

English notes

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Theoretical preliminaries

In short, this note is based on Basic Linguistic Theory (Dixon 2009, 2010, 2012) with generative flavor, and since I will use this theoretical framework from the first chapter to the last, it's probably a good idea to outline the framework before everything else starts. It's my belief that the descriptive theoretical framework outlined by Dixon is largely – if not completely – compatible with modern generativism, especially the branch of Distributed Morphology and Cartography. This note is partially intended as a demonstration of this idea, and in the main body of this note, I insert many boxes about the general principles of morphosyntactic structure building that look like this:

Box: Description of the content of the box

These boxes can be safely ignored if you are only interested in English grammar itself. For more “substantial” (as opposed to more formal) information, a box with a different style like the follows will be provided:

Box: Description of the content of the box

The dictionary between generativism and Basic Linguistic Theory is roughly the follows:

Correspondence between concepts in generative syntax and BLT

Generativism	BLT
phrase (DP, vP, etc.) with specifiers	dependency relations
phrase without specifier	marking of grammatical category
specifier-complement relation of phrase	grammatical relation (subject, object, etc.)
functional head	grammatical category
several layers of co-occurring projections	constructions
stem in Distributed Morphology	head
a batch of spellout result	a phrase (verb phrase = vP-TP-CP span)
phase (DP or CP)	word or constituent
tree structure	order of “closeness” of dependency relations
movement	dependency network

Basic Linguistic Theory still assumes a constituency tree, but it's a highly flat one: The only levels are words, noun phrases and clauses. Inner structures of these constituents are not represented as trees – dependency relations are used instead. Despite these differences in the notation, we can see it's easy to translate between Basic Linguistic Theory and modern lexical-decompositional generative syntax in the table above. What Dixon calls “underlying structure” is actually “syntax proper” in generative syntax.

Another notable tradition is the structuralist tradition, under which the most important recent work is probably Huddleston and Pullum (2002). Constituency trees in Huddleston and Pullum (2002) are more like generative trees, but there are still differences. First, the notion of head in Huddleston and Pullum (2002) is still not “functional heads” in modern generative grammar, but lexical heads similar to Dixon (2009); sometimes auxiliaries that are collective realizations of several functional heads are also recognized as heads in Huddleston and Pullum (2002), and controversies like whether prepositions are heads then arise (Box 5.3). And now since functional heads are removed, the dependency relations

introduced by these heads now have to be introduced by adding a *syntactic function* tag to every subtree in a tree. Thus “the DP is in the specifier position of TP” is replaced by “the NP is in the subject position”, and the tag of that NP in the tree is now “subject: NP”, not just “NP”. Second, dependency relations that can’t be reflected by the tree structure are still required: Since Huddleston and Pullum (2002) reduces the use of movements, the relation between the subject and the main verb is said to be that “the subject is the external complement of the verb phrase” (here verb phrase means the verbal complex plus internal complements, i.e. Dixon’s verb phrase plus inner arguments). And similarly prepositional phrases in noun phrases that are licensed by an adjective far from it are called “indirect complements”.

The main problem of the approach in Huddleston and Pullum (2002) is if a constituent is broken by some further movements, then it’s impossible to draw a constituency tree that both respects the surface adjacency relations and the deep dependency relations. It’s impossible to talk about the verb phrase in a VSO language, though there are strong evidences suggesting there is a movement that fronts the main verb. Fortunately, this is not the case for basic constructions in English, but even so we can still occasionally find cumbersome treatments of some constructions in Huddleston and Pullum (2002), in which constituency analysis is done but it doesn’t tell us much about the construction, or linear order-based analysis is done while constituency relations are simply ignored. That’s why this note is mostly carried out in terms of Basic Linguistic Theory. Still, I think making the hierarchy structure of dependency (or constituency) relations clear is important, so I will use the term *verb phrase* in the way of Huddleston and Pullum (2002) (Box 8.1) and do a fine anatomy of clausal syntax (Fig. 8.1) instead of mixing all clausal grammatical relations together on the same plane.

Chapter 1

Introduction

Chapter 2

Grammatical overview

This chapter presents basic (and unavoidably fragmentary) typological information of English, as well as basic principles to be followed in this note, and the arrangement of some sections are more function-oriented, with several structurally heterogeneous implementations of similar semantic concepts placed in one section. I will overview word classes – or more generally, form classes – as well as classes of phrases and clauses, and also their subclassification and distributional information. Topics like combinatorial possibilities of constructions are not touched in this chapter: For more organized, structure-oriented summaries of NPs and clauses, see, for example, Ch 4 and Ch 8.

2.1 Morphology

2.1.1 Wordhood in English

Box 2.1: About wordhood

It's impossible to establish an uncontroversial definition of the term *word*. Phonologically we can define a word as a unit in the utterance that has clear pauses as its boundaries and whose inner makeup is targeted by phonological rules much more frequently than larger units (Dixon 2010, § 10.3). The problem is such a unit sometimes doesn't bear any morphosyntactic significance: It may contain two morphosyntactic words, it may be just a part of a morphosyntactic word, or it may even be the combination of two segments from two different morphosyntactic words.

We can also recognize morphosyntactic words, i.e. a unit that is made of one or more roots and morphological processes, and has a conventionalized meaning, and is unable to have its parts scattered through the clause, and have relatively strictly ordered inner components (Dixon 2010, § 10.4). The problem then is the standards only conflict with each other, and they are also true on some constructions that clearly are not words. A root-plus-morphology construction can be created in the syntax, as in Chinese verbal resultative or directional complement constructions. Phrases can have conventionalized meanings as well, especially in specialized fields. Speakers are sometimes aware of the inner parts of words and occasionally split them in the syntax, as in *pre- and post-processing*, while on the other hand, some orthographical multiple word constructions are also not active in syntax, like *apple tree* or *American history teacher*, but people usually don't say they are words. And as syntactic cartography shows, in many languages syntax is much more "rigid" than we previously thought, and it's also possible to have words in which a part of affixes are not in a completely rigid order (with a difference in the meaning, obviously, but the same is also true for syntax).

From the Distributed Morphology perspective, this is expected, because morphosyntactic words recognized by the above criteria are sometimes categorizer phrases and sometimes span spellout of a functional projection, which has no substantial difference with a syntactic constituent or a sequence of auxiliary verbs ("verb phrase" in the definition of Dixon (2009)). It's however useful to define a morphosyntactic word as the *smallest* unit that has some of the above properties, as a layer in Fig. 8.1. After introducing this concept, we can split the burden of describing morphosyntactic into several chapters about "morphology" and several chapters about "syntax", and the grammar will be very organized.

Some say we can define the morphology-syntax distinction based on speech production – there are generally less speech errors in the morphology component, the morphology component is more “automated”, etc., but this also doesn’t go beyond the “word as small syntactic constituent” definition or the “word as phonologically processed constituent” definition.

In conclusion, the notion of *word* is a good descriptive concept if defined with a few clear criteria, but we shouldn’t put too much theoretical emphasis to it (Bruening 2018).

2.1.2 Morphological devices

2.2 Parts of speech

Box 2.2: Determining parts of speech

Parts of speech in this note are mainly determined by morphosyntactic tests of both form and syntactic function, like the standards listed in Dixon (2009, § 3.3). Despite Dixon’s strong opinion against the generative or “formalist” approach, his criteria for word classes don’t go against generativism, because what are taken for granted in generative syntax is not concrete, surface-oriented labels like “English-like nouns” or “Latin-like verbs”, but labels like the noun categorizer, the verb categorizer, the light verb heads, TAM heads, etc., and the allowed combinations of them, like whether a noun is able to replace the main verb in a clause (which may be realized by a BE light verb, or something else) are definitely language-specific: Some combinations just don’t spellout in one language, but spellout well in another. That neatly explains why tags like nouns or verbs are universal: Because the relevant functional heads exist in all languages. It also explains why the behaviors of nouns differ cross-linguistically: because the noun categorizer interacts with other ingredients differently.^a

That means I don’t use terms like *noun clause* or *adjective clause*, because what they mean are clauses filling argument slots, clauses filling attributive slots, etc., and these clauses are similar with nouns and adjectives in their syntactic functions but not their internal forms, so they are not nouns or adjectives. I will also avoid paying too much attention to the semantics of a word, because the same semantics can be expressed in several ways in the grammar, and the focus of this note is the latter.

Purely grammatical items, like auxiliary verbs, inflectional suffixes, determiners, don’t really need part of speech tags: They are added by the grammar and are phonetic realization of grammatical categories and relations, or in generative terms, phonetic realization of functional heads. Huddleston and Pullum (2002) still assigns part of speech tags for grammatical items, but that’s not the position of this note.

^a“People like Haspelmath may say the universality of *noun* is a “comparative concept” and is rooted in communicative functions of language. The problem with the first claim is its ignorance of equivalence between two ways to formulate a grammatical theory: One is to use primitive concepts to construct larger objects, and the other is to show the relation between the larger objects. Modern generativism is done in the first way, while “comparative concepts” belong to the second approach. They are mathematically equivalent, and asserting there are useful comparative concepts is equivalent to asserting the existence of primitive features. (This is, of course, true for a theory of *competence*; a theory about psycholinguistic reality and *performance* is another story.)

The problem with his second claim is the domain of the so-called domain general communicative functions are actually narrow. To express the concept do some action to something, you don’t really need a noun-verb distinction: In functional programming, which is created by the domain-general problem solving skills by the human race, everything is a function – or maybe a “verb”, yet you never find a group of people speak like this. And similarly the TOML format is a concise way to communicate facts, while still you never find a tongue with such a structure, though it’s understandable using our domain-general cognitive abilities. Sometime semantic information that *are* recognized by people, like the scope of quantifiers, are not reflected in their speech explicitly. So the object – the collection of so-called communicative skills – that Haspelmath’s comparative concepts work on is not semantics or pragmatics, and this object only appears when people choose to “talk” or “sign” or “write” – not when they are solving puzzles. This target of Haspelmath’s comparative concepts therefore has to be the *syntax proper*. Only in it do we constantly work with things like the verb and its arguments, noun phrases, etc., which, if understood as semantics and pragmatics, are malfunctioning in some aspects and can be recast into equivalent formalism, yet people are content with the former and never do the latter. Note that the above discussion is about the abstract structure building devices, and even for concrete grammatical categories, there are evidences suggesting their innateness (Satick 2022).

2.2.1 Nouns, verbs and adjectives

English has a quite clear distinction between the noun class and the verb class. The inflection patterns are different,

The English adjective class is not quite similar to the noun class or the verb class (Dixon 2010, pp. 73). The adjective class has the following properties. Attributives in NPs are most frequently adjective phrases. Adjectives are

2.3 Nouns and noun phrases

2.4 Verbal morphology and the clause

2.4.1 TAM categories

English has two tenses: the past and the present. The aspectual system is more complicated. The concept of composition – whether the inner makeup of an event is important (Dixon 2012, § 19.10) – is marked by the so-called plain-progressive distinction, though (Dixon 2012) calls it the imperfective-perfective distinction. The English plain-perfect distinction arguably marks a distorted version of the completion concept – whether the time of an event is before the time of narratives defined by tense (Dixon 2012, § 19.7), because sometimes the event time in the English PERFECT is the starting time of the event in question, not the finishing time, and this disagrees with the term *completion*. English also has several modal constructions. The above categories interact freely (§ 5.1.2.1, TODO: really?).

The category of tense is always realized morphologically on the main verb when there is no auxiliary or on the highest auxiliary verb (§ 5.1.1). The category of the two aspect categories are marked by auxiliary verbs, as well as modality (§ 5.1.2).

There is no future tense in English: The future time is marked by the auxiliary *will* or *would* or the *be going to do* construction (§ 5.1.4.1).

Besides the regular TAM system, there are also some periphrastic constructions marking specific TAM configurations, like *used to* or *would rather* (§ 5.1.3). Adverbs are also an important part in expressing TAM information in English (TODO: ref).

There are usual compatibility issues between TAM categories with some moods (§ 5.1.5).

2.4.2 Negation

Negation in English clauses is usually realized by the negator *not* or negative forms of auxiliaries (§ 5.1.2.4). Negative pronouns like *nobody* can also be used to express a negative idea (TODO: ref).

2.4.3 Alignment

English is a typical accusative language. A subject can be identified syntactically according to constituent order, case, semantic role, and more criteria (§ 8.1.2). The usual tests of syntactic accusativity, like extraction in coordination (1), can be run on English.

- (1) I [wondered around]_{intransitive} and [saw something weird]_{transitive}
- (2) I didn't hurt him, but he hurt me.

2.4.4 Finite clause types

English has the following major types of finite main clauses with regard to the related speech act (note that there are mismatches between form and meaning when it comes to mood): the imperative, the declarative, the open interrogative, the closed interrogative, the exclamative (§ 8.1.4). No further morphosyntactic marking of sentential speech act (such as sentence-final particles) exists in English. The moods are *not* marked morphologically. The interrogative moods, for example, are formed by introducing an interrogative pronoun (for open interrogative) and subject-auxiliary inversion (§ 5.1.2.5).

Finite relative clauses look similar to open interrogative clauses, though usually without subject-auxiliary inversion, and finite complement clauses look similar to either declarative clauses or interrogative clauses (§ 2.6). English also has nonfinite constructions (§ 2.4.7).

Box 2.3: Mood and modality

Dixon (2009) firmly argues against using the term *mood* for the syntactic marking of modality, while Huddleston and Pullum (2002) uses the term *mood* for the syntactic marking of modality and uses *clause type* to specifically refer to Dixon's *mood*. To avoid confusion (*clause type* is too vague), this note follows the definition of Dixon.

The confusion seems to arise from traditional Latin grammar, in which there is no significant difference between a declarative sentence and an interrogative sentence, while there is significant difference between the verbal morphology in indicative and subjunctive clauses. On the other hand, in imperative clauses there is no indicative-subjunctive distinction. Therefore the imperative-non-imperative distinction is fused with the indicative-subjunctive distinction and is named *mood*. This relies on the specificities of Latin grammar and surely is not a universal category for all languages. English also has subjunctive clauses, but that's about modality, not mood.

Box 2.4: Clause and sentence

Also, note that *mood* is about *sentences*, and not necessarily anything that can be called a clause Dixon (2009, 96). (Here Dixon is trapped into another extreme by claiming the clause linking procedure is flat, and the sentence is the ultimate product of grammar. But of course clause linking can be done recursively, with a tree-like order.) In generative syntax, a TP or a low-level CP is already well qualified as a clause, but in order to construct a sentence – a verbal constituent that serves as a “full” utterance – we still need to include the full functional projections marking speech acts or speech “forces”. In Mandarin Chinese, for example, a clause often needs sentence-final particles attached to it to be an acceptable independent sentence, while clauses without sentence-final particles appear regularly in clause linking, and even more impoverished “small clauses” – basically *v*Ps – also appear in clause embedding. Thus, there are several types of clauses with different sizes.

Such phenomena also appear in English, arguably in all languages. Non-embedded finite clauses are of course full CPs, but some embedded finite clauses, like the indirect quoted question in *I asked [why he was always late]*, show different behaviors with their non-embedded counterparts: In the bracketed example, the subject-auxiliary inversion is absent. Participle constructions are likely to be TPs, as well as infinitives in control constructions (Pires 2006), while infinitives are impoverished CPs.

Still, Huddleston and Pullum (2002, pp. 45, pp. 853) uses the term *sentence* almost as a synonym of *utterance*, and all discussions concerning the syntax in their account of English grammar are about clauses. In practice, covering all kinds of TPs and CPs with the catch-all term *clause* doesn't create much confusion, because non-embedded finite clauses, embedded finite clauses, and nonfinite clauses are usually discussed in different places and it's easy to infer whether the term *clause* means a full CP, a defective CP or a TP. So to say mood (or *clause type*, with the specific meaning of the imperative/declarative/interrogative distinction) is marked on a finite clause doesn't create much confusion, and nor do wordings like “the clause type or the mood marks the speech force”, though the latter is not universally true (in Chinese there are several syntactic systems marking the speech force).

2.4.5 Valency changing

Box 2.5: Valency changing

Valency changing involves the lexicon, the *v*P layer, and the TP layer. The term *valency changing* is kind of misleading, because what actually happens is *valency corresponding*, and the transformational rules used to describe valency changing are just phenomenological.

Some kinds of valency changing is likely to be purely because of the verb in question has two subcategorization frames. The clause *John and Mary will meet tomorrow* has the same meaning of *John will meet with Mary tomorrow*, but it's unlikely the relation between the two arises from some operations in the *v*P layer: The case may just be that *meet* is compatible with two *v*P structures, which turn out to have the same semantic interpretation.

Sometimes, however, we can add a *v* head to an existing *vP*, and extract one of the arguments introduced in the latter into the specifier of the former or introduce a new argument. This is frequently seen in Old Chinese as well as its sisters, and is still the main way Modern Mandarin Chinese does valency changing.

It's also possible to have two (or more) *vP* structures that both work for a group of verbs, and for some reason (e.g. the agentive argument is assigned an inherent case, so it's no longer visible for the A-movement to SpecTP), one of them disrupts the way TP usually works. This seems to be the way the English passive works.

In more descriptive terms, the *vP*-internal strategy lies on the blur line between derivation and inflection (and if the additional *v* head is realized as a word, that it lines on the line between multi-verb predicates and auxiliary verb constructions), while the *vP*-TP strategy involves the *alignment*.^a It's hard to draw a clear line between the first and the second strategy.

^aThis – the agentive argument in a transitive clause being assigned an inherent case – also seems to be the source of morphological ergativity (Aldridge 2008). Syntactic ergativity, on the other hand, is caused by an early EPP feature targeting the absolutive NP.

There are only two regular valency changing device in English, and both of them belong to the passive or the *passive voice*. The first is the *be*-passive (3), and the second is the lately grammaticalized *get*-passive.

- (3) a. [[A car]_{subject, agent} [hit]_{past} [me]_{object, patient} [this morning]_{adverbial, time}]_{active}
 b. [[I]_{subject, patient} [was]_{passive, past} [hit]_{ED-participle} [by a car]_{agent} [this morning]_{adverbial, time}]_{passive}
- (4) [[I]_{subject, patient} [got]_{past} [hit]_{ED-participle} [by a car]_{agent} [this morning]_{adverbial, time}]_{passive}

2.4.6 Light verb constructions

English has several verbs whose semantic contents are somehow bleached.

- (5) a. I [gave [the target]_{object} [a hit]_{action}]_{light verb construction}·
 b. I hit the target.

2.4.7 Nonfinite constructions and nominalization

English nonfinite constructions include two participles (the *ING*-participle and the *ED*-participle), the bare infinitive and the *TO*-infinitive (§ 8.1.5). They are all morphologically marked (§ 5.1.1). English nonfinite constructions are largely restricted to relative clauses and complement clauses; adverbial nonfinite clauses are possible, but there are always finite counterparts (6). This makes English different from languages like Japanese, in which nonfinite adverbial clauses are much more frequent and sometimes are the only choice.

- (6) a. I usually watch jail shows [when waiting for the results of my program]_{temporal:ING-clause}
 b. I usually watch jail shows [when I wait for the results of my program]_{temporal:finite}

2.5 Adjectives, adverbs, prepositions, and their phrases

Adverb phrases and prepositional phrases – which may be called **adverbials** collectively – prototypically fill **clausal adjunct** positions, which can be distinguished from clausal complements – which in English are mostly core arguments – by tests described in Huddleston and Pullum (2002, Ch 4. § 1.2). It's also possible for them to modify adjectives.

There are many subclasses in the catch-all adverbial class regarding the syntactic function. Some adverbials – both adverb phrases and prepositional phrases – are peripheral arguments (Ch 7) – the mean, instrument and manner of an event, the spatial and temporal location, etc. Some adverbs are TAM markers (§ 5.2), and of course, temporal peripheral arguments also have TAM meanings. Some adverbs have higher scopes and are more or less about speech acts.

2.6 Clause combining

All English clause combining devices are on the level of complete clauses: There is no complex predicate or clause chaining. Thus, TODO: types of clause combining

2.7 Constituent order

As is said above, probably because of the erosion of the morphology system in historical stages (§ 3.1, TODO: more ref), English has highly rigid constituent orders. Moving of syntactic objects usually indicates non-trivial information structure (Ch 9) or is triggered by the syntactic environment (TODO: interrogative, etc.).

Chapter 3

Nominal categories

3.1 Overview

The case system of English

3.2 Pronouns

3.2.1 Personal pronouns

3.2.2 Demonstratives

3.3 Inflectional morphology

Chapter 4

The structure of the noun phrase

Chapter 5

Verb inflection and TAM marking

5.1 The verb paradigm

5.1.1 Inflectional forms

5.1.1.1 Lexical verbs

Box 5.1: Distinguishing inflectional forms

Traditional grammars usually have a large paradigm with its row and column headers being grammatical categories. (When there are too many categories – and in this case the language in question is usually agglutinative – the paradigm will be unbearably large, and another way – like the School Grammar of Japanese – is needed to cover verb inflection. Still, partial paradigms are useful in this case.) This is a morphosyntactic way to represent the inflection of a word, but if we are talking purely about the *morphological* part (i.e. how grammatical relations and categories are realized), then it's sometimes not necessary to recognize so many forms: If a verb appears exactly the same in two different syntactic environments, then we say there is only one *inflectional form* of that verb. For languages like Latin, the traditional large-paradigm way is handy, while for English, we can zip the paradigm severely (Huddleston and Pullum 2002, Ch 3. § 1.2).

Modern English has already lost most of its verb inflection. Following the analysis of Huddleston and Pullum (2002, Ch 3. § 1.1), for lexical verbs, there are six remaining inflectional forms: the past form, the plain present form, the 3sg present form, the plain form, the ING-participle, and the ED-participle. The two present forms and the past form appear solely with trivial aspectual values and trivial modality. They are **primary** forms: They already have all TAM categories marked on them. The plain form and the two participles are **secondary** forms: They usually appear after auxiliaries in a periphrastic construction to have full TAM marking, though a subjunctive clause may sometimes get rid of any auxiliary verb, as in *he suggests that she [complete] this task first* (§ 10.1.1.1).

Examples of these forms are illustrated in Table 5.1. This is a copy of [1] in Huddleston and Pullum (2002, § 1.1). It can be noticed that the plain form is usually the same as the plain present form. However, since modal verbs (see below) have no plain form, and that the syntactic environments of the plain form and the present plain form are too different, if Table 5.1 is to be regarded as a paradigm – that is, to be incorporated with morphosyntactic information – then the two forms should occupy two cells.

Table 5.1: Paradigms of lexical verbs

			<i>take</i>	<i>want</i>	<i>hit</i>
Primary	past form		<i>took</i>	<i>wanted</i>	<i>hit</i>
	present form	3sg	<i>takes</i>	<i>wants</i>	<i>hits</i>
		plain	<i>take</i>	<i>want</i>	<i>hit</i>
Secondary	plain form		<i>take</i>	<i>want</i>	<i>hit</i>
	ING-participle		<i>taking</i>	<i>wanting</i>	<i>hitting</i>
	ED-participle		<i>taken</i>	<i>wanted</i>	<i>hit</i>

Box 5.2: The name of the forms

Here I deviate from the practice in (Huddleston and Pullum 2002, Ch 3) and pick up the more common names for some of the forms.

The ING-participle is frequently called the *gerund*, because it now has the function of both a gerund and an active participle. Huddleston and Pullum (2002) call it the *gerund-participle*. Some grammars use the term *present participle*. Since in Modern English, the ING-participle no longer carries any tense information, the historical term *present participle* is abandoned in this note.

The traditional name *past participle* for the ED-participle makes more sense, because it's morphologically related to the past form for regular verbs and it still has some sense of "past": It is strongly related to the PERFECT and therefore has some sense of the past, though it doesn't carry the past tense. A better term would be the one in Latin grammar: the *perfect passive participle*, but this is in conflict with the name of the *having been done* construction.

A usual name for the plain form is the infinitive form, which I reject here because the morphological marking of the main verb after modal auxiliary verbs (*would [like]*), the verb in a subjunctive clause (*he suggests that she [complete] this task first*), and the verb in a real infinitive clause are all the same, and therefore it makes no sense to use the term *infinitive* to cover the *morphological* form of all the three.

The ING-participle is regularly formed by adding *-ing* to the end of the plain form (TODO: -tt- in splitting). The ED-participle and the past form are usually obtained by adding *-ed* to the end of the plain form, but for irregular verbs they can't be inferred from the plain form. Thus English verbs have three **principal forms**: the plain form, the past form, and the ED-participle. We may also say there are three stems in English: the plain form, the past form, and the ED-participle, with only the first one being productive for further morphological processes.

5.1.1.2 Types of irregular verbs

The formation of the principal parts

5.1.1.3 Auxiliary verbs

English also has a number of auxiliary verbs (§ 5.1.2). All auxiliary verbs have tense-dependent forms, because all of them may appear as the first word in an auxiliary chain, and the tense category is to be marked on the highest i.e. the first of them (§ 5.1.2.1). Thus, we say English auxiliaries also have primary forms. Modal auxiliaries don't have a separate 3sg present form, but *do*, *have* and *be* (when used as auxiliary verbs) do. It should be noted that the past forms of many auxiliary verbs don't just appear in past clauses: They may have distinct meanings (§ 5.3).

Modal auxiliaries don't have secondary forms, probably because they never appear after another auxiliary verb or in nonfinite clauses, but *do*, *have* and *be* do.

English auxiliary verbs also have negative forms, which are obtained by attaching *-nt* to the end of auxiliary. The *-nt* is historically a contraction form of the negator *not*, but in modern English the negative suffix moves together with the auxiliary in subject-auxiliary inversion (§ 5.1.2.5). Thus, it's recognized as a part of the auxiliary (Huddleston and Pullum 2002, pp. 91). All auxiliaries don't have secondary negative forms, though *do*, *have* and *be* have primary negative forms.

Since auxiliary verbs are a part of the grammar, here I list the paradigms TODO

Box 5.3: Auxiliary constructions are single-clause ones

Huddleston and Pullum (2002) treats auxiliary verbs as verbs taking complement clauses (as in, say, [11] in pp. 782). This is not the position of this note: Here I follow the standard practice in generative syntax (probably also American structuralism) and assume auxiliary verb constructions are always single-clause constructions. *Historically*, auxiliaries may origin from complement-taking verbs, but now *synchronically*, they have the same function of inflectional affixations. Complement clause constructions may (or may not) have the same *semantics* of auxiliary verb constructions and inflectional affixations, but they never have the same *structure*.

The main reasons Huddleston and Pullum (2002) analyze auxiliary verbs as complement-taking verbs or *concatenative verbs* in their terms are shown in Ch 14. § 4.2.2. However, these arguments are based on binary constituency trees, and here they confuse lexical heads and (PF

realization of) functional heads. They therefore bring in much inconsistency when they argue that the complementizer *that* isn't a head. In this note, I follow BLT's standard of headhood while fully being aware of the generative functional head analysis.

5.1.2 Periphrastic constructions with auxiliary verbs

5.1.2.1 The regular auxiliary chain

In a declarative finite clause, the order of auxiliaries is constantly given by Table 5.2. Table 5.2 is a part of the larger picture of clause structure: The auxiliary *do* (§ 5.1.2.2), adverbs (§ 5.1.2.3) and the negator (§ 5.1.2.4) may be inserted into somewhere between two auxiliaries. Other types of clauses still largely follow the scheme but may undergo subject-auxiliary inversion (§ 5.1.2.5).

The auxiliaries positions can be filled by the corresponding auxiliaries or be just left blank, without creating ungrammatical constructions. The MODAL slot may be filled by a modal auxiliary. The PERFECT slot may be filled by the auxiliary version of *have* with the correct inflection, and the PROGRESSIVE and *passive* slots may be filled by the auxiliary version of *be* with the correct inflection.

The rules of inflection are the follows. The tense category is always marked on the first auxiliary (not necessarily one of the slots in Table 5.2 – it may be an inserted *do*), and when there is no auxiliary, it's marked on the main verb. Note that it isn't true that if the first auxiliary is in the past form, it always means a past event (§ 5.3). The modal auxiliary is always followed by a plain form, and the progressive marking *be* is always followed by an ING-participle, and the perfect marking *have* is always followed by an ED-participle, and so is the passive marking *be*. When the clause is finite and the tense is PRESENT, and the MODAL slot is empty, if the subject is 3sg in number, then the first non-empty slot in Table 5.2 is in the 3sg present form, which means for verbs other than *be*, the -s suffix is attached to it; for *be* the correct form is *is*. This is the only case **subject-verb agreement** happens in English other than the case of *be* (1). For *be*, the tense is still TODO: subjunctive

In nonfinite forms, the MODAL slot has to go; the rest are still there, following the same inflectional pattern as is described above (2). Note that the subject-verb agreement is missing in all nonfinite clauses, be it the third person singular -s or inflectional forms of *be*.

Table 5.2: The order of auxiliaries and some examples

MODAL	PERFECT	PROGRESSIVE	PASSIVE	main verb
				<i>takes</i>
			<i>am/are/is/was/were</i>	<i>taken</i>
	<i>have/has/had</i>	<i>am/are/is/was/were</i>		<i>taking</i>
	<i>have/has/had</i>	<i>been</i>	<i>being</i>	<i>taken</i>
<i>will/would</i>	<i>have</i>	<i>been</i>	<i>being</i>	<i>taken</i>

- (1) a. I [like] this.
b. He [likes] this.
- (2) The award is reported [to have been being taken]_{complement clause: TO-infinitive}
- (3)

Box 5.4: The TP projections

From a generative perspective, what happens here isn't surprising: What happens here is the span spellout of grammatical categories in the TP layer. The T feature is realized via affix lowering, and it's attached locally to the nearest "word" after vocabulary insertion, which is, of course, the first auxiliary. Some adverbs are also involved in the TP domain. We usually regard them as specifiers of functional heads, because in this way it's easy to account for the fact that in the surface form, verbs occur between adverbs: If adverbs are specifiers, then their corresponding heads can be sites of vocabulary insertion. In the prototypical case, the specifier of, say, an Asp_{continuous} head tells us more about *how* continuous the event is, just like that the object – the specifier of

the Trans head – tells us more about *what* is the patientive argument. It's also frequent that the ways to fill this specifier is highly limited, and in this way the semantic function of the adverb is almost the same as the head, though the former is “in the format of specifier” (Shlonsky 2010). and they are by all means a part of the sequence in Table 5.2. TODO: cartography of TP, especially the position of not

5.1.2.2 Do insertion

5.1.2.2.1 Obligatory *do* insertion *Do* insertion happens in two circumstances. The first is we need an auxiliary but there isn't one. This is the case when we negate a clause with no auxiliary verb (§ 5.1.2.4), and the case when subject-auxiliary inversion happens but there is no auxiliary verb (§ 5.1.2.5). In both cases, *do* is inserted before the main verb, and is regarded as an auxiliary, which carries the tense feature and the subject-verb agreement information and is inflected accordingly (4, 5).

We may say the *do* is the default realization of the tense category and the agreement when these can't find an appropriate host. It's roughly in the same position of MODAL in Table 5.2. Then, expectedly, adverbs can be inserted between *do* and the main verb (6).

- (4) I do not like the gift. I don't like the gift.
- (5) Did he enter the room that night?
- (6) I do not particularly like that kind of flower.

5.1.2.2.2 *Do* for emphasis Unlike (4, 5, 6), we can also just insert *do* to emphasize on the action, and in this case the inserted *do* receives stress. The morphology of *do* is the same as the obligatory *do* insertion, and so is the distribution of adverbs.

- (7) Your company [*do*]_{do insertion} [have]_{main verb} lots of rules!

5.1.2.3 Adverbs in the auxiliary chain

Adverbs are never inserted between the first auxiliary (if any) and the negator. TODO: what else?

- (8) He [is]_{PROGRESSIVE} [vigorously]_{TODO}: [doing]_{main verb} [his job]_{object}.

5.1.2.4 Negation in the auxiliary chain

The rule of negation is close to the rule of adverbs: If the negator *not* is used, it is always after the first auxiliary, which may be the inserted *do* (9), otherwise the first auxiliary is in its negative form (10).

- (9) He is [not]_{negation} vigorously doing his job.
- (10) He isn't vigorously doing his job.

It should be noted the position of the negator doesn't determine the scope of negation (Huddleston and Pullum 2002, pp. 668). See, for example, the ambiguity of (11). This means the negator-after-first-auxiliary rule is about *realization* and not about the underlying syntactic structure (Box 5.6), if we assume the semantic difference has structural significance. Another piece of evidence for the quasi-morphological nature of the negator *not* is adverbs never appear before the auxiliary and it (see above).

- (11) I don't appoint him because he is my son.
'I appoint him, but because of his talent, not because his relation with me. / I don't appoint him, because he's my son and I don't want to appoint him and leave a bad impression on my colleagues.'

Box 5.5: Negation in Cartography

The mismatch between the syntactic position and the semantic scope of negation is prevalent: Both narrowing and widening the scope are possible (Moscati 2010, pp. 40). The exact status of negation in syntax is still a debated topic. As is said above, if we assume the syntactic structure faithfully represents the semantic scope of negation, we need to set multiple negator positions

in the TP (and also CP – think about the Latin negative complementizer *ne*) layer, while the PF realization of the negation is fixed to a specific position (in the case of English, after the first auxiliary verb). We can also assume a uniform NegP, but then LF must be able to arbitrarily change the negation scope (Moscati et al. 2012), which may give rise to the theoretical problem that there now seems to be “real” head movements that change the semantics. The Cartography tradition however tend to treat syntactic negation markers as specifiers (Zanuttini 1997, pp. 101; Radford 2009, § 4.7) – essentially the negation-like-adverb approach introduced above in the main text – and this scope widening approach at least doesn’t face theoretical barriers.

In either case, the position of PF-active NegP varies cross-linguistically. This is especially demonstrated by looking at morphologically rich languages, because spelling out a span of functional heads into one phonological word is unmarked compared with incorporating a specifier of a functional head into the word, and while TAM affixes have a strong tendency to be ordered according to the preposed order in Cartography, the position of the negation affix seems to be free (Moscati 2010, pp. 15).^a The category of negation, which is purely logical, is therefore in sharp contrast with the hierarchy of TP, which encodes more substantial semantic information and has a relatively rigid order cross-linguistically.

^aNote that since the order of morphemes in the verb has a strong correlation with the syntactic functional head hierarchy motivated by other evidences, it’s not a good idea to claim that the position of the negation affix is completely an affair only about the realization of underlying grammatical structures.

5.1.2.5 Subject-auxiliary inversion

In interrogative sentences and in other cases (§ 8.1.1), the first auxiliary in the chain undergoes leftward movement, often to the initial position but may be preceded by preposed constituents (§ 8.1.1). This is called **subject-auxiliary inversion**. When there is no auxiliary, the correct form of *do* carrying the tense and

- (12) Do [you see my umbrella]?
- (13) Only then do we cook

Box 5.6: The exact meaning of morphology

In generative syntax, the subject-auxiliary inversion is usually attributed to a T(or other functional heads)-to-C movement. This notion reminds us the inherent vagueness of the term *morphology* in linguistic description: If we equate *morphology* with the stuff about post-syntactic operations i.e. *details of how a syntactic tree is realized*, then definitely the subject-auxiliary inversion is a part of morphology. This claim, however, is to outrageous for descriptive linguistics.

It’s better to say there are two dimensions when we divide the grammar of a language into parts. The structure-realization axis is about whether a part of grammar is about abstract categories, dependency relations, constituents, etc. or just the linearization of the above. Note that the first part – constantly called the underlying structure by Dixon (2009) – is still not the semantic structure, because the same semantic concept can be realized by several structurally heterogenous constructions. The morphology-syntax axis has its own vagueness, because the phonological standard of wordhood (how easily a construction undergoes internal phonological processes compared with its interaction with the neighbors) and the morphosyntactic standard of wordhood (how small a construction is) don’t always agree (Box 2.1).

Still, there are descriptive problems with the morphology-as-the-grammar-of-words approach: Too many largely independent concepts are mixed into the same chapter. For example, verb morphology in this sense includes the marking of TAM categories (which, in the perspective of the abstract, underlying structure of syntax, belongs to the clause, not the verb), synchronic verbal derivations (which is essentially syntax within the verb – a good example is De Clercq and Vanden Wyngaerd (2019)), and historical verbal derivations (patterns in the lexicon), and a reader uninterested in the details of conjugation classes has to painfully search for a while before he or she finds whether the language in question has future tense.

5.1.3 Semi-auxiliaries

5.1.4 Other semantic concepts

Some concepts exist in English but are not marked in the verb paradigm.

5.1.4.1 The future time

5.1.4.2 Evidentiality

The usual idea is English doesn't have an evidentiality category. The idea of evidentiality may be expressed by *allegedly* and by complement clause constructions about quoted speech (TODO: ref).

5.1.5 Comparability with moods

5.2 TAM adverbs

This section deals with adverbs that can't be

5.3 Use and meaning of modality auxiliaries

Chapter 6

Verb valency

This chapter mainly discusses the grammatical relations between the main verb and its core arguments in active clauses without information packaging. Information packaging devices may change the constituent order of arguments (Ch 9), and passivization changes the argument structure (§ 8.3).

Box 6.1: Two-step description of verb-argument relations v.s. one-step description

Ideally, the description of arguments is two-step: The first step is the semantic roles of the verb, and the second step is the correspondence between semantic roles and types of clausal dependents (“The G argument fills the object position”, etc.). Such a division however makes the grammar hard to read, and is not strictly followed in this note, though I will still summarize types of clausal complements in § 6.1.

6.1 Overview of arguments of verbs

6.2 Prototypical transitive and intransitive verbs

Chapter 7

Peripheral arguments

Peripheral arguments, or simply

Chapter 8

Simple clauses

This chapter is mainly about clauses without information packaging (Ch 9). The details of how a clause is embedded into another are not covered in this chapter – they are covered in Ch 10.

8.1 Parts of the clause

8.1.1 The template of clause structure

The template of English clause structure is shown in Fig. 8.1. The figure displays the four rough levels of clause structure. Each layer in Fig. 8.1 as well as justification of them, if not described in chapters above, are described in the rest of § 8.1.

The first layer contains the verb-argument (core or peripheral) grammatical relations, TAM marking (by inflection, auxiliary construction, or adverbs), and negation. In structuralist tradition as is described in Huddleston and Pullum (2002), this layer is the **verb phrase**. It contains the auxiliary chain and the main verb (§ 5.1.1, § 5.1.2.1), internal complements (§ 6.1), and adverbials that prototypically appear in the clause-final position (TODO: ref). The first layer is actually several layers: First the core argument structure, then peripheral arguments, then auxiliary verbs and negation and also TAM marking by adverbs, and also the category of voice.

The second and the third layers shown in Fig. 8.1 are much slimmer than the first layer. They are shown as separate layers mainly because the subject-predicate relation and the subject-auxiliary inversion traditionally gain more attention. The second layer highlights the prominent status of the subject (§ 8.1.2). A subject plus a verb phrase is a **nucleus clause**. A declarative clause without information packaging operations can just be a nucleus clause without further syntactic operations. The third layer is optional: It arises when subject-auxiliary inversion happens (§ 5.1.2.5), which is the case in TODO.

The fourth layer is also optional and may have several preposed constituents, each of which may be preposed by a different reason (TODO: ref), and interacts freely with the subject-auxiliary inversion (§ 9.1). This is also a fat layer: There exist several types of preposing operations (TODO: ref), and the layer also contains some high-level adverbials which are about speech force, etc., like *frankly* (TODO: ref).

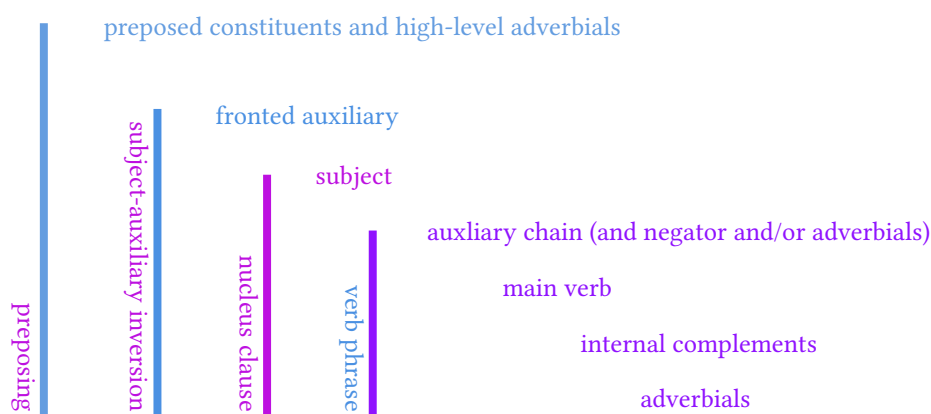


Figure 8.1: English clause structure

Box 8.1: About the term *verb phrase* and *predicate*

Dixon argues against using the term *verb phrase* in the sense of this note; his *verb phrase* is Table 5.2. The two definitions of *verb phrase* are all frequent in modern descriptive grammars. When the term *verb phrase* is used in the sense in Fig. 8.1, Dixon's verb phrase is sometimes called the *verb complex* (Friesen 2017).

Another terminology issue is many people – like Dixon – use the term *predicate* for the syntactic function of the verb complex (i.e. the realization of functional heads), while others use it for the syntactic function of the verb phrase (i.e. a lower part of the TP – see Box 8.2). To avoid this endless confusion, I will just avoid the notion of *predicate* as much as possible (Box 8.3).

Box 8.2: The *vP-TP-CP* projection

Roughly speaking, in Fig. 8.1, the verb phrase is the part of TP that is lower than the projection in which the subject is introduced. The subject-predicate structure is roughly the complete TP. Layer 3 and layer 4 are about CP.

Note that clause linking is not represented in the figure: Linked clauses may appear before or after the main clause. Supplementation and subject-sharing coordination is also not covered (TODO: ref). Nor is information packaging illustrated in the figure (TODO: heavy NP shift, final adverbial with a pause). Apart from these cases, the scheme illustrated in Fig. 8.1 works for all clause types (1, 2, 3), including nonfinite clauses, though for the latter, the properties of the subject and the allowed auxiliaries deviate from the finite case, and this is also the same for allowed preposing constructions (TODO: ref). (1) is a fused relative clause, in which there is WH-fronting but no subject-auxiliary inversion (TODO: ref). In (2) we see two preposing constructions, one topicalization (TODO: ref) and WH-movement for question formation (TODO: ref), and the only verb – the copula *is* – is moved out of the verb phrase because of subject-auxiliary inversion. The

- (1) [[What]_{i, WH-preposed: WH-pronoun} [[Max]_{subject:NP} [said Liz bought -_i]_{verb phrase}]_{nucleus}]_{WH-preposing}
- (2) [[In your opinion]_{topicalized} [[what]_{i, WH-preposed} [is [-_i the most dangerous]_{verb phrase}]_{SAI}]_{WH-preposing}]_{topic-preposing}
- (3) [[what]_{i, WH-preposed} [to [do -_i]_{verb phrase}]_{nucleus}]_{WH-preposing}

Box 8.3: Confusing form and function

If you are familiar with the structuralist method documented in Huddleston and Pullum (2002), you may already notice my annotation in Fig. 8.1 and the above examples confuse *function* (predicate) with *form* (verb phrase). However, as is said in Box 2.4, English verb phrases – roughly *vP* after case assignment, etc. – almost never appear outside a clause, and it doesn't provide additional information to introduce separate terms for form and function in Fig. 8.1. This is also the practice taken in most works adopting the notion of verb phrase, like Friesen (2017).

8.1.2 The subject

The grammatical relation subject, as opposed to other types of complements, has the following properties.

8.1.2.1 Semantic role

In active clauses, the subject is usually agentive.

8.1.2.2 Accusativity

The usual tests demonstrating syntactic accusativity can be run on English, like the recovering of extracted subject in coordination (4).

- (4) a. I [saw my mom]_{transitive} and [got into my house]_{intransitive}
'I saw my mom and I (not my mom) got into my house.'

- b. * My mom [I saw]_{transitive} and [got into my house]_{intransitive}
'I saw my mom and *my mom* got into my house.'

8.1.2.3 The subject in information packaging constructions

In information packaging, the position of the subject may be altered. Here I justify TODO

8.1.3 Active and passive voices

One thing that happens in the verb phrase and strongly influences the structural building process is the category *voice*. English doesn't have a rich set of valency changing devices, and the active-passive distinction is the only regular valency changing mechanism. There are other alternations of verb valency, but they are much more strongly determined by the lexicon and therefore are excluded from the discussion on voice (§ 2.4.5).

8.1.4 Moods or types of finite clauses

English has several clause types with regard to the related grammatically marked speech force. From the perspective of compatibility with the auxiliary verbs, the main distinction is the distinction between the imperative mood and non-imperative moods: The former doesn't allow any nontrivial modality and aspect, and the tense is always present, while non-imperative moods interact freely with all TAM categories.

The difference between non-imperative moods is small. The formation of interrogative clauses only takes two (often skipped) syntactic steps (§ 8.4.1.1), which can be attributed to a focus construction which also happens in declarative clauses (TODO: ref). Indeed, some, like Dixon (2005, pp. 25), only recognize two moods. This note still keeps the declarative-interrogative distinction for narrative convenience.

8.1.5 Nonfinite clauses and verbless clauses

8.2 Minimal declarative clause

8.3 The passive voices

8.4 Interrogative moods

8.4.1 Prototypical questions

8.4.1.1 Formation

There are two movements involved in forming a canonical interrogative clause: the subject-auxiliary inversion, and fronting of the WH-phrase, if any. Both operations can be omitted in casual speech.

8.4.2 Tag questions

- (5) The car is broken, isn't it?

8.5 The imperative mood

8.6 The to-infinitive

Chapter 9

Information packaging

9.1 Preposing

Chapter 10

Clause combining

10.1 Complement clause constructions

Complement clauses or *content clauses* (Huddleston and Pullum 2002) are clauses embedded as arguments of certain verbs. English adverbial clauses have the same form of complement clauses, and therefore Huddleston and Pullum (2002) uses the term *content clause*. Here I'll just stick to the more common terminology in linguistic description.

10.1.1 Types of complement clauses

10.1.1.1 Subjunctive clauses

10.1.2 Complement-taking verbs

10.2 Relative clauses

The relative clause construction is formed by

10.2.1 Types of relative clauses

It should be noted that the *WH*-movement in relative clauses is not structurally the same as the *WH*-movement in interrogative constructions. Consider the pair in (1): It clearly demonstrates that the relative *WH*-phrase is structurally higher than the topic, while the opposite is true for interrogative constructions. This may have a semantic motivation Radford (2009, pp. 330): In question formation, the *WH*-movement is just a marking strategy of the *focus*, which appears below the topic, while in the formation of relative clauses, *WH*-movement happens *last*, marks the whole clause as a relative clause, and “seals” the whole relative clause, separating its content and the matrix clause.

- (1) a. [In your opinion]_{topic}, [what]_{focus:WH} [is]_{fronted auxiliary} our most urgent task right now?
b. [[What], [in his opinion]_{topic}, is our most urgent task right now]_{relative clause} still remains unknown for the listeners.

10.2.2 Purpose relative clause

A rare type of

- (2) I need [a house [to live]_{purpose}]_{object: NP}
(3) I need [a house [to live in]_{purpose}]_{object: NP}

10.3 Clause linking: subordination

10.4 Clause linking: coordination

This section talks about FANBOY TODO: subject extraction

References

- Edith Aldridge. Generative approaches to ergativity. *Language and Linguistics Compass*, 2(5):966–995, 2008.
- Benjamin Bruening. The lexicalist hypothesis: Both wrong and superfluous. *Language*, 94(1):1–42, 2018.
- Karen De Clercq and Guido Vanden Wyngaerd. Negation and the functional sequence. *Natural Language & Linguistic Theory*, 37(2):425–460, 2019.
- RM Dixon. Basic linguistic theory. volume 3: Further grammatical topics, 2012.
- Robert MW Dixon. *A semantic approach to English grammar*. OUP Oxford, 2005.
- Robert MW Dixon. *Basic linguistic theory volume 1: Methodology*, volume 1. OUP Oxford, 2009.
- Robert MW Dixon. *Basic linguistic theory volume 2: Grammatical topics*, volume 2. Oxford University Press on Demand, 2010.
- Dianne Friesen. *A grammar of Moloko*. Number 3 in African Language Grammars and Dictionaries. Language Science Press, Berlin, 2017. doi: 10.5281/zenodo.824016.
- Rodney Huddleston and Geoffrey K. Pullum. *The Cambridge Grammar of the English Language*. Cambridge University Press, 2002. doi: 10.1017/9781316423530.
- Vincenzo Moscati. *Negation raising: logical form and linguistic variation*. Cambridge Scholars Publishing, 2010.
- Vincenzo Moscati et al. The cartography of negative markers: why negation breaks the assumption of lf/pf isomorphism. *Enjoy linguistics! Papers offered to Luigi Rizzi on the occasion of his 60th birthday*, pages 1–7, 2012.
- Acrisio Pires. The minimalist syntax of defective domains. *Gerunds and infinitives*, 2006.
- Andrew Radford. *Analysing English sentences: A minimalist approach*. Cambridge University Press, 2009.
- Deniz Satık. Cartography: Innateness or convergent cultural evolution? *Frontiers in Psychology*, page 1726, 2022.
- Ur Shlonsky. The cartographic enterprise in syntax. *Language and linguistics compass*, 4(6):417–429, 2010.
- Raffaella Zanuttini. *Negation and clausal structure: A comparative study of Romance languages*. Oxford University Press, 1997.