

The semantics of clause linkage: analysis of the finite complex complementation types in the English *complain* verbs

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Abstract. This article engages with the semantics of complex finite syntactic linkages of the *complain* verbs in English, as in Levin (1993). Since these verbs display two main types of complex complementation patterns, this research explains how semantics motivates and predicts to a great extent the clause linkage process through the Interclausal Relations Hierarchy, the Interclausal Semantics Relation Hierarchy, and the Syntactic Interclausal Relations Hierarchy, within the Role and Reference Grammar (RRG) framework. RRG's solid proposal is employed in this research for the systematization of the syntax-semantics interface of these verbs, drawing two main conclusions. Firstly, the results accommodate and respect the rationale of the Iconicity Principle governing the hierarchy: the closer the semantic bond (indirect discourse > direct discourse), the tighter the syntactic link (clausal subordination (daughter) > sentential subordination (daughter)). And secondly, I argue in favor that sentential subordination (daughter) is the kind of syntactic link prompted by the direct discourse semantic relation, as this has not been fully dealt with within this theory of grammar.

Keywords: semantics, complex complementation patterns, clause linkage, Iconicity Principle, subordination

[es] La semántica de los enlaces complejos: análisis de los tipos de complementación finita en los verbos de queja ingleses

Resumen. Este artículo investiga la semántica de la complementación de cláusulas finitas de los verbos de queja en lengua inglesa, tal y como se clasifican en Levin (1993). Puesto que estos lexemas verbales exhiben principalmente dos tipos de complementación compleja, se presenta una explicación sobre cómo la semántica motiva y predice en gran medida los enlaces sintácticos a través de la Jerarquía de Relaciones Interclausulares, la Jerarquía de Relaciones Semánticas Interclausulares, y la Jerarquía de Relaciones Sintácticas Interclausulares dentro de la teoría gramatical de la Gramática del Papel y la Referencia (GPR). La GPR ofrece una sólida propuesta que se emplea en esta investigación para la sistematización de la interfaz sintaxis-semántica de estos verbos, estableciendo dos conclusiones principales. La primera es que los resultados se acomodan y respetan el razonamiento del Principio de Iconicidad que gobierna la jerarquía: cuanto más cercana sea la relación semántica, (discurso indirecto > discurso directo), más rígido será el enlace sintáctico (subordinación clausal (hija) > subordinación oracional (hija)). Y, sobre la segunda, expongo que el enlace sintáctico de tipo subordinación oracional (hija) es el que se da con la relación semántica de discurso directo, ya que esta cuestión no ha sido abordada completamente dentro de este marco teórico.

Palabras clave: semántica, complementación compleja, enlaces sintácticos, Principio de Iconicidad, subordinación

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1. Introduction

The purpose of this article is to explain the formal complex linkages of the English *complain* verbs (Levin 1993) from a semantic perspective within the functionalist theory of language of Role and Reference Grammar² (Van Valin & LaPolla 1997; Van Valin 2005, Van Valin 2023; henceforth RRG). Most of these verbs take sentential complements

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² Some of the previous research on verbs of communication within RRG includes Van Valin and LaPolla (1997), González Orta (2002, 2004), Ibáñez Cerda (2008), Kailuweit (2012), and Martín-Padrón and Cortés Rodríguez (2021).

(e.g., *She complained that I left early*), and how these complements are selected and formally constructed is to be explained through their lexical semantics and the semantics of complex events. This interface is captured by the Interclausal Semantic Relations Hierarchy, the Interclausal Syntactic Relations Hierarchy, the Interclausal Relations Hierarchy, and the theory of the nexus and juncture. This research aims at analyzing only the finite complex syntactic linkages found in the grammatical behavior of the *complain* verbs. This leads to three main research questions that are addressed throughout this article: (1) what are the semantic relations that cause the particular syntactic linkages of these verbs? (2) How close or loose are those relations? And (3) what are the correspondences between the semantic relations and the syntactic linkages? I argue that sentential subordination (daughter) is one of the links motivated by these verbs, as there have been no exhaustive proposals in this respect, other than the brief stances taken by Van Valin and LaPolla (1997, 469) and Van Valin (2005, 193). Apart from this, I propose the syntactic alternation in which these verbs may participate, since Levin (1993) does not elaborate any further on this aspect. In order to answer the above-mentioned questions, I also present the lexical representation and semantic decomposition of these verbs.

This paper is structured as follows: Section 2 introduces the basic concepts of RRG, its syntactic theory for simple and complex sentences, and its system of lexical description. Section 3 deals with the classification proposed by Levin (1993) of English verb classes and alternations, where the *complain* verbs are not assigned any alternation explicitly. In this section, the main syntactic characteristics of these lexemes, extracted from Levin (1993) as well as from the consulted corpora, are presented and specified, constituting the data for this research. Section 4 engages with the Interclausal Semantic Relations expressed by the selected verbs, whereas Section 5 focuses on their syntactic linkages according to the RRG theory. Section 6 analyzes the results of the previous sections establishing correspondences between semantics and the syntactic complex clauses through the Interclausal Relations Hierarchy. Finally, Section 7 draws the main conclusions of the article.

2. Theoretical framework: an overview of Role and Reference Grammar

Role and Reference Grammar (Van Valin & LaPolla 1997; Van Valin 2005, Van Valin 2023) is a theory of language framed within the functional paradigm, subsuming the theoretical tenets of the communication-cognition perspective. Among the many characteristics that define this theory, RRG is extremely concerned with the typological level of adequacy, since it has been conceived and theorized after the study of more than 90 languages (Martín Arista 2012). Consequently, this trait is directly seen in the organization and the conception of the syntactic units that form the layered structure of the clause (LSC). The constituent projection of the LSC includes different syntactic units. Some of them are universal, and are semantically motivated, whereas those language-specific categories are pragmatically triggered. The universal ones comprehend the PREDICATOR, together with its ARGUMENTS and those non-argumental elements. The predicate, as a semantic element, belongs in the NUCLEUS and with the ARGUMENTS represent the CORE: [CORE (NUC [PRED]) + (ARG)]. It is worth mentioning that Van Valin (2023, 22) substitutes the label *predicate* in the syntactic representation by *predicator*. Concerning those units which are non-arguments, or adjuncts, they occur in the periphery and may modify the different nodes. All these syntactic units define the clause node and are under the scope of the sentence node: [SENTENCE (CLS [CORE (NUC [PRED]) + (ARG)] ← [PERIPHERY])]. RRG employs a tree-diagram representation and a hierarchical organization for the LSC³. The language-specific units that we can find in English are the Pre-Detached Position (PrDP: [*Frankly*], *I don't like it*), the Post-Detached Position (PoDP: *I know them*, [*those boys*]), and the pre-core slot (PrCS: [*What*] *can I do?*). The first two are relabeled as such in Van Valin (2023) and are direct daughters of the sentence node, while the PrCS has the clause as the mother node.

Nevertheless, the LSC is not only composed by the constituent projection, which is represented in the upper part of the tree-diagram, but also by the operator projection. Operators do not conflate with the constituents since they represent a grammatical category on their own. Van Valin and LaPolla (1997, 40) explain them as “[...] categories that modify the clause and its parts. These elements are in a whole domain of their own because they represent grammatical categories [...] different from predicates and their arguments”. Consequently, they are projected in the lower part of the LSC. Operators are usually coded on auxiliary verbs in English. Although there are at least eight operators⁴ in this theory, only six are found in English: (1) tense, (2) aspect, (3) negation, (4) deontic modality, (5) status or epistemic modality, and (6) illocutionary force, which defines if a clause is declarative, interrogative, optative or imperative. These may function at different levels of the LSC: status, tense and illocutionary force always function at clausal level. This is not the case for modality, external negation, and directionals, whose scope stops at core level. The NUCLEUS includes operators such as aspect, internal negation and directionals, too. Illocutionary force and tense are operators that are always present in English clauses.

So far, I have presented the formal aspects of the syntactic units that constitute the LSC. In the case of complex sentences, traditional grammar posits mainly two forms of linkages, i.e., units may be joined by means of coordination or subordination. However, RRG's syntactic theory recognizes two variables that are involved in the bringing

³ Van Valin (2023, 23-27) offers a formal representation of the LSC.

⁴ For a more extensive explanation on operators, I refer the reader to Van Valin and LaPolla (1997), Van Valin (2005), Pavey (2010), and Van Valin (2023).

about of a complex structure: (1) the level at which the union occurs and (2) the type of relation established between the units being joined. The first variable is known as juncture, and the second one is the nexus.

The repository of junctures is taken from the levels of the LSC: NUCLEUS, CORE, CLAUSE, and SENTENCE. Van Valin (2005, 188) defines it as “the nature of the units being linked”. Junctures at nuclear level occur with the union of two nuclei and their arguments, referring to the same event (Pavey 2010, 221): *He forced the door open*. One of the characteristics of nuclear junctures is that they do not allow the introduction of complementizers, such as *to*. In these cases, the junctures are at the core: *He told John to clean the table*. Clausal junctures comprise more than one clause, as in *Robert told Mary, but she didn't listen*.

Regarding the nexus, three types of connections are possible: coordination, subordination, and cosubordination⁵. Coordination is characterized by the independence of the units, each one with its own predicator and arguments as well as operators: *They spoke, but we didn't listen*. Subordination, nevertheless, implies a relation of dependency between the matrix and the dependent/embedded/subordinate⁶ element. This type of relation may be instantiated by a unit, as an argument of the matrix clause (*He heard that they had left*) or as an adverbial element modifying the main one, also known as ad-subordination: *He went to the office, because I was there*. Finally, cosubordination takes place when there is dependency in terms of operators: *He must try to shut the door*. The deontic modal *must*, indicating strong obligation, affects both *try* and *shut*.

Complex sentences in English can be instantiated by nine different juncture-nexus types, as explained in Van Valin (2005, 198): (1) nuclear cosubordination, (2) core coordination, (3) core cosubordination, (4) core subordination, (5) clausal coordination, (6) clausal cosubordination, (7) clausal subordination, (8) sentential coordination, and (9) sentential subordination.

In the latest revision of the theory, Van Valin (2023, 82-83) refers explicitly to the Interclausal Syntactic Relations Hierarchy (ISynRH), which captures the tightness of the syntactic linkage. The ranking states that nuclear junctures are tighter than core junctures, but these, in turn, are less weak than clausal junctures. The weakest type is sentential juncture. In the case of nexus types, cosubordination represents the tightest bond, while coordination the weakest. Since subordination can be of two kinds, ad(verbial)-subordination, or peripheral, is less tight than daughter subordination (Van Valin 2023, 83).

The ISynRH is complemented by the Interclausal Semantic Relations Hierarchy (ISemRH), which ranks the Interclausal Semantic Relations from the closest to the loosest. These two hierarchies converge into the Interclausal Relations Hierarchy (IRH)⁷, which is based on an iconic relation principle (cf. Silverstein 1976; Foley & Van Valin 1984, 264-274; Givón 1990, 515-560; Van Valin 2005, 205-213; Van Valin 2023, 82-92) governing the semantics and syntax of clause linkage, as Van Valin (2023) explains. The principle is that the closer the semantic relation is, the tighter the syntactic linkage will be. It must be mentioned that the semantic relations exceed the number of syntactic linkages, meaning that there is no fixed one-to-one correspondence in the mapping from syntax to semantics and vice versa. In fact, a semantic relation may be realized by different juncture-nexus types (Van Valin 2023, 88). However, the closer the semantic relation, the tighter the syntactic link.

Lastly, RRG introduces the concepts of ACTOR, UNDERGOER, and PRIVILEGED SYNTACTIC ARGUMENT (psa) (cf. Van Valin & LaPolla 1997, 139-154; Van Valin 2005, 53-67). The first two are the generalizations of semantic roles and are known as macroroles, each of them subsuming a specific type of argument (Van Valin & LaPolla 1997, 141). In the case of the PSA, it refers to what has been traditionally named *subject*. These three concepts mingle together in the linking algorithms of this theory of language, working at the grammatical relations level, and systematized in the *Actor-Undergoer Hierarchy*, and the *PSA Selection Hierarchy*.

3. Data

The selected verbs for analysis have been taken from Levin's (1993) preliminary classification of the diathesis alternations of English verbs. According to this author, the alternations in which a verb participates are rooted in a semantic component. To illustrate this, Levin (1993, 4) presents an example with the verb *gally*, unknown to two speakers but each of them associates it with two different verbs. She observes that

On the basis of these assumptions about the meaning of *gally*, the two speakers are able to make judgments about its syntactic behavior [...] Thus the two speakers' different treatment of *gally* may be explained by their different assumptions concerning meaning [...] knowing the meaning of a verb can be key to knowing its behavior". (Levin 1993, 4-5)

This is also related to the notion of the *nature of lexical knowledge* that she mentions, meaning that the knowledge that speakers have is greater than what is reflected in a verb's lexical entry. Therefore, verbal behavior results

⁵ As Van Valin (2023, 72) makes abundantly clear: “Coordination and cosubordination, as well as subordination, are abstract linkage relations which are instantiated by a range of formal construction types. [...] Coordination and cosubordination are not always realized via conjunction, just like subordination is not always associated with embedding”.

⁶ It is necessary to clarify that the following notions *dependent*, *embedded* and *subordinate* are not employed as synonyms in the RRG system. Van Valin (2023, 72-73) offers an explanation on this aspect.

⁷ The reader might find useful an in-depth explanation of the ISynRH, the ISemRH, and the IRH in Van Valin (2023, 68-92).

from “the interaction of its meaning and general principles of grammar” (Levin 1993, 11): argument structure is conditioned largely by verbal meaning. In other words, the belonging of a lexeme in a verbal class is based on the sharing of common properties, such as “the possible expression and interpretation of their arguments, as well as the existence of certain morphologically related forms” (ibid.) and “verb classes arise because a set of verbs with one or more shared meaning components show similar behavior” (Levin 1993, 17).

Regarding the *complain* verbs, Levin lists the following: *boast, brag, complain, crab*⁸, *gripe, grouch, grouse, grumble, kvetch*, and *object*. The properties that these verbal lexemes exhibit comprehend patterns such as “*Ellen complained. Ellen complained to Helen. Ellen complained (to Helen) that melons were selling. Ellen complained, ‘The mail didn’t come today.’*” (Levin 1993, 210-211), mainly. It is seen that these verbs can also take finite sentential complements as well as introducing the entity at which the communicative act is addressed through the prepositions *to* or *at*, depending on the verb. She comments that these verbs explain the attitude or the feeling of the speakers towards what is being said (Levin 1993, 210-211).

However, for this group of verbs, the alternations are not specified or labeled in Levin (1993), unlike other similar verbs, such as the *advise* verbs. This represents a sort of void in the theorization of the English verbs by Levin, particularly of those related to the communication dimension. It is my purpose to address and answer this question, analyzing them within the theory of nexus and juncture, the ISemRH, ISynRH and the IRH.

The linguistic data has been principally extracted from the *Corpus of Contemporary American English* (CoCA). The information provided by the corpus has been employed to delve into vital aspects of this research, such as the diathesis alternations of these verbs and their finite sentential complementation types. The size of the sample by verb amounts to 100 entries in the corpus, when possible. However, the reduced number of entries of some verbs, such as *grouch*, and *kvetch*, do not offer enough data to examine the complement types that they can take. For the purpose of gathering significant linguistic information that has not been provided by the CoCA, the *Corpus of Global Web-Based English* (GlobWbe), the *Cambridge Dictionary (Online)*, the *Longman Dictionary (Online)*, and the *Merriam-Webster Dictionary* have been consulted.

4. *Complain* verbs: interclausal semantic relations

Since most of these verbs allow complex complementation types, as seen in the examples provided by Levin (1993), this section deals with the kinds of interclausal semantic relations that they express, which are to be included in their lexical representations and semantic decompositions. Such a lexical-semantic descriptive system is known as logical structure (LS) in RRG. A LS fuses the semantic prime of a predicate and its lexical aspect (Aktionsart). This leads to six predicate classes: states, activities, achievements, semelfactives, accomplishments, active accomplishments, and their causative counterparts⁹. Their formal representations depart from the LSs of states, i.e., **predicate’** (x, y), and activities, i.e., **do’** (x, [**predicate’** (x, y)]) (Van Valin 2005).

The LSs of the *complain* verbs in English are adapted from the ones proposed for the Spanish *complain* verbs proposed in Martín-Padrón (2023) and are assigned to each lexeme following the methodology employed in that research¹⁰. These are activity-like predicates taking two or three arguments depending on the verb.

4.1. Indirect discourse

One of the interclausal semantic relations that these verbs exhibit is that of indirect discourse, which is defined according to Van Valin (2005, 206) as “an expression of reported speech, e.g. *Frank said that his friends were corrupt*”. The formal characterization of this semantic relation is “**do’** (x, [**say’** (x, [LS <TNS...>])])”, meaning that *someone said that...* The operator of tense is coded as *tns* in the LS, and it is a fundamental aspect to be specified in the event that is being narrated in order for this semantic relation to express reported speech.

Complain and *gripe* have the following LS¹¹, presented in Table 1 with an example and its representation:

⁸ This verb has also a complain-related sense, defined by the Merriam-Webster as “to complain about peevishly”.

⁹ A more specific explication on lexical aspect, lexical classes and the system of lexical representation is provided in Van Valin and LaPolla (1997), Van Valin (2005), Pavey (2010), Cortés Rodríguez, González Vergara, and Jiménez Briones (2012), and Cortés Rodríguez (2016).

¹⁰ Martín-Padrón’s (2023) methodology for assigning the semantic prime and the LS for each verb is based on the onomasiological structuration of the lexicon according to the Functional-Lexematic Model (cf. Mairal Usón and Faber 1999). This implies a hierarchical lexical arrangement based on superordinate and subordinate relations. Moreover, this model takes a definitional approach for semantic decomposition. However, in Martín-Padrón (2023), that approach is complemented by extracting the semantic prime *SAY* from the Natural Semantic Metalanguage (Goddard & Wierzbicka 2002, 60) for the verbs of communication, avoiding as much as possible the theorization of ad-hoc lexical decompositions.

¹¹ These LSs have been adapted, i.e., the semantic prime has been expanded when needed, from the ones proposed for the Spanish *complain* verbs in Martín-Padrón (2023).

Table 1. Codification of the indirect discourse interclausal semantic relation for the verbs *complain* and *gripe*

Aktionsart class	Activity
LS	$[DO(x, [\text{use.code}'(x, w)]) \wedge DO(x, [\text{address}'(x, y)]) \wedge DO(x, [\text{say.words.not.satisfactory}(\alpha).\text{to}(\beta).\text{in.language}(\gamma)'](x, [L_{LS} <TNS...>]))]$, where $(x, [L_{LS} <TNS...>]) = \alpha$
Example	They complained to the manager that the prices were too high.
Semantic representation	$[<_{TNS} PAST <_{IF} DECL < DO(They, [\text{use.code}'(They, \emptyset)]) \wedge DO(They, [\text{address}'(they, the\ manager)]) \wedge DO(they, [\text{say.words.not.satisfactory}(\alpha).\text{to}(\beta).\text{in.language}(\gamma)'](they, [<_{TNS} PAST\ be' (prices, \mathbf{high}')>)))]>>>]$, where $(they, [<_{TNS} PAST\ be' (prices, \mathbf{high}')>]) = \alpha$

The LS of *complain* and *gripe* with this interclausal semantic relation is understood as ‘someone (x) who employs a particular code (w) to convey the message (x, [LS <TNS...>]) that someone (x) had said as not satisfactory to a hearer (y)’. Some of these arguments may be specified or not.

In the case of the verbs *grouse* and *grumble*, the LS is different, as seen in Table 2:

Table 2. Codification of the indirect discourse interclausal semantic relation for the verbs *grouse* and *grumble*

Aktionsart class	Activity
LS	$[DO(x, [\text{address}'(x, y)]) \wedge DO(x, [\text{say.words.not.satisfactory.annoyingly}(\alpha).\text{to}(\beta).\text{in.language}(\gamma)'](x, [L_{LS} <TNS...>]))]$, where $(x, [L_{LS} <TNS...>]) = \alpha$
Example	Some employees grumbled at their superior that the conditions were hard.
Semantic representation	$[<_{TNS} PAST <_{IF} DECL < DO(Some\ employees, [\text{address}'(Some\ employees, their\ superior)]) \wedge DO(Some\ employees, [\text{say.words.not.satisfactory.annoyingly}(\alpha).\text{to}(\beta).\text{in.language}(\gamma)'](Some\ employees, [<_{TNS} PAST\ be' (conditions, \mathbf{hard}')>)))]>>>]$, where $(Some\ employees, [<_{TNS} PAST\ be' (conditions, \mathbf{hard}')>]) = \alpha$

These verbs do not incorporate the variable *w*, as seen in the LS of *complain* and *grouse*. Therefore, their semantic representation reads as “someone (x) addresses a hearer (y) by saying the message (x, [LS <TNS...>]) that someone (x) had said as not satisfactory in an annoying manner”.

Boast and *brag* have a similar LS to the one of *grouse* and *grumble*, but with a distinct semantic specification, as can be observed in Table 3:

Table 3. Codification of the indirect discourse interclausal relation semantic for the verbs *boast* and *brag*

Aktionsart class	Activity
LS	$[DO(x, [\text{address}'(x, y)]) \wedge DO(x, [\text{say.words.of.excessive.pride.about.oneself}(\alpha).\text{to}(\beta).\text{in.language}(\gamma)'](x, [L_{LS} <TNS...>]))]$, where $(x, [L_{LS} <TNS...>]) = \alpha$
Example	His father bragged that he had a lot of money.
Semantic representation	$[<_{TNS} PAST <_{IF} DECL < DO(His\ father, [\text{address}'(His\ father, \emptyset)]) \wedge DO(His\ father, [\text{say.words.of.excessive.pride.about.oneself}(\alpha).\text{to}(\beta).\text{in.language}(\gamma)'](His\ father, [<_{TNS} PAST\ have' (he, a\ lot\ of\ money)>)))]>>>]$, where $(His\ father, [<_{TNS} PAST\ have' (he, a\ lot\ of\ money)>]) = \alpha$

In this case, the semantic interpretation of the LS of *boast* and *brag* is similar to that of *grouse* and *grumble* concerning the number of arguments, but, as one might expect, different in semantic nature. Hence, it is read as follows “someone (x) addresses a hearer (y) by saying the message (x, [LS <TNS...>]) that someone (x) had said with excessive pride about oneself”.

The last verb that expresses indirect discourse is *object*, developed in Table 4:

Table 4. Codification of the indirect discourse interclausal semantic relation for the verb *object*

Aktionsart class	Activity
LS	[DO (x, [say.words.of.one's.opposition.(α).to.(β).in.language.(γ)' (x, [LS <TNS...>])]), where (x, [LS <TNS...>]) = α
Example	Bush objected that the requirement interfered.
Semantic representation	[<TNS PAST<DECL<DO (Bush, [say.words.of.one's.opposition.(α).to.(β).in.language.(γ)' (Bush, [<TNS PAST do' (the requirement, [interfere' (the requirement)])>])>>>], where (Bush, [<TNS PAST do' (the requirement [interfere' (the requirement)])>]) = α

Such a LS is summarized in the following scheme: “someone (x) said the message “(x, [LS <IF...>])” that expressed opposition”.

The semantic roles that these verbs take are SPEAKER for argument x and HEARER for argument y, except for *object*, where y is by default a CONTENT complement. These verb-specific semantic roles are also maintained when expressing the other interclausal semantic relation for these predicates.

It seems that the verbs *crab*, *grouch* and *kvetch*¹² are not frequently used with this semantic interclausal relation, but, like the rest of the verbs of this group, they do employ a non-finite form of complex complementation, as in **GlobWbE 5 CAG** *They kvetch [about riding in white breeches]*. Since this investigation is mainly concerned with the finite complementation types, these will be left out.

4.2. Direct discourse

The second interclausal semantic relation that is identified is direct discourse, understood as “the direct quotation of a speech event, e.g., *Frank said, ‘My friends are corrupt’*” (Van Valin 2005, 206). On this occasion, the formal characterization of this relation is captured as “do’ (x, [say’ (x, [LS <IF...>])])”. If is the representation of the illocutionary force operator. Since the speech event that is expressed is not paraphrased, it requires its own illocutionary force. The verbs that convey the indirect discourse relation also allow direct discourse, as Table 5 shows for *complain* and *gripe*:

Table 5. Codification of the direct discourse interclausal semantic relation for the verbs *complain* and *gripe*

Aktionsart class	Activity
LS	[DO (x, [use.code’ (x, w)]) ^ DO (x, [address’ (x, y)]) ^ DO (x, [say.words.not.satisfactory.(α).to.(β).in.language.(γ)’ (x, [LS <IF...>])]), where (x, [LS <IF...>]) = α
Example	They complained, “The prices are too high”, to the manager.
Semantic representation	[<DECL<TNS PAST<DO (They, [use.code’ (They, Ø)]) ^ DO (They, [address’ (they, the manager)]) ^ DO (they, [say.words.not.satisfactory.(α).to.(β).in.language.(γ)’ (they, [<DECL <TNS PRE be’ (prices, high’)>>])>>], where (they, [<DECL<TNS PRE be’ (prices, high’)>>]) = α

The LS of *complain* and *gripe* reads differently to the one expressing indirect discourse: “someone (x) who employs a particular code (w) to convey the message “(x, [LS <IF...>])” as not satisfactory to a hearer (y)”.

Table 6. Codification of the direct discourse interclausal semantic relation for the verbs *grouse* and *grumble*

Aktionsart class	Activity
LS	[DO (x, [address’ (x, y)]) ^ DO (x, [say.words.not.satisfactory.annoyingly.(α).to.(β).in.language.(γ)’ (x, [LS <IF...>])]), where (x, [LS <IF...>]) = α
Example	“The conditions are hard”, some employees grumbled at their superior.
Semantic representation	[<DECL<TNS PAST<DO (Some employees, [address’ (Some employees, their superior)]) ^ DO (Some employees, [say.words.not.satisfactory.annoyingly.(α).to.(β).in.language.(γ)’ (Some employees, [<DECL<TNS PRE be’ (conditions, hard’)>>])>>], where [<DECL<TNS PRE be’ (conditions, hard’)>>]) = α

¹² The findings from the CoCA reveal that *kvetch* could cooccur with a *that*-clause: **CoCA 56/2000 NEWS/Atlanta: A Composers who do not receive instant popularity often kvetch that “My time will come”**. However, this example might be considered inconclusive in two respects: 1) it is not clear if it is an indirect discourse complement or a direct discourse complement, and 2) its frequency is extremely low, as this is the only concordance found in the sample of this verb (131 entries were analyzed for *kvetch*: 60 from the CoCA and 71 from the GlobWbE Corpus). The information about *kvetch* in the *Cambridge Dictionary* and the *Longman Dictionary* also suggests that it is not regular that this verb shows such a complementation pattern. Accordingly, it seems coherent to not include this type of complementation as canonically proper to the verb *kvetch*. This also occurs with the verb *grouch* and the direct discourse relation.

This LS of *grouse* and *grumble*, introduced in Table 6, is slightly changed from the one with the tns operator, i.e., indirect discourse, to the if operator: “*someone (x) addresses a hearer (y) by saying the message “(x, [LS <IF...>])” as not satisfactory in an annoying manner*”.

Table 7. Codification of the direct discourse interclausal semantic relation for the verbs *boast* and *brag*

Aktionsart class	Activity
LS	[DO (x, [address' (x, y)]) ^ DO (x, [say.words.of.excessive.pride.about.oneself.(α).to.(β).in.language.(γ)' (x, [_{LS} <IF...>])], where (x, [_{LS} <IF...>]) = α
Example	His father bragged, “I have a lot of money”.
Semantic representation	[< _{IF} DECL< _{TNS} PAST<DO (His father, [address' (His father, Ø)]) ^ DO (His father, [say.words.of.excessive.pride.about.oneself.(α).to.(β).in.language.(γ)' (His father, [< _{IF} DECL< _{TNS} PRE have' (I, a lot of money)>>])])>>], where (His father; [< _{IF} DECL< _{TNS} PRE have' (I, a lot of money)>>]), = α

As observed in Table 7, the semantic decomposition of the verbs *boast* and *brag* is paraphrased as “*someone (x) addresses a hearer (y) by saying the message “(x, [LS <IF...>])” with excessive pride about oneself (x)*”.

Table 8. Codification of the direct discourse semantic interclausal relation for the verb *object*

Aktionsart class	Activity
LS	[DO (x, [say.words.of.one's.opposition.(α).to.(β).in.language.(γ)' (x, [_{LS} <IF...>])], where (x, [_{LS} <IF...>]) = α
Example	“The requirement interferes”, Bush objected.
Semantic representation	[< _{IF} DECL< _{TNS} PAST<DO (Bush, [say.words.of.one's.opposition.(α).to.(β).in.language.(γ)' (Bush, [< _{IF} DECL< _{TNS} PRE do' (the requirement, [interfere' (the requirement)])>>])])>>], where (Bush, [< _{IF} DECL< _{TNS} PRE do' (the requirement, [interfere' (the requirement)])>>]) = α

In this example of *object*, the LS reads as “*someone (x) says the message “(x, [LS <IF...>])” that expresses opposition*”. Since the data analyzed from the corpus suggests that this verb does not address the main proposition to a HEARER, it has not been included in its semantic decomposition and lexical representation, presented in Table 8. As happens with the interclausal semantic relation of indirect discourse, the verbs *crab*, *kvetch* and *grouch* do not seem to occur with the direct discourse relation either.

This section has introduced the indirect discourse and the direct discourse complements as part of the interclausal semantic relations expressed by these verbs, which may have different realizations in the syntax. In the following section, the types of nexus-juncture combinations of the *complain* verbs when taking those sentential complements are presented.

5. Syntactic linkages

These predicates allow optionality concerning the syntactic realization of arguments expressed in a sentence. Although their semantic representations incorporate at least two semantic arguments, argument *x* must always be present when syntactically realized: [*They(x)*] *complained* [Ø HEARER] [Ø EVENT]. Two syntactic linkages are associated with this verbal group: clausal subordination (daughter) and sentential subordination, apart from ad-subordination.

5.1. Clausal subordination (daughter)

Such a syntactic linkage is very frequent concerning the sentential complements taken by the *complain* verbs in English. In this type of nexus-juncture bond, there is a subordinate clause, as dependent to the matrix, which is introduced by the clausal complementizer *that*. In RRG, complementizers are part of a more comprehensive category named *linkage markers* (LM), incorporating conjunctions and switch reference markers (cf. Van Valin & LaPolla 1997, 469-477; Van Valin 2005, 205-213). I present the reader with the following analyses:

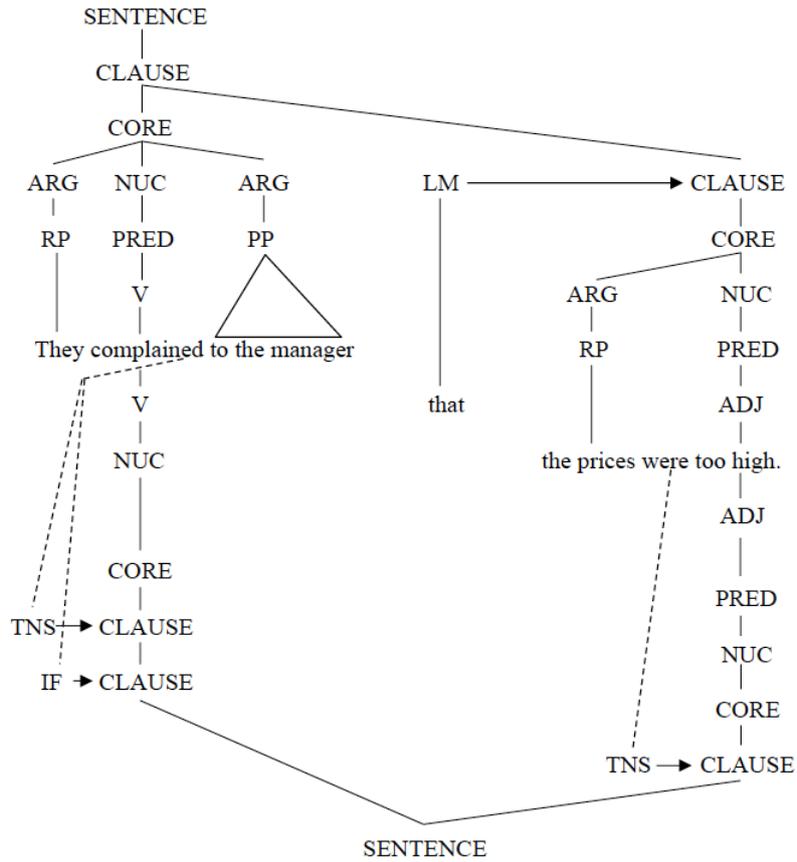


Fig. 1. Clausal subordination (daughter) with the verb *complain*

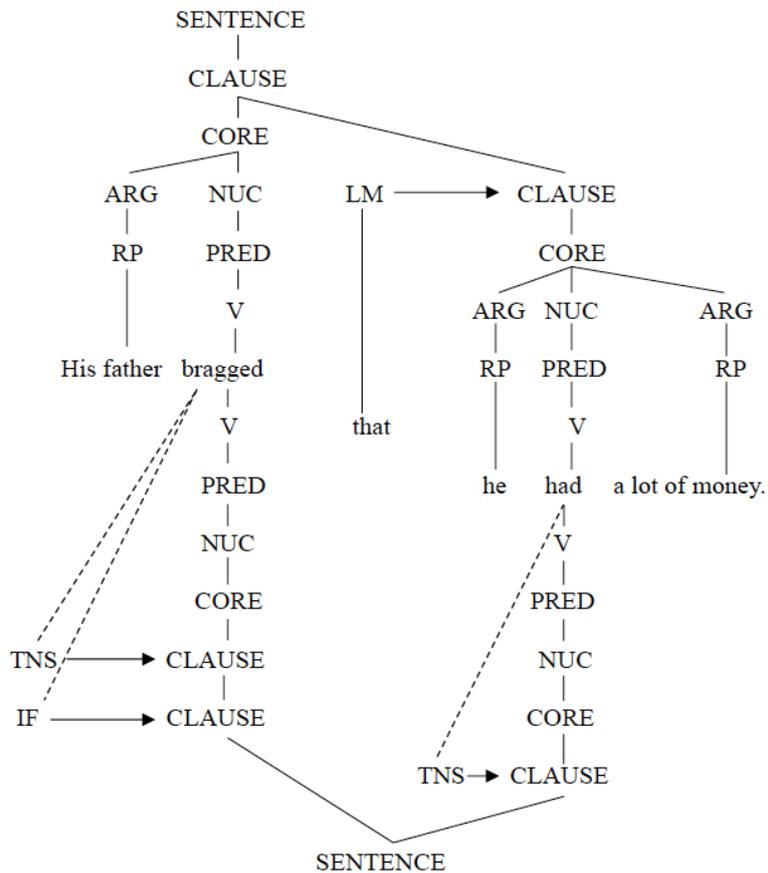


Fig. 2. Clausal subordination (daughter) with the verb *brag*

Figure 1 and Figure 2¹³ show the syntactic analysis of a *that*-clause complement. In the case of Figure 1, the verb *complain* has a direct core argument, *They*, and an oblique core argument, *to the manager*. These units, together with the predicator, are under the scope of the clause node and constitute the main clause of the sentence: [[*They complained to the manager* CORE] CLAUSE]. This main clause comprehends the subordinate one, *the prices were too high*, joining at clausal level. As seen, the matrix clause bears the sentence node above the clause node, leading to a clausal subordination (daughter) structure. Consequently, the *Im that* affects the clause node of the dependent unit. Concerning the operator projection, tense (TNS) and illocutionary force (IF), functioning at clausal level, are present in the main unit (headed by *complained*). However, for the subordinate junct, the *tns* operator is the only one in the operator projection (*were*). Figure 2 presents a similar analysis with the verb *brag*, but it does not have a realized oblique core argument in that example.

Although the subordinate junct, [*that*] *the prices were too high*, is a semantic argument of the predicate in the semantic representation of this sentence (cf. Table 1), in the constituent projection it is realized as a daughter of the clause node of the matrix. Nevertheless, one could expect the core to be the higher node, since it is an argument of the predicator. Van Valin and LaPolla (1997, 464-467) provide an answer to such a mismatch at the syntax-semantics interface explaining that, since peripheral adverbials can occur in between the matrix and the subordinate, the clausal junct cannot be placed under the core node. Therefore, this syntactic linkage has its formal template in: [CLS [CORE] + [CLS]], rephrased from the one given in Van Valin (2005, 223).

Another of the aspects that is worth highlighting is that in the operator projection the *that*-clause does not have illocutionary force, neither is it shared with the main clause, but lacks it. This is in fact a characteristic of a reported speech complement. The rest of the verbs present the same syntactic structure when taking a *that*-clause as a complement.

5.2. Sentential subordination

Sentential subordination takes place when the subordinate unit occurs parenthetically and/or in the PrDP, as in the example, *After Jeremy bought it, he gave it to him*. There is structural dependency between the subordinate, *After Jeremy bought it*, and the matrix, *he gave it to him*, junct. Peripheral clauses which are fronted are mostly formed by a prosodic pause, being the most canonical way to construct a sentential subordination structure. Particularly, these are usually of an adverbial nature (Van Valin, 2005), but there are cases, such as the ones presented by these verbs, where semantic arguments may occupy those positions:

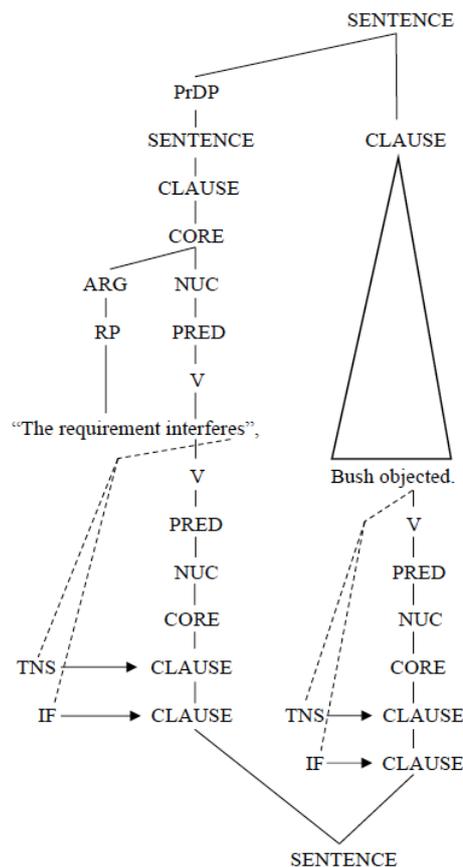


Fig. 3. Sentential subordination (daughter) with the verb *object*

¹³ RP = Referential Phrase. This non-endocentric syntactic category was firstly proposed in Van Valin (2005), further developed in Van Valin (2008), and incorporated into the standard theory in Van Valin (2023).

Figure 3 develops the relational structure of a sentential subordination juncture, where the direct discourse complement occupies the PrDP, as it is assumed that there is a prosodic pause between this subordinate constituent, “*The requirement interferes*”, and the matrix, *Bush objected*. In this respect, Ohori (2023) comments that parenthetical clauses are candidates for sentential subordination as well, referring to them as sentence-to-sentence subordination. This type of linkage occurs in sentences such as: *The main point why not have a seat? - is outlined in the middle paragraph* (Ohori 2023). In relation to the *complain* verbs, this parenthetical subordination seems to take place in examples where the direct discourse complement does not occur as a single constituent in the PrDP (as shown in Figure 3): **CoCA 83/1994 FIC VirginiaQRev** “*They forever try to sell you things you don’t want*” he groused , while driving back, “*but, of course, once you’re in...*”. As seen, the main clause, *he groused, while driving back*, appears to be interpolated between the direct discourse complement, “*They forever try to sell you things you don’t want*”[...] “*but, of course, once you’re in*”.

The analysis presented in Figure 3 and its explanation revolve around the classification of this type of syntactic linkage as sentential subordination. Yet, in Van Valin and LaPolla (1997), it was not clear that this kind of link could be actually of subordination

The closest thing to ‘sentential’ subordination’ would be direct discourse constructions, e.g. *Amy said, ‘As for Sam, I saw him last week’*, but there is in fact no evidence for claiming that the direct discourse sentence is in any way embedded in or dependent on the clause headed by the verb of saying. (Van Valin & LaPolla 1997, 469)

In Van Valin (2005) there is a brief revision of this topic, where this question remains open “Another candidate for sentential subordination is direct discourse complements; the linked clause has independent illocutionary force, hence is a full sentence” (Van Valin 2005, 193). As seen in the operator projection in Figure 3, the linked element does have independent illocutionary force. This is not the case of Figures 1 and 2, where the subordinate juncture are endowed with the tense operator but lack the illocutionary force, which is borne by the main clause. In the following paragraphs, I elaborate on the analysis proposed in Figure 3, where the syntactic linkage is of a sentential subordination (daughter) type.

A possible explanation for “*The requirement interferes*”, *Bush objected* being a sentential subordination (daughter) juncture is found in the semantics of these verbs, which requires that they have a CONTENT-like complement, with the possibility of being another event, e.g., **CoCA 11/20 MAG/NewRepublic** [“*Their strategic sense isn’t very strong*”EVENT], *griped a prominent Republican lobbyist* or *A prominent Republican griped* [that their strategic sense isn’t very strong EVENT]. The relevance of this is that the semantics of the verb assigns such an event as an argument in the LS (as seen in Section 4), which may be realized syntactically through two types of linkages: as a clausal subordination (daughter) or as a sentential subordination (daughter). The first does not posit further problems of analysis than those unraveled in the previous subsection, but the linkage at sentence level does. Nevertheless, although it may seem like a paratactic juxtaposition linkage, where the two units are at the same level, have independence in terms of operators and are joined by prosodic and/or pragmatic means, the semantics of such a syntactic construction tells us otherwise, and a functionalist approach as the one taken by RRG should not ignore this fact. If “*The requirement interferes*”, *Bush objected* were to be an example of sentential coordination, as found in *His cousin arrived; I will leave tomorrow*, it is not explicable that speakers can process that what *Bush objected* was that *the requirement interferes*, as Figure 4 shows:

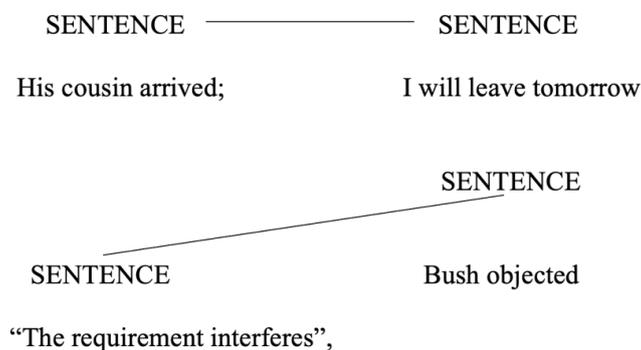


Fig. 4 Templates for sentential coordination (top) and sentential subordination (daughter) (bottom)

The semantic connection is undeniable, and both units are in a looser relation than that of a *that*-clause construction, but this does not imply that the two units are syntactically independent. The semantic role of a syntactic element like “*The requirement interferes*” is that of CONTENT, and a CONTENT complement is licensed and conditioned mostly by communication verbs. This is also seen in the type of semantic role given to argument *x*, that is, SPEAKER. This verb-specific semantic role is generalized into the role AGENT, and as a characteristic of most of these verbs, they do

not allow passivization when taking finite sentential complements. This means that syntactically, the *x* argument, which always coincides with the semantic argument *x*, cannot be omitted as the English *complain* verbs are intransitive in terms of macroroles. Hence, the quoted complement is uttered by the AGENT of the main clause and could be syntactically unexpressed: *Bush objected [Ø]*. Nonetheless, if *The requirement interferes* were to be realized on its own, the implication is that it is not a complement, but a semantically independent event. If it keeps its formal characteristics, i.e., that it is a quotation and, therefore, a CONTENT-like complement, the possibility of being realized on its own leads to an ungrammatical sentence: *?/*“The requirement interferes”*.

Again, the semantics of the sentential complementation of these verbs reinforces the premise that such a syntactic element is linked in a dependent structural relation to the main clause, which is headed by a verb of communication or of similar nature. The linked unit may be fronted or not, indicating that pragmatic and discursive factors also intervene in the syntactic configuration of the information structure of the construction.

6. Interclausal Relations Hierarchy

The IRH, as introduced in Section 2, is governed by the Iconicity Principle: the closer the semantic bond, the stronger the syntactic link, and the looser the semantic bond, the weaker the syntactic link. In this research, two interclausal semantic relations have been dealt with as being proper to the English *complain* verbs: the indirect discourse and the direct discourse. Concerning the ISynRH, two other syntactic linkages have been spotted as being prompted by the verbal semantics of these lexemes: clausal subordination (daughter) and sentential subordination (daughter). Of course, ad-core subordination, ad-clausal subordination, and ad-sentential subordination are possible, since they just incorporate additional information to the main event that cannot be retrieved from their lexical semantics. For example, *He complained that it wasn't right [after his friend screamed]* (ad-core subordination), or *He complained that it wasn't right [because his friend screamed]* (ad-clausal subordination), and *[Because his friend screamed], He complained that it wasn't right* (ad-sentential subordination). This leads to a total number of five ISynRH, but, for the above-mentioned reason, this article only engages with explaining the semantics of the clausal complementation types of the selected verbs.

Figure 5 captures the one-to-one correspondences in the mapping of complex event semantics to complex syntactic structures, systematizing the meaning-form interface of these verbs. The correlations between the semantics and syntax of these lexemes respect the Iconicity Principle that governs this hierarchy: the closer the relation, the tighter the syntactic link. In Figure 5, the semantic representation has been taken from the verb *complain* as an example to explain the interface. In agreement with this principle, the LSs of these predicates show a closer semantic relation when they express indirect discourse, as they do not have the illocutionary force operator, taken by the main clause. This closer relation leads to a tighter syntactic link: clausal subordination (daughter), formally realized by a *that*-clause. The other semantic representation expresses the interclausal semantic relation of direct discourse, which is looser since both clauses have their independent illocutionary forces. Accordingly, their syntactic linkage is expected to be weaker, namely, that of a sentential subordination (daughter).

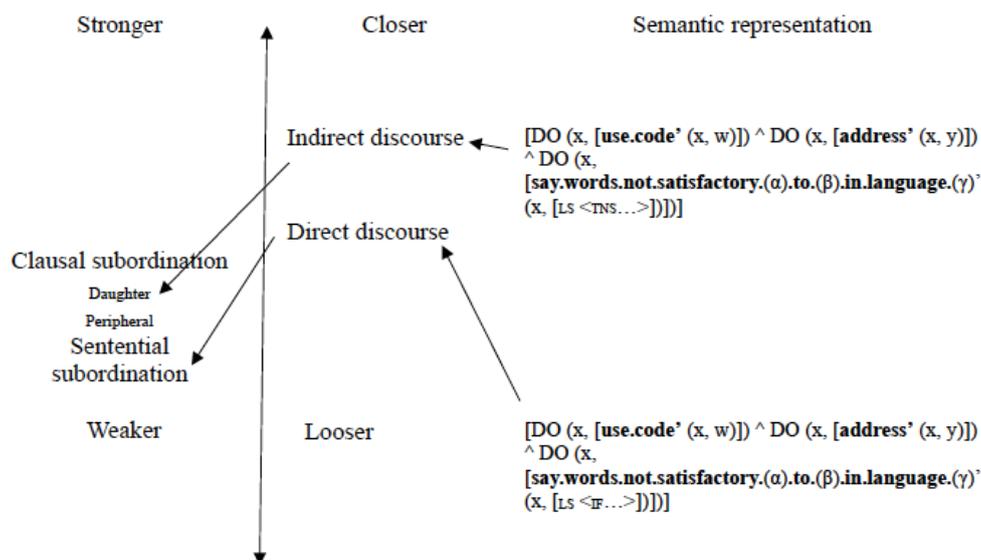


Fig. 5. IRH for the English *complain* verbs

In the RRG framework, the English *complain* verbs participate in the clausal and sentential subordination (daughter) syntactic schemas and the indirect and direct discourse constructions. In Levin's terms, most of them have similarities with the syntactic characteristics of the Pro-*arb* Object alternation

In this alternation, the unexpressed object in the transitive variant receives what has been called an “arbitrary” or “PRO-*arb*” interpretation. That is, this variant could be paraphrased with the transitive form of the verb taking “one” or “us” or “people” as object. This alternation is restricted to verbs with affected objects”. (Levin 1993, 38)

This coincides to a great extent with the characteristics of the grammatical relations and the types of semantic roles that most of these verbs exhibit. However, there is a significant aspect between the *complain* verbs and other verb groups, such as the *advise* one, which fully accommodate to this Pro-*arb* Object alternation. The difference is that the *complain* verbs do not have affected objects but oblique arguments. Accordingly, these verbs should enter a variant of the Pro-*arb* Object alternation, such as the Pro-*arb* (*Oblique*) Object construction, where one of the transitive forms of the verb could take “one” or “them” as an oblique argument introduced by the preposition *to* or *at*: *The kid complained to them*.

7. Conclusion

This article has provided an explanation of the semantics of the finite sentential complements taken by the *complain* verbs in English. This has been achieved from the perspective of the theory of nexus and juncture and the semantics of RRG, involving the ISemRH, the ISynRH and the IRH. Such an interaction represents a theorization in the systematization of the semantics-syntax interface of this subgroup of the English verbs of communication.

The conclusion to the first research question (what are the semantic relations that cause the particular syntactic linkages of these verbs?) focused on the recognition of the semantic types of the complex complementation that the *complain* verbs may have: (1) indirect discourse, and (2) direct discourse. Such an aspect was accomplished by proposing their LSs, which included these two interclausal semantic relations. Concerning the second research question (how close or loose are those relations?), two syntactic constructions have been identified: clausal subordination (daughter), and sentential subordination (daughter), or the indirect discourse, and direct discourse constructions respectively. Both have different degrees of semantic closeness, and this is formally revealed in the syntax. In their operator projections, the indirect discourse construction assigns the *if* to the main clause, and the subordinate junct has independent tns operator. Nonetheless, a lesser level of semantic closeness between the main semantic event and its complement is seen in the direct discourse construction, where both clauses have independent operators, not even sharing the *if* operator. This involves that clausal subordination (daughter) is tighter than sentential subordination (daughter), as predicted by the Iconicity Principle. Finally, the answer to the last research question (what are the correspondences between the semantic relations and the syntactic linkages?) indicates that the indirect discourse interclausal semantic relation motivates a clausal subordination (daughter) linkage, whereas the direct discourse interclausal semantic relation is materialized in the syntax via a sentential subordination (daughter) structure.

As seen, this research has contributed theoretically to the study of speech predicates, as the *complain* verbs in English had not been covered in the RRG framework. Moreover, future research is needed to have a wider picture of how these verbs behave as a group from a cross-linguistic perspective and how they relate to other verb classes that have similar complex complementation types.

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