *for*, to introduce its internal argument. As I judge that *on* substitution is quite acceptable in a sentence such as (15b) above (*cf. It is easy on the rich to (just) let the poor do the work*), I suggest that it is indeed the *tough on* rather than *difficulty* sense of the adjective that is used in (15b).\(^{12,13}\)

The above observation notwithstanding, I think that the co-occurrence of two consecutive *for* phrases in a *tough* sentence, as illustrated in (17a) above, may serve as more reliable diagnostic for the *tough on* sense of the adjective than *on* substitution. This is because I note that there are *tough* adjectives that are compatible with a *tough on* reading yet which, according to my own judgment, only marginally tolerate replacement of *for* with *on* (*cf. (19), below):

\[
(19) \text{ It would be difficult for John/\?on John [for his wife to accept this view].}
\]

\(^{12}\) The proofreader of this chapter, who is a native speaker of British English, has advised me that *on* substitution is completely unacceptable in her dialect of spoken English. Since I am a native speaker of American English, I concede that the distinction proposed above may be one that is particular to North American speakers of the language.

\(^{13}\) For reasons that are not entirely clear to me, I prefer the comparative form of the adjective in this particular sentence (*i.e. It is easier on the rich to (just) let the poor do the hard work*). This raises the issue of whether examples such as that presented by Cormack (1998:249, her example #37), and reproduced in (i) below, involve the *difficulty* sense of the adjective, as she suggests, or the *tough on* sense:

\[
(i) \text{ It is easier [for the boys] [for the girls to make the beds].}
\]

Since I find *on* substitution acceptable in (i) (although somewhat awkward with the complementizer-headed embedded clause), I suggest that it is possible that the semantics of this sentence may not involve the same sense of *easy* that is licensed to participate in TM. Space considerations dictate, however, that I leave further investigation of this issue for some future time.
Furthermore, the for co-occurrence test reliably identifies those tough adjectives, such as impossible, that lack a related tough on sense (cf. (20), below):

(20) *It would be impossible *for John/*on John [for his wife to accept this view].

Returning to the issue of the semantic properties of the difficulty sense of the tough adjective, I have argued that these adjectives s-select an entity argument, to which they assign the thematic role of experiencer, and a propositional argument. But does the tough adjective assign a θ-role to its propositional argument and, if so, what type of role might this be? In response to this question, Landau (1999:347) asserts that the proposition bears the semantic role of cause, as it is the propositional argument that is construed as being causally responsible for bringing about the mental state ascribed to the tough experiencer (see also Pesetsky 1987:133-4).

A complication is introduced in connection with the above proposal, however, when it is considered that, like functional degree heads, tough adjectives c-select for both predicative as well as non-predicative complements. According to the criteria outlined in Rothstein (2001:48-9), the tough associate clause is classified as an argument of the tough adjective, since it contains no open (i.e. unsaturated) syntactic position, while the tough infinitive qualifies as a predicate on the basis of the presence of a syntactic gap. Yet, if only arguments are eligible to receive a θ-role from a licensing predicate, then how is θ-role assignment effected in the case of the TC, where the propositional complement of the adjective takes the form of a predicate?

There are two schools of thought in this regard. According to one view, the tough adjective assigns a causal role to a DP subject argument only when the adjective appears in a TC; the assignment of the causal role is thus viewed as being exclusively related to the construction itself. According to the second view, the argument structure of the adjective is held constant, with the cause role differentially assigned, depending on whether the adjective occurs in an expletive-headed construction or in a TC. Each theory offers a legitimate means of addressing a well-recognized fact, which is that speakers tend to interpret the subject argument of the TC as bearing a
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connotation of responsibility for, or causation of, the state of affairs that is described by the *tough* infinitive (see, e.g., Cormack 1998:247). That is, the default interpretation of the sentence in (21b), below, typically carries the implication that some property or properties of the book – for example, its poor quality or small print - serves as the cause of the difficulty that an individual may experience in reading it; (21a), an expletive-headed *tough* sentence, carries no such implication, however:

\[
\begin{align*}
\text{(21)} & \quad \text{a. It is difficult to read this book.} \\
& \quad \text{b. This book is difficult to read.}
\end{align*}
\]

Kim (1995) takes the second of the theoretical positions outlined above, maintaining that the *tough* adjective assigns a causal role to its propositional argument in (21a) and to its matrix subject argument in (21b). One consequence and, I think, potentially problematic aspect of such an analysis, however, is that the grammatical status of the infinitive clause is allowed to vary in the two types of *tough* sentence, with the *tough* infinitive serving as a complement to the adjective in (21a) but as an adjunct to the adjective in (21b). This is an issue that I specifically address in §1.3.1.1, where I will argue, pace Kim, in favour of a single, uniform subcategorization of the *tough* adjective.

Cormack’s (*op.cit.*) treatment of the phenomenon is more in keeping with the first view, since, for her, attribution of responsibility to the subject is uniquely associated with the TC and thus not of relevance in the case of the *tough* associate. She proposes that this added element of meaning arises not through thematic role assignment but rather through the existence of a default meaning postulate to this effect.

Like Cormack, Goh (2000b) favours a construction-specific account of the phenomenon, but, unlike Cormack, he proposes a pragmatic rather than semantic explanation of the same. In particular, he argues against the claim that the causal interpretation of the subject argument of the TC derives from semantic entailment. He begins with the observation that the subject argument of the TC is not *necessarily* associated with a causal interpretation. For example, in a sentence such as (22),

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below (Goh’s #21a, \textit{ibid.}:5), it would be nonsensical to attribute the ease of finding the books to any particular property of the books themselves:

\begin{quote}
(22) Books are easy to locate in this library.
\end{quote}

Second, he points out that even in those contexts in which the subject argument can be construed as being responsible for the event described, it is possible to cancel this interpretation with the provision of further context in which an alternative source of the responsibility is identified, as illustrated in (23), below (Goh’s #31a, \textit{ibid.}:6):

\begin{quote}
(23) This exam will be almost impossible to pass – because I didn’t study for it at all.
\end{quote}

Goh asserts that, in the normal case, speakers evaluate the difficulty or ease associated with a particular event by checking it against a pragmatically determined “comparison set” of alternatives (\textit{ibid.}:8). In the case of the expletive-headed \textit{tough} sentence, the relevant comparison set is assumed to consist of events, whereas in the case of the TC, Goh suggests that the subject argument may instead be evaluated against a comparison set of entities, as a means of determining the ease or difficulty of the event that is referenced in the embedded clause. As he explains, in a sentence such as (21b), it is the DP \textit{this book} that is pragmatically salient as the subject of the sentence and which is therefore likely to serve as the point of departure for evaluating the ease or difficulty to be ascribed to the activity of reading. And since properties associated with the subject will be compared against those of entities contained in an appropriate comparison set, the distinct possibility arises that some property or properties of the book itself may be singled out as being causally responsible for the difficulty or ease that is associated with reading the book.

Because I find Goh’s arguments convincing, I will henceforth assume that any connotation of causation or responsibility that is borne by the subject of a TC arises as a consequence of pragmatic considerations that are peculiar to the construction. In particular, I take the view that the s-selection specification of the \textit{tough} adjective is uniform, with the adjective requiring one argument of the entity type and one of the

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propositional type. As regards the $\theta$-roles assigned by the adjective, I maintain that these roles can only be assigned to arguments of the appropriate semantic type, with the entity argument taking the role of experiencer and the propositional argument the role of theme. Note that, *pace* Landau (1999), I choose not to label the thematic role that is assigned to the propositional argument a cause role, because I am not entirely convinced that this is an accurate description of the semantic import of this constituent. Instead, for the purposes of the present work, I prefer the more neutral label of *theme*.

1.3.1 Syntactic distribution

In terms of syntactic criteria, *tough* predicates are, of course, primarily identified through their participation in the TC. In §1.2.0, I provided a working definition of the TC, in which I defined this construction as involving the referential co-indexation of a matrix subject argument and direct object gap, the latter embedded in an infinitival complement clause. Some further specification of my use of this term is required, however, since, as it stands, this working definition does not offer a sufficient means of distinguishing the TC from certain other syntactically related constructions that will feature in later discussion in this thesis. Examples of the relevant constructions are provided in (24a-d), below:

(24) a. John found [DP some [NP wood, [to use $e_i$]]](to build the shed).
b. Mary [VP brought cages$_i$ [to put the rabbits in $e_i$]].
c. The boys$_i$ are [DegP too young [to teach $e_i$]].
d. Butterflies$_i$ are [AP pretty [to look at $e_i$]].

Like the TC, all of the constructions illustrated in (24) involve a referential relationship that holds between a DP in the matrix clause and an object gap in an embedded clause. I am aware that in the syntactic literature, constructions such as (24c) or (24d) are sometimes described as TCs, presumably on the basis of the structural similarities noted here. It is my contention, however, that the TC can be uniquely distinguished from each of the other constructions illustrated in (24), an issue that will represent the focus of the remaining discussion in this chapter.
Before presenting the criteria by which I propose that the TC can be uniquely distinguished from the other constructions illustrated in (24), it will first be necessary to provide a unique label for each of the constructions to be compared. For sentence (24a), in which a restricted relative clause is predicated of a matrix object DP, I will adopt the standard term *infinitival relative construction* or IR. After Jones (1991:27), I will assume that an IR can be distinguished from a sentence such as (24b), which I will term an object-gap *purpose* construction (OPC), according to the structural location at which the infinitive clause attaches. In an OPC, this is standardly assumed to be matrix VP since the infinitive clause specifies the purpose of the activity denoted in the matrix clause, while in the IR, the clause is standardly held to attach to the matrix DP (although, see Jones *op.cit.* or Williams 1980 for arguments that the infinitival modifier attaches at the X-bar rather than XP level).

There also exist sentences, which, like (24b), involve VP-attachment of a purposive modifier but do not contain an embedded object gap. These sentences instead contain a gap in the subject position of the embedded infinitive clause, as illustrated in (25), below:

\[(25) \text{Mary, [VP brought John, along [e$_i$ to talk to the candidates]].}\]

We will therefore find it helpful to distinguish the two types of purpose constructions exemplified in (24b) and (25), above.\(^{14}\) After Jones (*op.cit.*:26), I will adopt the label ‘OPC’ for sentences such as (24b) and the label ‘SPC’ for sentences such as (25). I prefer, however, to interpret these acronyms as referring to either the ‘subject-gap purpose construction’ (SPC) or the ‘object-gap purpose construction’ (OPC), rather than as referring to *subject- or object-gap purpose clauses*, as proposed by Jones. This is because, like Bach (1982), I prefer to reserve use of the terms ‘subject-gap

\[^{14}\text{For the sake of clarity, I should also distinguish a third type of purpose construction that is referenced in the literature, which differs syntactically and semantically from both the SPC and OPC. This is what is sometimes termed a rationale clause (cf. Faraci 1974, Tsimpli 1998) or an in order (to) clause (IOC) (Jones 1991, Bach 1982), as illustrated in (i), below:}\]

\[(i.) \text{Sue, chose only the freshest chillis [in order e, to make the soup extra spicy].}\]

Note that the IOC in (i) can be distinguished from the SPC in that it is the matrix subject argument that serves as the subject of the *in order to* clause, rather than the matrix object (*cf.* (25), above).
purpose clause’ or ‘object-gap purpose clause’ for the description of the embedded infinitive clause rather than for the description of the entire sentence.

With reference to (24c), above, constructions such as these are given a number of descriptions in the literature, including object deletion constructions (Lasnik and Fiengo 1974) or degree clauses (Tsimpli 1998). I think the first term is problematic because it has been used imprecisely in the literature. For example, Cinque (1990:153-4) groups sentences such as (24b), (24c), and the TC under the single label of complement object deletion (COD) constructions. And with regard to the second term, degree clause, I consider this term unsuitable as well, since I prefer to reserve its use for the description of the complement clause of a degree head, such as too, rather than for the entire construction illustrated in (24c). Instead, I will describe a sentence such as (24c) as a degree construction or DC, although I will additionally require some means of distinguishing the two possible readings that are associated with sentences of this type. For example, sentence (24c) admits either the interpretation illustrated in (26a) or the interpretation illustrated in (26b):

(26) a. The boys$_i$ are too young [e$_i$ to teach rugby/physics/their peers].
   b. The boys$_i$ are too young [for us [to attempt [to teach e$_i$]]].

In (26a), the matrix subject argument is referentially coindexed with a gap in the subject position of the embedded clause. I will therefore adopt the term subject-gap degree construction, or SDC, to describe sentences of this type. In contrast, (26b) involves the referential coindexation of the matrix subject argument and embedded
object gap, and so I will term such a sentence an object-gap degree construction, or ODC.\textsuperscript{15}

Finally, I turn to the construction in (24d), which, again, is not always clearly distinguished in the literature from the constructions listed in (24a-c) (see, \textit{e.g.}, Contreras 1993 or Tsimpli \textit{op. cit.}). Adapting Lasnik and Fiengo’s \textit{(op. cit.)} term \textit{object deletion construction}, I propose \textit{adjunct object deletion construction (AODC)} as a label for (24d), in keeping with the observation that the embedded infinitive clause in this construction plays the grammatical role of adjunct modifier to the matrix adjective. My adaptation of Lasnik and Fiengo’s terminology should not be taken, however, as an endorsement of the specific syntactic analysis that they propose for the AODC. Nevertheless, I concur with the authors that it is likely that the syntactic derivation of a sentence such as (24d) involves a deletion rather than movement operation, according to the assumption that the subject argument is base-generated as the external argument of the matrix predicate, thus rendering the matrix subject position an improper site for object movement.

In concluding this section, I propose that the TC can be uniquely distinguished from the OPC, ODC, and AODC, when the considerations listed in (27), below, are taken into account:

\begin{enumerate}[a.]
  \item The categorical status of the complement clause
  \item The grammatical status of the complement clause
  \item The availability of long-distance extraction and parasitic gaps
  \item The obligatory/non-obligatory status of the gap
  \item The thematic status of the matrix subject position
\end{enumerate}

\textsuperscript{15} There is, additionally, a third type of \textit{degree} construction which is referenced in the literature and which is illustrated in (i), below:

(i) The boys are too young for the coach to be able to work with them properly.

As can be readily seen, the complement clause in (i) does not contain a gap or open position and therefore the syntactic analysis of this sentence differs from that of either the SDC or ODC, which represent my primary focus in the present work. (See Browning 1987:143-4 for further discussion of the semantic and syntactic distinctions that exist between (i) and (26a&b), above.)
In the remainder of this chapter, I will examine each of the topics listed in (27) in turn. It is important for me to acknowledge before proceeding, however, that while I will be interested to highlight certain differences that exist between the TC and various other constructions, space considerations prevent a full investigation of all of the points of diversity. My primary focus will thus remain on identifying those syntactic properties that uniquely define the TC – and, by extension, the tough adjective - in English.

1.3.1.0 Categorial status of the tough infinitive

In this section, I propose that the appropriate categorial analysis of both the tough infinitive and tough associate is infinitive phrase (IP). In order to better explain my reasoning behind this claim, I begin with a consideration of alternative analyses that have been offered in the literature. In generative syntactic theory, there is a long tradition of taking the categorical realization of a propositional complement to be CP (i.e. a full clause), even when such a constituent lacks an overt complementizer and/or subject (see, e.g., N. Chomsky 1981, 1982, or Koster and May 1982). Bošković (1996:290-1), however, follows Law (1991), in maintaining that infinitival complements should be analyzed as IP by default, in the absence of any lexical requirement that would indicate otherwise. In accordance with the Principle of Economy of Representation originally proposed by Law, Bošković has specifically argued that if two syntactic representations (e.g. CP and IP) satisfy the same lexical requirements and serve the same grammatical function, then the representation that postulates the fewer number of projections is to be favoured. Bošković’s claim is thus complementary with my own assertion that both the tough infinitive and tough associate take the form of IP rather than CP. In particular, neither type of complement contains any evidence of the presence of lexical material in C (for complementizer) or Spec CP.16

16 I am aware that there have been recent proposals to distinguish different types of IPs according to their featural specification for tense and finiteness (see, e.g., Bošković 1996 or Martin 1992, 2001). Because I do not believe that such a finer-grained distinction is necessary for the points made above, I will not pursue these claims here.

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One oft-cited piece of evidence for the CP analysis of the *tough* infinitive was earlier presented in (15b), §1.3.0, and is repeated here as (28), below. As can be clearly seen, the sentence in question involves a clausal complement that includes the complementizer *for* and presumably therefore a C projection:

(28) It is easy [\[PP for the rich\] [\[CP for the poor\] to do the hard work]].
(Browning 1987:33)

Recall, however, that I have questioned the grammatical acceptability of such sentences and moreover have proposed that, if available at all, sentences of this type may not involve the *difficulty* sense of the *tough* adjective but instead an alternative *tough on* sense.\(^{17}\) In support of this claim, I offered the observation that there in fact exists no legitimate *tough*-moved counterpart of (28) (cf. *Hard work, is easy [for the rich] [for the poor to do e].) Instead, *tough*-movement is available only when the complement clause does not feature an overt DP subject, as in the TC *Hard work, is easy [for the rich] [PRO \[to do e]].* Thus, I think that it is reasonable to question the validity of this type of evidence for a CP analysis of the *tough* infinitive.

As far as I am aware, there is only one other piece of theoretical evidence that could reasonably be offered in support of a CP analysis of the *tough* complement clause. This would involve the claim that the *for*-phrase that appears in conjunction with adjectives of the *tough* class should be analyzed as part of the embedded CP, rather than as a self-contained *prepositional phrase* (PP). Certain authors have advanced such a claim (e.g. Gazdar, Klein, Pullum, and Sag 1985 and Hukari and Levine 1990, both cited in Jacobson 1992), but I believe that the weight of the empirical evidence clearly favours a prepositional analysis of the *for*-phrase, as has been argued by, *inter*

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\(^{17}\) *Pace* both Browning (1987) and Cormack (1998), I therefore reject the contention that when the *tough* adjective co-occurs with a single *for*-phrase, the resulting sentence is ambiguous between two possible structural representations, as illustrated in (i) and (ib) below:

(i)  a. It is easy [\[PP for the girls\] [\[IP PRO to make the beds\].]
    b. It is easy [\[CP for \[IP the girls\] to make the beds\].

According to the arguments I advanced in §1.3.0, I take the position that unless it is the *tough on* reading of the adjective that is intended, the complementation possibility exemplified in (ib) is completely ruled out for the *tough* adjective.

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Evidence for the prepositional, and therefore independent, status of the for-phrase includes the following. First, as Jacobson \textit{(op.cit.)} has observed, the tough adjective imposes selection restrictions on the DP complement of for, which would not be anticipated if the for-phrase is analyzed as a complementizer introducing an embedded clause. For example, with reference to a sentence such as (29), below, (Jacobson’s #18, \textit{ibid.}:276), it is clear that the implausibility of the sentence derives from the incompatibility of the matrix adjective easy and the inanimate, non-sentient complement of for, ‘that picture,’ which is incapable of experiencing ease or difficulty:

\begin{equation}
\text{(29)} \quad \text{*John would be easy for that picture to frighten.}
\end{equation}

Second, as has been argued by a number of authors (see, \textit{e.g.}, Lasnik and Fiengo \textit{op.cit.:538-9}), the for-phrase associated with the tough adjective is relatively free to move, as illustrated in (30), below, in contrast to the for-phrase that introduces a CP, as illustrated in (31):

\begin{enumerate}
\item (30)  
\begin{enumerate}
\item That essay was easy for Carmen to write.
\item For Carmen, that essay was easy to write.
\end{enumerate}
\end{enumerate}

\begin{enumerate}
\item (31)  
\begin{enumerate}
\item I’m ready for Bill to submit his proposal to me.
\item *For Bill, I’m ready to submit his proposal to me.
\end{enumerate}
\end{enumerate}

For me, then, the sole remaining issue to be considered in this section is whether the tough infinitive is more appropriately categorized as IP or as VP, as has been elsewhere argued in the literature. Arguments for the VP analysis of the tough infinitive date at least back to Bresnan (1971) but have also been advanced more
recently by Jones (1991). Bresnan, whose analysis subscribed to the tenets of the EST, recognized only a simple distinction between fully clausal complements, labelled ‘S,’ and non-clausal complements, labelled ‘VP.’ In support of a non-clausal analysis of the propositional complement of the tough adjective, she offered the following types of evidence. First, she observed that there-insertion is disallowed in the case of both the tough associate clause and tough infinitive, as illustrated by the ungrammaticality of (32a&b), below (see also Lasnik and Fiengo op.cit.:549).

Translated into modern theoretical terms, this suggests that neither constituent contains the functional projection(s) required to support the presence of an overt subject and case-assigning complementizer for:

\[
\begin{align*}
(32) \quad &a. \quad \text{*It is easy [for there to be concern about the situation in the Middle East].} \\
&b. \quad \text{*The situation in the Middle East, is easy [for there to be concern about it].}
\end{align*}
\]

As has been widely noted, this particular feature of the syntactic distribution of the tough adjective stands in contrast to the distributional privileges of the degree modifier, which, as illustrated in (33), below, is fully compatible with a CP complement:

\[
(33) \quad \text{The diplomats are too distrustful of the opposition [for there to be an honest debate of the issues today].}
\]

Notably, the unacceptability of the tough sentences illustrated in (32a&b) would still follow if the tough associate/infinitive were analyzed as an IP, as I have proposed,

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18 Jacobson (1992) also offers a relatively recent VP analysis of the tough infinitive, which takes the semantic properties of the tough adjective, specifically, its control properties, as the relevant determining factor. Because I do not share the theoretical orientation of the author, however, I will not explore this particular analysis here.

19 Interestingly, it seems that there-insertion is licensed in the case of the tough on reading of the adjective tough, as illustrated in (i), below:

(i) \quad \text{It is tough on the negotiators [for there to be continuing opposition from the rebel factions].}

The above evidence therefore suggests that there is a clear difference in the subcategorial properties associated with each of the two senses of the adjective, as was argued in §1.3.0.
rather than as a VP, since the lack of a C projection would mean that a complementizer could not be merged in C to assign case to the expletive subject there.

The other piece of evidence offered by Bresnan for a VP analysis of the tough propositional complement is also compatible with an IP analysis of the same. This concerns the contrast noted between the sentence pairs illustrated in (34) and (35), below (Bresnan’s #23 and #24, op.cit.:264), in which the fully clausal complement of the adjective surprising is free to move to the subject position of the sentence (or is free to be merged there), whereas the complement of the tough adjective does not enjoy the same distributional privilege:

(34) a. It is hard for a woman to act that way.
    b. *For a woman to act that way is hard.

(35) a. It is surprising [CP for a woman to act that way].
    b. [CP For a woman to act that way] is surprising.

Yet another piece of evidence for a “non-sentential” or VP analysis of the tough complement is offered by Lasnik and Fiengo (1974:547-9), who contrast the availability of passivization in the clausal complement of a DC, as in (36a), below, with its non-availability in the TC, as in (36b) (their examples #15 and #73a, ibid.:537 and 549, respectively):

(36) a. Maryi is too clever to be defeated ei in a debate by Bill.
    b. *Johni is easy (for Bill) to be outsmarted by ei.

According to then-standard theoretical assumptions, Lasnik and Fiengo maintained that the grammatical operation of passivization required the presence of a “deep syntactic subject” (1974:554). They reasoned, therefore, that if the tough infinitive took the form of a VP, which lacks a subject projection, then the non-availability of

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20 In fact, Bresnan (1971:264) offered a third piece of evidence for a VP analysis of the tough infinitive in her original paper. I do not reference this particular evidence above, however, as I believe it pertains to the distributional properties of the tough on rather than difficulty sense of the tough adjective.
passivization in this constituent could be readily explained.\footnote{According to application of the same criterion, however, I note that the VP analysis of the tough associate would be questionable since passivization is fully acceptable in these contexts (cf. *It is hard for Mary to be cross-examined without her counsel present*). Nevertheless, Lasnik and Fiengo (1974:561) analyze both the tough associate and tough infinitive as VP. While I agree with the authors that neither of these constituents should be analyzed as a complementizer-headed clause (*i.e.* as CP), I believe that modern theoretical developments offer a more attractive alternative to the VP analysis that they proposed for each.} And, of course, it is possible to advance a similar argument according to more recent generative syntactic theory, in which lack of a suitable landing site for NP movement of the object argument in the lower clause would bar passivization of the same.

Nevertheless, there is good reason to question the significance that Lasnik and Fiengo attributed to the above type of evidence. This is because the passivized versions of the tough infinitive were attested in previous stages of English and, moreover, have only relatively recently disappeared from use, according to the observation that these forms were attested in the language as late as the 19\textsuperscript{th} century. I discuss in Chapter 2, §2.3, the relatively recent timing of this change in the language, which suggests that the passivized version of the tough infinitive is not necessarily incompatible with modern-day grammars but rather that its use has simply declined, and eventually died out, for pragmatic or stylistic reasons.\footnote{Consistent with the remarks made here, the native speakers that I have informally surveyed tend to reject sentences such as (36b) because they judge them as pleonastic rather than as completely ungrammatical. I suggest that this is because the presence of the tough adjective alone is sufficient in PdE to determine an object interpretation of the matrix subject, whereas in previous stages of the language, use of the passivized infinitive served an important disambiguating function (see §2.3, Chapter 2, for further discussion).} If this reasoning is correct, as I believe it to be, then use of the passivized version of the tough infinitive is more rightly viewed as anachronistic rather than as ungrammatical, and the validity of the evidence presented in (36a&b), above, is brought into question.

More recent arguments for the VP analysis of the tough infinitive are presented by Jones (1991), although it is important for me to acknowledge before proceeding that Jones proposes this analysis only for the tough infinitive and not for the tough associate clause, which he analyzes as CP. He presents a number of syntactic tests that can be used to distinguish clausal from non-clausal complements, a full review of which is outside the scope of this thesis. (The interested reader is instead referred to

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Jones *ibid.*:114-39; see also Williams 1984:138-44). The point that concerns the present discussion is this: Jones himself concedes that judgments concerning the non-clausal status of the *tough* infinitive (which he rather surprisingly terms an *easy clause*) are not always as clear-cut as they are in the case of related constructions such as the OPC or AODC.

For example, one test employed by Jones assesses the degree to which the aspectual auxiliary verb *have* is admitted in infinitival contexts. If the auxiliary is fully licensed, then GB Theory holds that the constituent must include a syntactic projection for Tense (T) and must therefore take the form of an IP or CP; if the auxiliary is not compatible, then a VP analysis is assumed to be the more appropriate. However, as Jones notes, whereas judgments of ungrammaticality tend to be robust (indicated by ‘*’ notation) when auxiliary *have* appears in the embedded clause of the OPC (*cf.* (37a), below) or the AODC (*cf.* (37b)), judgments are less reliable (indicated by ‘?’ notation) in the case of the TC (*cf.* (37c)). (Examples are his #88b, #67a, and #18b, *op.cit.*:114, 165, and 147, respectively.)

(37)  
\begin{enumerate}
  \item *I bought it \[to have \text{ read} \text{ } e_i (\text{at least before graduating})].*
  \item *Mary \_i \text{ was pretty } [to have \text{ looked at } e_i].*
  \item ?Moby Dick \_i \text{ will be easy } [to have \text{ read } e_i (\text{before I make it to college})].
\end{enumerate}

As Jones further observes, there exist examples such as (38), below (his #19, *op.cit.*:147), in which the contrast between the relative acceptability of the TC and the other referenced constructions is even more pronounced with regard to the presence of auxiliary *have*. Unfortunately, this example features an adjective, *great*, that I would not classify as a *tough* predicate and, according to my own judgment, the sentence is somewhat less acceptable with the substitution of a *tough* predicate such as *easy*:

(38) ?Moby Dick \_i \text{ would have been great } [to have \text{ read } e_i].

Because Jones is committed to a VP analysis of the *tough* infinitive, he accounts for the relative acceptability of a sentence such as (38) by suggesting that the “aspectual
parallelism” that holds between the matrix and embedded clause renders such a sentence more pleasing to the ear, despite its ungrammatical status. Yet, I note that a sentence such as (37b) cannot be similarly improved (cf. *Mary, would have been pretty to have looked at e_i), which suggests to me that the VP analysis of the propositional complement is more reliable in the case of the AODC than in the case of the TC.

According to my own reading of the various arguments presented in Jones, I maintain that the IP analysis of the tough infinitive remains a plausible option. Furthermore, I believe the IP analysis is a preferable option in light of the following considerations. Since Jones is forced to concede that a VP analysis of the tough associate clause is inappropriate, he is left with no option but to propose a dual subcategorization for the tough adjective. While I certainly agree that there are cases where a dual subcategorization is clearly called for (as, for example, in the case of the adjective ready, which c-selects both IP as well as CP complements), I can find no compelling reason why the tough adjective should be similarly treated. Instead, I take the position that, barring any evidence to the contrary, it is theoretically preferable to maintain a single subcategorization for the propositional complement of the tough adjective.

In closing, I offer one final piece of evidence against the VP analysis of the tough propositional complement and in favour of the IP analysis of the same. This concerns the behaviour of anaphors embedded in the tough infinitive and tough associate clause, as illustrated in (39a&b), below (adapted from examples originally offered by Ian Roberts, p.c.). Note that the grammaticality of these two sentences indicates that the reflexive pronoun each other is properly bound in the lower clause, despite the fact that the complement clause lacks an overt antecedent for the reflexive:

(39) a. It is difficult [to read those (types of) stories to each other].

b. Those (types of) stories, are difficult [to read e_i to each other].

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According to standard GB assumptions, reflexive elements require a local binder in order to be properly licensed; with reference to the above examples, the default assumption would be that the binder is embedded subject PRO.\textsuperscript{23} And since the presence of PRO in the structural representation of the propositional complement is inconsistent with either a VP analysis or a CP analysis of the same, I submit that the evidence cited in (39) provides further support for the IP analysis of the \textit{tough} infinitive/\textit{tough} associate that I have advocated in this section.

1.3.1.1 Grammatical status of the \textit{tough} infinitive

I next consider another issue that has served as a long-standing point of contention in the literature. This concerns the argument versus adjunct status of the propositional complement of the \textit{tough} adjective. In §1.3.0, I discussed Kim’s (1995) contention that the \textit{tough} infinitive is more appropriately analyzed as an adjunct rather than as an argument of the \textit{tough} adjective, a claim she bases on certain perceived differences in the meaning of the TC and the expletive-headed \textit{tough} sentence. In this section, I will further examine such claims, including those based on syntactic evidence, and offer reasons why I believe an adjunct analysis of the \textit{tough} infinitive to be untenable.

Proposals for an adjunct analysis of the \textit{tough} infinitive date at least back to Oehrle (1979) and have been offered in EST, GB, and Minimalist treatments of the TC (see, \textit{e.g.}, Nanni 1980, Bennis and Wehrmann 1987, Bennis 1990, Jones 1991, Wilder 1991, Contreras 1993, and Hornstein 2001). In the syntactic literature, the omissibility of a constituent is arguably the pre-eminent test for determining adjunction. However, as Jones (\textit{op.cit.}:66-7) observes, syntactic omissibility need not necessarily indicate that a constituent has the grammatical status of an adjunct.

\textsuperscript{23} I necessarily simplify the level of discussion with regard to the appropriate syntactic analysis of sentences such as (39a&b). For example, I do not consider the issue of how the referential index of the null experiencer argument is transferred to PRO and then ultimately to the embedded reflexive object, nor do I explore the issue of whether the experiencer argument of the \textit{tough} adjective can be considered structurally present, even when it is phonologically null. I will simply note that, with regard to the latter issue, I favour the analysis proposed by Rizzi (1986), in which it is argued on the basis of Italian data that the \textit{tough} experiencer remains a true implicit argument (\textit{i.e.} one that is not syntactically expressed) when it is not lexically realized (see also Browning 1987). (For a similar argument expressed in a Minimalist framework, see Manzini and Roussou 2000:427-9 and for a contrastive position, see Epstein 1984.)
This is because so-called *implicit arguments* may influence the interpretation of a sentence, even though these constituents cannot reasonably be considered part of the syntactic representation of the same (see also Rizzi 1986). For this reason, I will be concerned to investigate not only whether the *tough* infinitive is omissible at the representational level of PF but also whether this constituent is similarly omissible at LF, as would be anticipated if the *tough* infinitive has the grammatical status of an adjunct.

According to my own judgment, I think it is unreasonable to argue that the *tough* infinitive is freely omissible from the LF representation of the TC, given the anomalous status of a sentence such as (40) below:

(40) *This fish is hard for me.*

In (40), the semantic requirements of the *tough* adjective are not met because the sentence contains no argument that can be construed as a proposition. With the addition of a *tough* infinitive, however, as in (41) below, the sentence becomes acceptable. I submit that this is because the *tough* infinitive assumes the status of a proposition when the semantic value of the matrix subject DP is applied to the unsaturated or open position in the clause:

(41) This fish is hard [for me [to catch/cook/clean e,]].

However, there also exist sentences such as (42), below, which lack a *tough* infinitive but are nevertheless quite standard in spoken English:

(42) That exam was difficult [for me].

Just as in (40), I would once again argue that the matrix DP in (42) cannot serve as the lexical realization of the propositional argument of the *tough* adjective and yet (42) is well-formed compared to (40). After Goh (2000b), I argue that the acceptability of (42) derives from the fact that PF deletion of the *tough* infinitive is pragmatically allowed in certain circumstances. As Goh observes, in the absence of a special
context, the default reading of a sentence such as (42) would be that the referenced exam was difficult for someone to pass. If, however, a speaker were to have some alternative meaning of the sentence in mind, such as *That exam was difficult to read*, I concur with Goh that the *tough* infinitive cannot be omitted from the PF representation of the sentence if it is to be understood as the speaker intended.

If we maintain, as above, that the *tough* infinitive can be deleted at PF under certain conditions, there still remains the issue of how the semantic import of this constituent is conveyed when it remains phonetically null. On the basis of his examination of connectivity phenomena in English, Pesetsky (1987) has argued that the phonetically null *tough* infinitive remains present in the structural representation of the TC. Specifically, given the grammaticality of a sentence such as (43), below (adapted from Pesetsky’s #10a, *ibid.*:128), he argues that binding considerations mandate the structural presence of the *tough* infinitive, which serves as a suitable antecedent for the displaced object DP, *pictures of himself*:

(43)  [Pictures of himself]ₖ are difficult for Johnₖ [PROₖ to look at eₖ].

It would appear, then, that in terms of its syntactic and semantic omissibility, the *tough* infinitive does not display the characteristic behaviour of a true adjunct such as an adverbial clause. Even so, there are authors who have argued that an adjunct analysis of the *tough* infinitive is correct solely on the basis of an examination of the thematic properties of the *tough* adjective. For example, Jones (1991), Wilder (1991), and Hornstein (2001) have all argued that the *tough* adjective has a dual subcategorization, c-selecting a clausal argument when it appears in an expletive-headed *tough* sentence, but c-selecting a matrix subject argument and adjunct clause
when it appears in a TC.\textsuperscript{24} Taking into account the legitimate grammatical status of a sentence such as (42) above, these authors maintain that the \textit{tough} adjective may optionally assign its theme role – that is, the role typically assigned to the propositional argument of the adjective - to a DP argument with the semantic type of entity, when the adjective appears in a TC. One theoretical consequence of this assumption is that the \textit{tough} infinitive, as a non-\(\theta\)-marked constituent, must be analyzed as an adjunct rather than as a complement of the \textit{tough} adjective.

I maintain, however, that the above argument is flawed in two respects. First, as illustrated by the ungrammaticality of (40), above, the \textit{tough} infinitive is omissible only in certain pragmatically defined contexts, and therefore its syntactic behaviour is not characteristic of a true adjunct. Second, I object to the fundamental premise that the \textit{tough} adjective may assign a theme role to an entity argument, categorically realized as a DP, when the adjective occurs in a TC. This is because any such assumption is problematic for the standard view that a principled mapping relationship exists between the levels of s- and c-selection. As explained in connection with example (40), I maintain that the theme role of the adjective may be assigned only to a syntactic constituent that takes the semantic form of a proposition, which, in the case of the TC, is syntactically realized as an infinitive clause with a gap or open position. While I recognize that propositions may, at times, take the alternative structural realization of DP, I have argued that this is not the case in (40),

\textsuperscript{24} Canac-Marquis (1996:41-2) has advanced a similar claim for French, where the distinction between the \textit{tough} associate clause and \textit{tough} infinitive is signaled by the use of different introductory constituents, these being the complementizer \textit{de} in the case of the \textit{tough} associate and the preposition ‘\textit{à}’ in the case of the \textit{tough} infinitive. I am not convinced, however, that the French evidence is directly translatable to an analysis of the subcategorial properties of the English \textit{tough} adjective. This is because there are authors such as Roberts (1997:442-3; see also Kayne 2000:51-2) who maintain that the syntactic derivation of the French TC differs in certain fundamental ways from that of the English TC, which suggests the possibility that the subcategorization of the \textit{tough} adjective may not be the same in the two languages. (For differences between English and Italian TM, see Jaeggli 1982 or Rizzi 1982; for English/Spanish contrasts, see Montalbetti and Saito 1983 or Zagona 2002:259-62.)
where the subject DP is clearly interpreted as an entity, resulting in an interpretation of the sentence that is semantically anomalous.25

Finally, I will address two arguments that Contreras (1993) has advanced in the framework of GB Theory for the adjunct status of the *tough* infinitive. The first argument relies on the assumption that VP ellipsis is generally available in complement but not adjunct clauses and the second on *Condition on Extraction Domain* (CED) (Huang 1982) phenomena. Following Zagona (1982, 1988) and Lobeck (1986), Contreras assumes that infinitival *to* can only properly govern a null VP if the CP immediately containing *to* is a complement clause. According to all three authors, this is because *to* requires a θ-marked CP in order to inherit necessary tense features. Contreras then cites the following contrast in the grammaticality of (44a) and (44b) as providing evidence for the complement status of the embedded clause in the former versus the adjunct status of the *tough* infinitive in the latter (Contreras’s #11a and #11c, op.cit.:5):

(44) a. John is eager to please, but Bill is reluctant to [VP e].
    b. *John is easy to please, but Bill is hard to [VP e].

For me, however, the reliability of the evidence cited above is questionable. First, my own informal survey of native speakers has revealed that not all find sentences such as (44b) objectionable, a fact that Contreras himself acknowledges (op.cit., ftnt. 9). Second, even if it were to be established that sentences such as (44b) are ruled out by

25 Mulder and Den Dikken (1992:306, ftnt. 5) provide some supportive evidence for my contention that the *tough* adjective cannot assign its theme role to an argument of the entity type. Specifically, they point out the following contrast in grammaticality between (ia) and (ib):

(i) a. [Mary/*John] is a bitch.
    b. John is a bitch to have to deal with.

In (ia), whereas the predicate a *bitch* imposes selection restrictions on its choice of subject (i.e. it requires a feminine one), the same restrictions do not hold when the predicate appears in the TC. The authors rightly argue, I think, that because the *tough* predicate does not assign a θ-role to the subject DP in (ib), it therefore cannot impose any selection restriction on the same.

26 Furthermore, I am aware that other authors, such as Jacobson (1992), have offered examples of fully grammatical sentences which are superficially similar to (44b), above (cf. (i), below, modified version of her #34b, *ibid.*: 282):

(i) The rock is hard is for me to move e_k, but that one is quite easy [IP e_k].

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the grammar, Contreras himself provides an alternative reason why this might be so, based on the type of evidence listed in (45), below (his example (i) *op.cit.*:6, ftnt. 10):

(45) *Fred believes Mary to be intelligent, and John believes [IP Ed to [VP e]].

As Contreras observes, the sentence in (45) remains unacceptable even though VP ellipsis occurs in what is undisputedly a complement clause. He proposes that it is the IP rather than CP status of the complement clause that precludes VP ellipsis in (45), since he assumes that a CP is required if *inflection* (INFL) is to acquire the tense features that it needs to govern the null VP. What Contreras does not consider, however, is the possibility that the purported ungrammaticality of (44b) may similarly derive from the IP status of the *tough* infinitive, which I advocated in the previous section, rather than from the adjunct status of what he maintains is a full CP.

Turning now to his discussion of the relevance of CED effects for an analysis of the TC, Contreras focuses on the restricted interpretive possibilities associated with (46a), as opposed to (46b), below (his #24a and #22, respectively, *op.cit.*:8):

(46) a. When was Mary [hard [to please]]?
   b. When was Mary [reluctant [to speak]]?

Consistent with the CED, which generally licenses extraction from complement but not adjunct environments, Contreras notes that the question word *when* in (46b) can be interpreted as if it originates in either the matrix or embedded clause; that is, *when* can serve to question either the time at which Mary was reluctant to speak or the time of speaking. In contrast, however, he observes that the interpretation of *when* in (46a) can only pertain to the matrix clause, that is, *when* may not be used to question the time of pleasing but only the time at which Mary could be judged as being *hard to please*.

Yet, as Contreras himself acknowledges (see ftnt. 3, *op.cit.*:9) the evidence pertaining to CED effects is not entirely reliable, particularly when it concerns the *absence* of
such an effect in a specific construction. He cites two anonymous reviewers of his own paper who dispute the existence of CED effects in the TC and DC and who offer grammatical examples of wh-extraction out of the tough infinitive and degree clause, as, for example, in the sentence, *Who, is this book easy to read to e?* Moreover, I submit that the original comparison offered by Contreras, and illustrated in (46), is not a fair one and thus not a particularly persuasive piece of evidence for the adjunct status of the tough infinitive. This is because he focuses on the grammatical properties of the embedded clause in each sentence to the exclusion of other important considerations, such as the very different thematic relations that are exhibited in each. For example, while in (46a), it is Mary who both demonstrates reluctance and performs the act of speaking, in (46b), the person who is judged hard to please (i.e. Mary) is not the same person who does the pleasing. In particular, I think differences in the interpretive options associated with the two sentences have more to do with the semantic differences that obtain between the two matrix predicates, than with a lack of syntactic integration between the tough adjective and embedded infinitive clause.

In conclusion, I do not find the arguments reviewed above sufficiently compelling to reject the complement analysis of the tough infinitive that I have advocated. I now turn to the issue of how the TC can be distinguished from other syntactically related constructions with regard to the availability of long-distance extraction of an embedded object argument.

1.3.1.2 Availability of long-distance extraction

In the GB literature, it has long been held that one of the privileges of wh-movement, as opposed to NP movement, is that extraction of a phrasal constituent is permitted to occur across multiple embedded clauses, so long as certain licensing conditions (e.g. subjacency or the CED) are met. Nearly thirty years ago, N. Chomsky (1977) observed that, in this regard, the TC displays the characteristic properties of wh-movement, with multiple embedded clauses allowed to intervene between the subject of the TC and the tough infinitive, as illustrated in (47), below (his example #127bii, *ibid.*:103):
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John, is easy (for us) [to convince Bill [PRO to do business with e]].

It is important to note, however, that native speakers of English do not universally accept the grammaticality of sentences such as (47). Some relevant evidence in this regard comes from Fischer, van Kemenade, Koopman, and van der Wurff (2000:275), who report that their search of both Brown and LOB corpora yielded no modern-day examples of such constructions, even though the syntactic analysis of the TC that the authors adopt predicts their grammaticality. While findings such as these must be taken seriously, I suggest they reflect the rarity, rather than non-availability, of such constructions. This is because in my own dialect of American English, I would judge a sentence such as (48), below, grammatically acceptable, even though somewhat awkward:

(48) That sort of problem would be [difficult/simple/tough] for me to imagine Bill being able to solve in an hour.

I think it is plausible that speakers could judge a sentence such as (48) unacceptable simply on the basis of processing cost considerations, given that a large amount of intervening material separates the subject antecedent from the embedded gap. As is well recognized in the psycholinguistic literature, the processing of filler-gap dependencies places demands on memory over and above those associated with the processing of sentences which do not involve displaced constituents. Therefore, it is reasonable to consider that the acceptability of a sentence such as (48) could degrade as the level of embedding increases (a result that I note was, in fact, obtained in the experimental study described in Chipere 1997). Moreover, it is also reasonable to consider that children judge sentences such as (48) less acceptable than adults do, if,
as suggested here, the processing demands associated with such sentences are relatively greater than those associated with standard examples of the TC.\footnote{The above psycholinguistic considerations notwithstanding, it has also been suggested in the syntactic literature that certain structural considerations may affect acceptability judgments in the case of multiply embedded sentences such as (48). N. Chomsky (1977), for example, points out that when a finite clause barrier intervenes between the subject antecedent and the embedded object gap in a TC such as (i), below (his example #127c, \textit{ibid.}:104), the acceptability of long distance extraction degrades:}

Looking at the wider availability of long-distance extraction in English, I believe it is significant that this property is one that both the TC and ODC share, but which is excluded in the case of the AODC, as illustrated in (49a-c), below:

\begin{enumerate}
\item[(49) a.] That (sort of) dress$_i$ was easy to convince Mary to buy e$_i$ (TC)
\item[(49) b.] That (sort of) dress$_i$ is too expensive to imagine Mary being willing to buy e$_i$ (ODC)
\item[(49) c.] *That (sort of) dress$_i$ is uncomfortable to expect Mary to want to try on e$_i$ (AODC)
\end{enumerate}

The distributional evidence thus suggests that a complement analysis is more appropriate for the clausal complement of the \textit{tough} adjective and degree head, than for the embedded clause that appears in conjunction with an \textit{adjunct object deletion} (AOD) predicate such as \textit{uncomfortable}. Nevertheless, it has been persuasively argued elsewhere in the literature that AODCs such as (49c) are more appropriately judged semantically anomalous rather than syntactically ill-formed (see, \textit{e.g.}, N. Chomsky 1977:109 and Schacter 1981:446-7 or, alternatively, Mulder and Den}

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Dikken 1992:306, ftnt. 5, for an opposing view).\textsuperscript{28} Similar issues arise when the licensing of parasitic gaps is considered. For example, it is well recognized that the grammatical status of an AODC that features a parasitic gap, as in (50c), below, is less reliable than that of either the TC (\textit{cf.} 50a) or the ODC (\textit{cf.} 50b):

\begin{enumerate}
\item[(50)]
\begin{enumerate}
\item That dog\textsubscript{1} was hard to train \textsubscript{1} without muzzling \textsubscript{1} (first). (TC)
\item That dog\textsubscript{1} was too wild to train \textsubscript{1} without muzzling \textsubscript{1} (first). (ODC)
\item ?That dog\textsubscript{1} was lovely to play with \textsubscript{1} after muzzling \textsubscript{1} (first). (AODC)
\end{enumerate}
\end{enumerate}

In the GB literature, it is traditionally held that the availability of a parasitic gap (hereafter, PG) is linked to the presence of an A-bar bound object gap, upon which the PG is dependent for assignment of reference (N. Chomsky 1982, 1986a). Thus, it is anticipated that the \textit{tough} infinitive will meet the conditions for the licensing of a PG, if, as N. Chomsky (1977) has proposed, the \textit{tough} infinitive involves an (\textit{wh}) operator-gap dependency.\textsuperscript{29} Notably, the fully grammatical status of the TC in (50a) provides support for this contention, while the marginally grammatical status of the

\textsuperscript{28} This issue is further complicated by the existence of certain evaluative predicates such as \textit{nice}, which share features of syntactic distribution with both \textit{tough} and AOD predicates. Like the AOD adjective, \textit{nice} may c-select a single DP argument (\textit{e.g.} My mother is nice), but \textit{nice} may also, like the \textit{tough} adjective, take an internal DP and infinitival clause as its complements (\textit{e.g.} It is nice [of my mother/for my mother] to bake jam tarts). This latter subcategorization of \textit{nice} is sometimes taken to indicate that the adjective can participate in TM, with examples such as (i), below, offered in support of this contention:

\begin{enumerate}
\item Jam tarts are nice (for my mother) to bake \textsubscript{e}.
\end{enumerate}

I think it is debatable, however, whether a sentence such as (i) is interpreted in the same way as a standard TC. According to my own interpretation of (i), the matrix predicate and subject argument share a semantic relationship that is not evidenced in the TC illustrated in (ii):

\begin{enumerate}
\item Jam tarts are easy (for my mother) to bake \textsubscript{e}.
\end{enumerate}

Since a full consideration of the issues raised in this footnote would take us too far afield from the present discussion, I must reserve further investigation of this topic for some future treatment.

\textsuperscript{29} Space considerations require me to limit the scope of the discussion in this section, and I therefore have necessarily oversimplified the description of the syntactic conditions under which PGs are licensed. For example, I do not discuss the well-known anti-c-command constraint on the relation between the antecedent gap and the PG nor the claim that the licensing requirements on PGs uniquely holds at the S-structure level of syntactic representation. For more information on these and other issues related to PG constructions, the reader is referred to N. Chomsky (1986a:54-68).
AODC in (50c) would, comparatively, seem to suggest that constructions of this type do not share the same derivation as the TC. However, as earlier observed in connection with sentences such as (49c), it has elsewhere been proposed (see, e.g., N. Chomsky 1977:109, 1982:57-8) that the questionable grammatical status of a sentence such as (50c) may derive solely from semantic rather than syntactic considerations. Resolution of this issue must therefore await the results of future research.

1.3.1.3 Obligatory/non-obligatory status of the object gap

Drawing on evidence from both Italian and English, Cinque (1990) maintains that the TC can be uniquely distinguished from other superficially related constructions, such as the ODC or OPC, with regard to the grammatical status of the embedded object gap. He points out that in the tough infinitive, the gap is not permitted to alternate with an overt resumptive pronoun, as illustrated in (51a), below, while in the ODC and OPC, such optionality is allowed (cf. (51b&c)).30 (NB: The examples in (51) are Cinque’s #169b, #170b, and #171b, respectively, ibid.:152-3; for Italian counterparts of these sentences, see the same referenced pages.)

\[(51)\]

a. The problem is not easy to solve (*it) immediately. (TC)
b. They gave it to me to review (?it) by tomorrow. (OPC)
c. This book is too biased for us to adopt (?it). (ODC)

Cinque proposes that in each of the three constructions, the null representation of the object gap takes the specific form of pro. He explains the difference in the obligatory versus optional presence of pro in terms of differences in the thematic properties of the three types of licensing predicates, with only the tough adjective lacking the ability to assign a \(\theta\)-role to an external (i.e. subject) argument. (Note that in the case of the ODC, I follow standard practice in the generative literature in taking the matrix predicate to necessarily comprise both the functional degree head as well as its complement adjective phrase (AP), an issue to which I return in Chapter 2, §2.5.1).

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30 I abstract here from Cinque’s (1990) main argument, which is that the gapped position in the TC, ODC, and OPC is featurally different from the gapped position evidenced in typical wh-movement constructions such as interrogatives. I return to this issue in Chapter 2, §2.2.2.
In keeping with standard tenets of GB Theory, Cinque maintains that the only way that the subject argument in the TC can receive a $\theta$-role is through the formation of an A-chain with null object pro (ibid.:153).\(^{31}\) If, however, the embedded clause of the TC were instead to contain an overt pronoun, then, as Cinque observes, standard GB constraints that govern A-chain formation would be violated; specifically, the chain would contain two arguments eligible (or “visible”) for $\theta$-marking, thus precluding unique transmission of a $\theta$-role to the (otherwise unlicensed) matrix subject (cf. N. Chomsky 1986b:135).

While I concur that the obligatory status of the gap in the TC stands as one of the distinguishing features of this construction, I nevertheless have less confidence in Cinque’s assertion that the thematic properties of the tough adjective are key to explaining the observed prohibition against overt representation of the embedded object argument. This comes from my examination of the AODC, a construction which, like the ODC and OPC, involves a referential dependency between a matrix subject DP and embedded object gap. As illustrated in (52), below, the object gap in the AODC is obligatory, just as in the TC, despite the fact that the matrix predicate in the AODC, unlike the tough adjective, assigns a $\theta$-role to its subject argument:

\[\text{(52) Mary is pretty to look at (*her).}\]

Thus, according to the arguments offered in Cinque (1990), some independent explanation would be required for the lack of optionality exhibited in the AODC. Finally, one further complication for Cinque’s thesis concerns the fact that in certain languages such as Greek, the presence of a resumptive clitic pronoun in the embedded clause of the AODC is actually required while a gap is disallowed. Tsimnli (1998:10), for example, has cited distinctions that exist in the syntactic representation of the English and Greek AODC as evidence that the two languages employ entirely different means of satisfying the UG requirement on proper identification of empty categories.

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\(^{31}\) I necessarily simplify the arguments presented in Cinque (1990:152-5), since a detailed discussion of these would take us too far away from the present focus, which is the issue of the non-optionality of the embedded object gap in the TC.

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1.3.1.4 Thematic status of the matrix subject position

A distinction is traditionally drawn in the syntactic literature between thematic and grammatical subjects. A thematic subject is one that bears a semantic relation to its licensing predicate, which is characteristically described in terms of $\theta$-role assignment. A grammatical subject, however, is one that is defined in terms of certain morphosyntactic criteria (e.g. coding properties, Cole, Harbert, Hermon, and Sridhar 1980, Keenan 1976; see also Moore and Perlmutter 2000). For example, it is a cross-linguistic truism that a grammatical subject typically bears nominative case and is inflected to morphologically agree with a finite verb. In English, the argument that serves as grammatical subject is typically a thematic subject as well; however, as I have already noted, the subject of the TC atypically serves a strictly grammatical function.32

In English, the following types of subjects (italicised below) are attested with tough adjectives:33

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32 While this generalization holds true for English and certain other languages (e.g. French), I am aware that the grammatical status of the subject of the TC is not cross-linguistically consistent. In Russian, for example, the subject argument is standardly marked for accusative case and does not trigger subject-verb agreement; accordingly, Comrie (1989:81) argues that it is more appropriately analyzed as a topicalized constituent than as a grammatical subject.

33 In addition to the range of subjects illustrated here, Wilder (1991:123-4) has claimed that tough adjectives may also optionally take a tensed declarative CP or interrogative clause as their subject, as illustrated in (i.a) and (i.b) below (his #26a and #26b):

(i)   a. [That this should be so] is hard to accept.
     b. [Why John did this] is hard to understand.

Since Wilder proposes that the subject clauses in (i) are directly $\theta$-marked by the tough adjective (which is a problematic assumption in and of itself according to standard GB Theory), he is then at a loss to explain why omission of the tough infinitive so drastically affects the acceptability of the same sentences (cf. *That this should be so is hard). I suggest that, instead, sentences (i.a) and (i.b) actually involve what Mair (1990:30) has termed intraposition of a complement clause, in which it is not the propositional complement of the tough adjective that has been moved to a sentence-initial position but rather the propositional complement of the infinitive verb. It is thus entirely predictable that omission of the infinitive clause in either (i.a) or (i.b) will result in ungrammaticality, since the structure would lack a licensing head for the embedded declarative or interrogative clause.
(53)  

a. *It* will be difficult (for Mike) to finish that homework by tomorrow.

b. *That homework* will be difficult (for Mike) to finish by tomorrow.

c. *Homework* is difficult (for Mike).

d. *Finishing that homework by tomorrow* will be difficult (for Mike).

e. *To finish that homework by tomorrow* will be difficult (for Mike).

In (53a), the subject position is filled by an expletive or pleonastic element, which is standardly taken as evidence that the *tough* adjective does not assign a θ-role to an external argument. Nevertheless, in (53b), a TC, the same syntactic position is occupied by a lexical argument, which, according to standard GB assumptions, must be θ-marked as well as case-marked in order to meet the syntactic licensing conditions imposed on overt nominal constituents.

In (53c), the subject is again a DP, but notably one that takes a different interpretation than the subject in (53b). In this case, the DP is not interpreted as the direct object of the embedded infinitive verb (the sentence, in fact, lacks such a verb) but is instead interpreted metaphorically as taking the semantic value of a proposition (*e.g.* *doing homework* or *completing homework*). This interpretive difference notwithstanding, it is still assumed that the DP subject in (53c) must meet the same licensing conditions that are imposed on the subject in (53b), an issue to which I will return later in this section.

Lastly, in (53d), a gerund phrase occupies the subject position, and in (53e), an infinitival clause, although I have added the question mark notation (?) to indicate that not all speakers judge such sentences acceptable.

Beginning with examples (53a-c), the apparently inconsistent thematic properties of the matrix subject position in the TC have been notoriously difficult to reconcile in standard GB Theory. For this reason, I am sympathetic to the theoretical position taken by Rothstein (1995, 2001), in which she rejects the standard GB contention that
the subject position of a given predicate is either fundamentally thematic or non-thematic. In part, this is because she observes, after Heycock (1991), that there exist grammatical constructions in which a lexical (i.e. non-expletive) DP serves as the subject of a predicate which does not θ-mark it. In (54) below, I provide three examples of such constructions, the second of which, (54b), is a TC (Rothstein’s #35a,c&e, 1995:511, the latter two credited to Heycock op. cit.):

(54)  a. The book is for you to read.
    b. The book is easy to read.
    c. That man seems as if his children kept him up all night.

With regard to the first and third of these examples, it is quite clear that there is no predicate in the sentence that can serve as a legitimate θ-assigner, at least according to the standard tenets of GB Theory. Yet, as first noted in §1.3.0 of this chapter, there are some researchers who take the view that the tough adjective does assign a θ-role to its lexical subject when it appears in the TC. I have previously stated that I disagree with this position, and I will use the remaining discussion in this section to solidify my argument.

Rothstein (1995, 2001) follows Heycock (op. cit.) in asserting that subject arguments can be licensed in the syntax either through θ-marking or through the existence of a predication relation that holds between the subject and a licensing predicate, as illustrated in (54a-c) above. Rothstein (1995, 2001) takes the argument one step further, however, by proposing that predication serves as the primary licensing mechanism for syntactic subjects, with θ-marking thus serving an incidental function as regards this particular syntactic relation. That is, she considers θ-marking to represent neither a necessary nor sufficient condition for the presence of a subject in a syntactic representation; instead, she maintains that subjects are projected in accordance with a structural well-formedness condition that requires every predicate to take a syntactic subject (1995:503, 2001:38-9).

The well-formedness condition that Rothstein proposes is not in itself particularly controversial, as both GB Theory and Minimalism propose a strictly structural...
requirement that some element, whether lexical or expletive, must occupy the Spec IP position of a well-formed sentence of English. In both frameworks, this requirement is termed the Extended Projection Principle (EPP), although it is formulated somewhat differently in the Minimalist Program. For example, in Minimalism, it is standardly held that the EPP is predicated on a morphological property of T(ense), specifically, the uninterpretable categorical feature ‘D’ (for determiner) that is associated with T. As an uninterpretable feature, the D feature of T must be eliminated prior to LF in order for a given derivation to converge, an outcome that is effected when the D feature of T enters into a checking or matching relation with an overt nominal element, namely, with an element that possesses an interpretable D-feature (Chomsky 1995, 2000, 2001).

Where Rothstein’s claims do depart from standard GB and Minimalist assumptions, however, is with respect to the stipulation that the EPP represents a well-formedness condition that pertains to the subject of a clause. For Rothstein, the type of predication relation that mandates the structural presence of a subject is one that holds instead between subjects and predicates. Moreover, as noted above, Rothstein sees no necessary correlation between the projection of a lexical subject and the thematic properties of its licensing predicate, as is stipulated in GB Theory. Instead, she maintains that it is perfectly possible for the external position of a syntactic predicate to host both 0-marked as well as non-0-marked constituents.

I find Rothstein’s arguments particularly compelling as regards the thematic status of the subject position that is associated with the tough adjective. This is because, as illustrated in (53), above, the tough adjective appears with a range of different subjects, only certain of which can be considered thematically licensed according to

34 It is outside the scope of the present discussion to consider the various modifications that have been proposed within the Minimalist framework to the conception of the EPP that is outlined above. The interested reader is instead referred to N. Chomsky (2000, 2001) for discussion of relevant issues.

35 I have chosen the label DP to describe both expletive and non-expletive arguments, although I am aware that the appropriate syntactic analysis of various expletive elements remains an area of debate in the generative literature. I anticipate, therefore, that there will be those readers who reject DP as an appropriate identification of the projection that contains expletive it. My own practice follows a precedent set in the Minimalist literature, in which it is assumed that expletive elements are minimally associated with a D-feature and therefore reasonably categorized as DP (see, e.g., N. Chomsky 1995a or Radford 1997).
the tenets of standard GB Theory. Furthermore, consistent with Rothstein’s arguments, the thematic versus non-thematic status of the subject DPs illustrated in (53a-e) has no bearing on whether the presence of the subject induces morphological agreement with the verb. In particular, examples (53a-c) provide clear support for Rothstein’s contention that subject-verb agreement does not require the existence of a semantic relationship between the two elements but instead only a structural one.

Beginning with example (53a), I now address the issue of precisely what type of element plays the role of subject in a sentence of this type. The simple, and standard, view in the generative literature is that the subject position is filled by a grammatical “placeholder,” that is, by an element that has no interpretive content but which instead serves to satisfy the structural requirement that clauses must take subject arguments (or, in Minimalist terms, the requirement that Tense must enter into a checking relation with an element that has an interpretable D-feature). I take issue with this analysis, however, for the following reasons. First, after Moro (1997), I maintain that the grammatical function served by the tough expletive subject is distinct from that served by the expletive subject of, for example, a raising predicate. One piece of evidence for this view comes from the contrast noted in (55), below, in which the tough associate clause may replace expletive it with no loss of grammaticality in (55a), while the same does not hold true when the matrix predicate is the raising verb to seem, as in (55b):

(55) a. [To build/building this house in two days] is difficult.
    b. *[That this house was built in two days] seems.

On the basis of this and other syntactic evidence, Moro has proposed that in a sentence such as (55b), expletive it has the grammatical status of a pro-form (specifically a “propredicate”) which is referentially linked to the small clause complement of the “quasi-copula” seems (op.cit.:174). In the case of (55a), however, he asserts that such a sentence features an expletive subject that plays the more traditional role of (small clause) subject to the tough adjective. Thus, for Moro, the
syntactic differences noted in (55), above, reflect real differences in the grammatical status of the expletive element that occurs in the two environments.36

There are other accounts, such as those offered by Bolinger (1977) and Biberauer (2001), which distinguish two versions of English expletive it according to differences in pragmatic function.37 Specifically, the referenced authors distinguish what is commonly termed “ambient” (or weather) it from what they term “anticipatory” (or introductory) it. The former occurs in construction with weather predicates (e.g. It is cold out today), while the latter is the form of expletive found in construction with the tough adjective. While it has been variously proposed that ambient it has the status of an argument that is c-selected by the weather predicate (see, e.g., Vikner 1995:227-8), Bolinger (op.cit.:66-7) identifies the function of anticipatory it as anaphoric. Specifically, he describes anticipatory it as a pronominal element that serves to signal a proposition that: (1) is introduced at the end rather than beginning of an utterance; and (2) represents information that can be considered already known to the interlocutors. Strictly speaking, then, anticipatory it is identified as having the grammatical status of a cataphor, since the information with which it is referentially linked (e.g. the tough associate) obligatorily follows, rather than precedes, presentation of the expletive (Biberauer ibid.:7-8).

At first pass, the cataphoric status of anticipatory it appears problematic for an observation I made at the beginning of this chapter, which is that speakers of English display a general preference for presenting given or known information at the beginning of an utterance rather than at the end. For Bolinger, however, this particular contradiction is explained in terms of a competing preference that speakers of English display for reserving presentation of informationally and/or intonationally

36 Koster (1978b:583-4; 1984:425-8) offers an early generative treatment of the same issue, in which he maintains that the standard rules of control that determine co-reference in an expletive-headed raising sentence require special modification in the case of the expletive-headed tough sentence.

37 In this regard, I take issue with a specific claim advanced by Jacobson (1992), who has argued that the various manifestations of expletive it are more likely to receive a satisfactory explanation in terms of syntactic rather than semantic considerations, as expletives are generally assumed to make no semantic contribution to the sentence. While I agree that the distribution of expletives in English is unlikely to receive an entirely satisfactory treatment in terms of the semantic properties of these elements (or lack of), I think the pragmatic evidence cited above undermines Jacobson’s claim that a complete treatment of this topic can only be provided in a strictly syntactic framework.
weighty constituents for the end of an utterance (op.cit.:74), a tendency which Biberauer (op.cit.:8) attributes to speakers of Germanic languages in general (see also the discussion in Mair 1990:88-9). According to this explanation, then, the speaker selects anticipatory *it* as the subject of the expletive-headed *tough* sentence in order to delay presentation of a semantically complex *tough* associate clause and thus facilitate the listener’s comprehension of the same.

I now consider the status of the subject argument that appears in the TC illustrated in (53b). As noted in §1.3.1.1, there are a number of researchers who maintain that the DP subject of the TC is directly θ-marked by the *tough* adjective and, consequently, that the *tough* infinitive must have the status of an adjunct constituent rather than licensing head. I have rejected this analysis of the *tough* infinitive in part because I maintain that it is not consistent with the semantic properties of the *tough* adjective, which assigns its theme role to a proposition rather than an entity. One further piece of evidence that the *tough* adjective does not theta-mark a subject DP is presented by Goh (2000b); this concerns the contrast illustrated in (56), below, where the DP subject, *butterflies*, is θ-marked by the AOD predicate, *pretty* (cf. (56a)), but not by the *tough* adjective (cf. (56b)):

\[(56) \begin{align*}
    a. & \text{ [DP Butterflies] are pretty.} \\
    b. & \text{ [DP *Butterflies] are easy.}
\end{align*}\]

Additionally, as illustrated in (57) below, it is easily demonstrated that any selection restrictions that apply to the subject DP of a *tough* adjective are imposed by the propositional complement of the adjective, rather than by the adjective itself:

\[(57) \begin{align*}
    a. & \text{ *Ideas/butterflies are hard to catch.} \\
    b. & \text{ Ideas/*butterflies are easy to discuss.}
\end{align*}\]

Yet, while the evidence above supports the claim that the *tough* adjective does not share a semantic relationship with the subject of the TC, this issue nevertheless remains clouded in the literature. In part, I believe this is due to the existence of grammatical sentences such as (58) below (see also (53c)):
(58) School’s hard for her.

The above is an actual sentence that I heard used in conversation. As determined by my participation in the conversation, I understood the speaker’s intention to be one of evaluating the relative difficulty that her daughter experiences with regard to the sum total of the activities that comprise “attending school.” Thus, reprising an argument I advanced in §1.3.1.1, I submit that the subject DP in (58) is properly interpreted as having the semantic value of a proposition, rather than that of an entity, despite its categorical (i.e. DP) status. Accordingly, I maintain that the presence of a subject DP of this type can be directly licensed by the tough adjective, since the adjective does s-select for a propositional complement.38

The only unusual aspect of selection, then, would appear to be the choice of a DP rather than IP as the categorical representation of the complement of the tough adjective. However, as both Jacobson (1992:284-5) and Grimshaw (1982, cited in Jacobson ibid.) have pointed out, there is an accepted generalisation in English that any verbal or adjectival predicate that c-selects for a clausal subject may also take a DP subject, so long as the constituent carries the same semantic import. Thus the selection option displayed in (53c) is one that is well attested in the language.

Finally, I address the status of the types of subject arguments that appear in (53d&e). In both cases, I assert that the subject argument takes the semantic value of the proposition that is s-selected by the tough adjective. In the case of (53d), as in the case of (53c), this argument, a gerund phrase, is unproblematically realized as a DP rather than as a clause, according to the generalization referenced in the preceding paragraph. Nevertheless, this contention still requires some further explication since I am aware that the categorical status of the gerund phrase is not universally accepted as being DP.

38 Of course, there remains the question of whether the propositional argument of the tough adjective is directly selected in (58) as the external argument of the adjective, or whether it is merged in an internal position and then subsequently moved to Spec of T. In the latter case, motivation for the movement of the DP could quite reasonably be identified as case-assignment, since the tough adjective assigns (internal) case only to its experiencer argument and not to a propositional DP. I return to a consideration of this issue in both Chapters 2 and 5.

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Arguments for a nominal analysis of the gerund phrase have a long history in the literature (see, e.g., Emonds 1972), with the distributional behaviour of the gerund subject of the TC providing support for such an analysis. For example, there is the contrast noted in (59), below, in which the gerund subject of the tough adjective is barred from internal syntactic representation (cf. (59a)), while the propositional complement is not (cf. (59b)). (Note that, for me, (59a) is acceptable only with an intonational break between the for-PP and gerund phrase, with right-dislocation of the gerund phrase, rather than merge of the phrase *in situ*.)

\[(59)\]
\[
\begin{align*}
\text{a.} & \quad *\text{It will be difficult for Mary [DP finishing that project].} \\
\text{b.} & \quad \text{It will be difficult for Mary [IP to finish that project].}
\end{align*}
\]

Since one standard assumption of GB Theory is that DPs require case-marking while clauses do not, one plausible explanation for the unacceptable status of (59a) is the nominal status of the gerund phrase. That is, as a DP, the gerund would require structural case marking in order to be syntactically licensed in (59a), a requirement that adjectives in English are generally unable to fulfill. The clause in (59b), however, would be exempt from the same requirement and thus would be free to appear either externally or internally.

Finally, looking at (53e), the subject argument here is unproblematically analyzed as clausal, although, as earlier noted, such sentences are disfavoured in actual use, with speakers preferring either a sentence-final infinitive clause or a gerund subject (Mair 1990:27). Koster (1978a, 1984:443) proposes that clausal subjects do not occupy the same structural position as nominal subjects, and therefore that subjects such as these are more appropriately analyzed as peripheral or topicalized constituents. For Koster, the derivation of (53e) involves a binding relation that holds between the satellite clause in sentence-initial position and a phonetically null DP, which serves as the structural subject of the sentence (1978a:57). (Note that in a Minimalist construal of Koster’s argument, the presence of the null DP would serve to satisfy the featural

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requirements of T.) While I consider this a plausible hypothesis, the question nevertheless remains as to why the DP must remain phonologically null in such a context (cf. *Finishing the project it is difficult for her). Because I believe that a full consideration of this issue would raise more questions than it addresses, however, I must leave this as a topic for future research.

In summary of the preceding discussion, I have offered an analysis of the thematic properties of the *tough* adjective, which, contrary to certain previously proposed accounts, does not require the assumption that the thematic properties of the *tough* adjective vary according to whether the adjective takes a lexical or expletive subject. I have offered evidence in support of the view that the *tough* adjective consistently assigns a thematic role to a propositional argument and an experiencer role to an internal argument of the entity type, but does not assign a thematic role to a subject argument of the entity type. In particular, when the propositional argument is optionally realized as a DP subject, I have maintained that the *tough* adjective assigns this argument the same role that it typically assigns to its IP complement. Thus, contrary to one standard assumption of generative theory, I do not take the fact that the *tough* adjective can occur in construction with an expletive subject to necessarily imply that the adjective lacks the ability to assign a θ-role to an external argument.

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39 Alternatively, Cormack takes the view that the infinitive clause in a sentence such as (53e) is correctly analyzed as the external argument of the *tough* adjective. She bases this claim on the following example, in which she notes that the presence of multiple clausal subjects triggers plural agreement with the copular verb (her #15, 2002:3; see also McCloskey 1991):

(i) [To climb up the stairs] and [to walk down the stairs] *are* both hard for Jake.

For me, however, it is difficult to evaluate the validity of this claim since, consistent with Mair’s (1990) observations, I favour a coordinated gerund phrase (*i.e.* climbing up the stairs, etc.) as the subject of (i) over the coordinated clauses exemplified here. Thus I am reluctant to attribute the significance to this example that Cormack does.
1.4 Conclusion

In this chapter, I have outlined certain semantic and syntactic criteria according to which a given lexical item can be identified as a member of the *tough* class and according to which the TC can be given a unique grammatical analysis.\(^{40}\) In succeeding chapters, I will draw on the information provided in this chapter to highlight important distinctions between children’s acquisition of the TC, and of *tough* lexical items, and their acquisition of constructions such as the ODC, OPC, and AODC.

By way of review, in §1.2, I began with an outline of the theoretical assumptions that I hold with regard to the lexical specification of arguments and predicates and with regard to the syntactic licensing of constituents. In §1.3, I sought to identify the semantic and syntactic properties that uniquely distinguish predicates belonging to the *tough* class in English. Section 1.3.0 focused on the semantic properties of the *tough* adjective. I proposed that adjectives of the *tough* class s-select for two arguments; the first of the semantic type *entity*, assigned the thematic role of experiencer, and the second of the semantic type *proposition*, assigned the role of theme. I also

\(^{40}\) Goh (1999) has suggested that the class of predicates licensed to participate in TM has been continually expanding in later stages of English. In this regard, it is worthy of mention before leaving this chapter that there are certain adjectives, such as *fun*, that appear to share some of the key selectional properties of *tough* adjectives. For example, *fun* occurs in sentences such as (i) below, which superficially resemble the TC:

(i) Grandad is fun to tickle.

Furthermore, like the TC, and unlike the AODC, the sentence listed in (i) has an expletive-headed counterpart (*cf.* It is *fun to tickle Grandad*). (Note that the native speakers that I have informally surveyed have confirmed the truth-conditional equivalence of the two sentences cited here.) And since *fun* is used in (i) to evaluate an activity (*i.e.* tickling Grandad) rather than an individual (*i.e.* Grandad himself), this sense of the adjective does appear to share the basic s-selection properties of *tough* rather than *pretty*-predicates. Additionally, this sense of *fun* is found in construction with an internal experiencer argument, just as is the *tough* adjective, e.g. Grandpa is *fun [for us] to tickle*.

Characteristic of the AODC, however, and unlike the TC, it seems that displacement of the embedded object argument in the *fun* construction is subject to locality restrictions (*cf.* (iia), below), and that the embedded object gap fails to license a parasitic gap (*cf.* (iib)):  

(ii) a. *Grandad is *fun* to expect the children to want to tickle* t._i_

b. *Grandad is *fun* to expect the children to want to tickle* t._i_ without asking t._i_ first.

In terms of the latter two properties, then, the distribution of *fun* patterns more closely with the AOD predicate than with the *tough* adjective and therefore I have chosen not to include this or similar lexical items in the list of *tough* adjectives identified in this chapter.

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distinguished a related but distinct sense of the tough adjective, which I termed the tough-on sense. As I detailed, the tough on sense of the adjective can be seen to subtly differ from the difficulty sense of the adjective and can be told apart from the latter not only in terms of the categorial representation of its arguments but most notably in terms of its lack of participation in the TC.

In the same section, I reviewed various explanations that have been offered for the causal interpretation that is typically associated with the subject of the TC. After Goh (2000b), I argued that any causal connotation carried by the subject argument of the TC arises from purely pragmatic considerations, rather than from the semantics of the tough adjective or of the construction itself.

Section 1.3.1 focused on the syntactic distribution of the tough adjective. In §1.3.1.0, I offered a case for the categorial analysis of the tough infinitive as IP, rather than VP or CP, pace certain existing accounts (e.g. Browning 1987). Additionally, I argued that the prepositional complement of the tough adjective (i.e. the for-phrase) should be analyzed as distinct from the embedded tough infinitive. In §1.3.1.1, I followed this discussion with a refutation of existing arguments for the adjunct status of the tough infinitive and with presentation of evidence in support of the complement analysis earlier advocated.

In §1.3.1.2, I pointed out that long-distance extraction of an embedded object argument is one of the distributional privileges associated with the tough adjective, and I asserted that this characteristic property can be used to distinguish lexical items of the tough class from certain others belonging to the wider evaluative class. In particular, I offered support for the latter claim by comparing the availability of parasitic gaps in the TC with their questionable licensing in the AODC.

In §1.3.1.3, I proposed that the obligatory status of the embedded object gap also serves as one of the defining characteristics of the TC, although I acknowledged that this feature alone cannot serve to distinguish the TC from other related NOS. Finally, in §1.3.1.4, I explored the issue of the thematic status of the matrix subject position in the TC, which has been a long-standing point of contention in the literature. I began
by rejecting the standard GB assumption that the subject position of the TC can be
described as being either uniquely thematic or non-thematic; instead, after Rothstein
(1995, 2001), I proposed that the subject position remains athematic and thus able to
host elements of either type. Reviewing the full syntactic distribution of the tough
adjective, I demonstrated that the semantic properties of the tough adjective remain
constant, despite variation in the categorial realization of its experiencer and
propositional arguments.

The following chapter offers a more detailed look at theoretical issues pertaining to
the syntactic analysis of the TC, IR, OPC, and ODC, the four constructions that
feature in the experimental study that I conducted, which will be reviewed in Chapter
4. In particular, the focus of Chapter 2 will be the null operator analysis of the TC
and related structures (Chomsky 1977, 1981), which serves as the basis for the
syntactic representation of the TC, IR, OPC, and ODC that I adopt in this work.