Chapter 2

The Framework: An Introduction to RRG

This chapter offers a brief introduction to Role and Reference Grammar (RRG) based on Van Valin & LaPolla (1997) (VVLP 1997 henceforth) and Van Valin (2005) (VV 2005 henceforth).[1] The general structure of the theory is given in Figure 2.1:

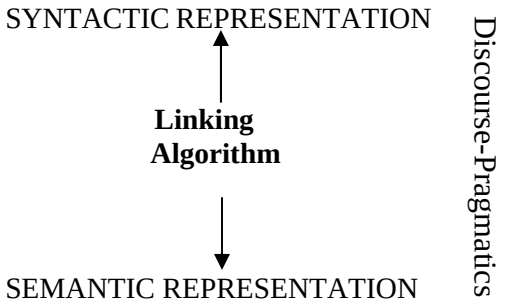

Figure 2.1 General Structure of Role and Reference Grammar

From this figure, we can see that there is a direct mapping, regulated by the linking algorithm, from the semantic representation to the syntactic representation without any bridging abstract syntactic representation. The linking algorithm that connects the two representations works bi-directionally, and the factors or considerations from discourse/pragmatics may come into play and affect the linking process. In addition to postulating general rules, principles, and constraints that govern the representations and various phases in the linking process, RRG also recognizes the idiosyncrasy that is pertinent to various "grammatical constructions" in every language. The grammatical constructions are deemed as a central part in the grammar, and these constructions are represented by "constructional schemas" in which the idiosyncratic syntactic, morphological, semantic and pragmatic information specific to the constructions are recorded.

[1] Unless specified, the English examples are all taken from VVLP (1997) and VV (2005). An earlier model of this theory can be found in Foley & Van Valin (1984) and Van Valin (ed.) (1993).

Among the four components presented in Figure 2.1, the semantic representation and the linking from semantics to syntax are the parts that this dissertation mainly relies upon. Therefore, the introduction made in the following sections will focus on the notions and issues related to these components.

This chapter is organized as follows. Section 2.1 presents the syntactic representation of RRG, and Section 2.2 introduces the component of semantic representation. Section 2.3 discusses issues related to the linking from semantic to syntax, and how RRG approaches the issue of grammatical relations and their related phenomena such as voice constructions. Let us begin with the syntactic representation.

2.1 Syntactic Representation

RRG assumes that the representation of clause structure should only capture universal features without imposing any feature on language. Such features include the distinctions between predicating and non-predicating elements, and the distinctions between core arguments and peripheral adjuncts of the predicate. These features are represented with syntactic units that form a layered structure. Their correspondence is given in Table 2.1 (VVLP 1997:27):

Table 2.1 Layered Structure of Clause (LSC)

Semantic element(s)	Syntactic unit
Predicate	Nucleus
Argument in semantic representation of predicate	Core argument
Non-arguments	Periphery
Predicate + Arguments	Core
Predicate + Arguments + Non-arguments	Clause (=Core + Periphery)

As shown in Table 2.1, there are three layers distinguished in the syntactic representation: nucleus, core, and clause. Each layer in the clause can be modified by one or more operators (i.e. functional categories) as diagrammed in Figure 2.2 (VVLP 1997:49):

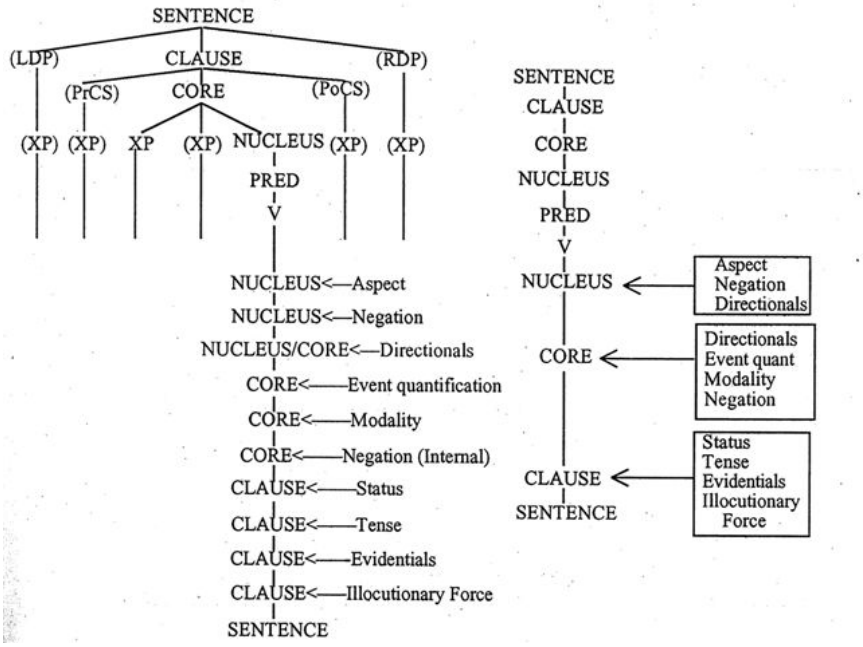

Figure 2.2 LSC with Constituent and Operator Projections

In addition to the representation of the universal features of a clause, there are some non-universal positions in the LSC for languages that manifest these language-specific features. Such positions include extra-core slots and detached positions. An example for the former is the precore slot (PrCS) for the WH-word in English, while the latter can be exemplified by the left-detached position (LDP) in English for the topical phrase "as for…". The detached positions are normally set off from the following clause by a pause or intonation break. Figure 2.3 below gives an LSC of an English sentence with universal and non-universal features.

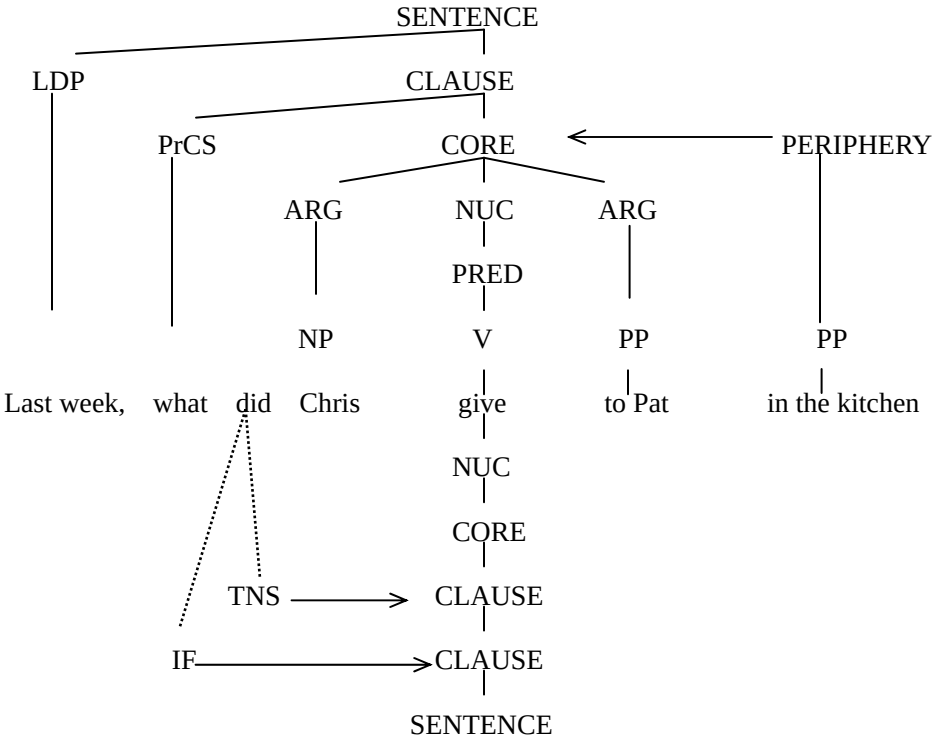

Figure 2.3 The LSC of an English Sentence

The syntactic representations of RRG are not specified by phrase-structure rules or something similar; rather, they are stored as syntactic templates in a syntactic inventory of every language. While the components of LSC in Table 2.1 are universal, the syntactic templates in a syntactic inventory exhibit substantial variations cross-linguistically. Figure 2.4 presents some examples from English (VV 2005:19):

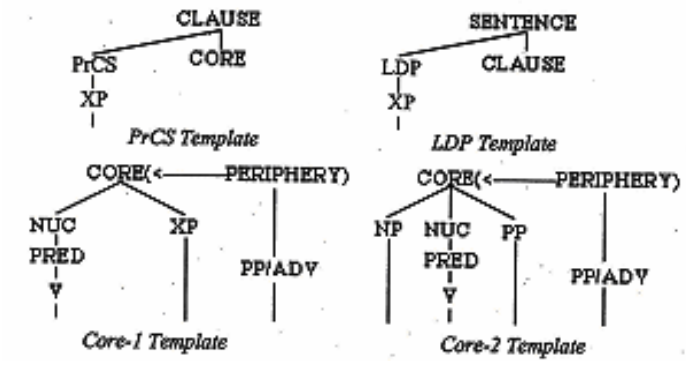

Figure 2.4 Some English Syntactic Templates (simplified) from the Syntactic Inventory

2.2 Semantic Representation

The main part of the semantic representation in RRG is a decompositional model of lexical representation, termed the logical structure, of the predicate. This analysis is built upon a theory of verb classification known as "Aktionsart", which was firstly proposed by Vendler (1967) and later elaborated by Dowty (1979). The details of the verb classification will be laid out in this section. In addition, I will also discuss the semantic relation that an argument can bear with its predicate from the RRG perspective.

2.2.1 Verb Classification and the Logical Structures

In Vendler's original taxonomy, verbs are classified into four basic classes based on their inherent temporal properties: states, activities, achievement, and accomplishments. Two more classes are added in RRG besides Vendler's four basic classes: Semelfactive (Smith 1997) and active accomplishment. These classes and their Aktionsart features (i.e. lexical aspectual properties) are displayed in Table 2.2 with English examples that illustrate each type:

Table 2.2 Aktionsart Features of Each Verb Class

Class	Aktionsart Features	English Examples
State	[+static], [-dynamic], [-telic], [-punctual]	*be sick, be tall, be dead, love, know, believe, have*
Activity	[-static], [+dynamic], [-telic], [-punctual]	*march, walk, roll* (intransitive), *swim, think, snow, write, drink*
Achievement	[-static], [-dynamic], [+telic], [+punctual]	*pop, explode, collapse, shatter* (intransitive)
Semelfactive	[-static], [±dynamic], [-telic], [+punctual]	*flash, cough, tap, glimpse*
Accomplishment	[-static], [-dynamic], [+telic], [-punctual]	*melt, freeze, dry* (intransitive), *learn*
Active Accomplishment	[-static], [+dynamic], [+telic], [-punctual]	See (2.1)

Semelfactives are punctual events without a result state. Active accomplishment verbs are activity verbs with a telic feature, which may be contributed by the definite/indefinite status of the co-occurring argument (e.g. in English) or by other morphological means

(e.g. affixation in Amis as seen later). The examples in (2.1) demonstrate the differences between plain activity verbs and their active accomplishment counterparts:

(2.1) Activity vs. Active Accomplishment
a. The soldiers marched in the park. *Activity*
a´. The soldiers marched to the park. *Active Accomplishment*
b. Dana ate fish. *Activity*
b´. Dana ate the fish. *Active Accomplishment.*
c. Leslie painted (for several hours). *Activity*
c´. Leslie painted Mary's portrait. *Active Accomplishment*

Based on the properties described in Table 2.2, these verb classes can be differentiated by the diagnostic tests summarized in Table 2.3:

Table 2.3 Diagnostic Tests for Aktionsart Classes[2]

Criterion	States	Achieve	Accomp	Activity	Active Accomp	Seml
1. Occurs with progressive	No*	No*	Yes	Yes	Yes	No*
2. Occurs with adverbs like *vigorously*, *actively*, etc.	No	No	No	Yes	Yes	Some*
3. Occurs with adverbs like *quickly*, *slowly*, etc.	No	No*	Yes	Yes	Yes	No*
4. Occurs with *X for an hour*, *spend an hour Xing*	Yes*	No	Irrelevant*	Yes	Irrelevant*	No
5. Occurs wit *X in an hour*	No	No*	Yes	No	Yes	No*
6. Can be used as stative modifier	Yes	Yes	Yes	No	Yes	No
7. Has causative paraphrase	No	No	No	No	No	No

Test 1 is only applicable for languages that have a progressive aspect. It works well with activity, accomplishment, and active accomplishment. When it occurs with semelfactive verbs, it yields an iterative reading, as illustrated in (2.2a), and the same situation happens when the progressive aspect co-occurs with an achievement verb that

[2] The "*" sign indicates that there may arise some complexities in the application of the test in a language and thus exceptions may exist.

has a plural subject (e.g. (2.2b-b'):

(2.2) a. The light is flashing (*once).
b. *The balloon is popping.
b'. The balloons are popping.

The adverbs in Test 2 distinguish dynamic verbs from those that are not dynamic, and the pace adverbs in Test 3 separate the verbs with a durative feature from those without. Test 4 and 5 are designed to differentiate telic from atelic verbs. The *for*-test works with verbs having a temporal duration, regardless of their telicity. The *in*-test diagnoses the telic feature of a verb, as it indicates the completion of an event. Meanwhile, it also indicates a temporal duration before the completion. Hence, for punctual verbs such as achievement and semelfactive, they can only co-occur with *in* + a very short of period of time (e.g. *in an instant*). Test 6 is for distinguishing the two types of punctual verbs; punctual verbs with a result state (i.e. achievement) can serve as stative modifiers (e.g. *a **popped** balloon*), while punctual verbs without a result state (i.e. semelfactive) cannot serve this function (e.g. **a **flashed** light*). As for the last test (i.e. the causative paraphrase test), it is designed for determining whether a verb is inherently causative or not. The causative paraphrase for a lexically causative verb should have the same number of NPs as the original sentence. Although the tests mentioned above are not all equally applicable in every language, and the application of certain tests may involve some complexity that may affect the diagnostic result, in general these tests can still help differentiate the Aktionsart classes. Some of these tests will be utilized to classify Amis verbs in Chapter 4.

Each of the six classes has a causative counterpart (e.g. state and causative state).[3] So, in total, there are twelve verb classes differentiated in RRG. Each verb class is formally represented by a logical structure, as shown in Table 2.4:

Table 2.4 Lexical Representations for Aktionsart Classes

Verb Class	Logical Structure (LS)
State	**predicate'** (x) or (x, y)
Activity	**do'** (x, [**predicate'** (x) or (x, y)])
Achievement	INGR **predicate'** (x) or (x, y), *or* INGR **do'** (x, [**predicate'** (x) or (x, y)])
Semelfactive	SEML **predicate'** (x) or (x, y), *or* SEML **do'** (x, [**predicate'** (x) or (x, y)])
Accomplishment	BECOME **predicate'** (x) or (x, y), or BECOME **do'** (x, [**predicate'** (x) or (x, y)])
Active Accomplishment	**do'** (x, [**predicate$_1$'** (x) or (x, y)]) & INGR **predicate$_2$'** (z, x) or (y)
Causative	α CAUSE β, where α, β are LSs of any type

The lexical representations of the verbs in Table 2.4 are termed "logical structures" of the verbs.[4] As shown in the table, state and activity are two most fundamental Aktionsart classes upon which the logical structures of other classes are based. For example, achievement verbs can be either the punctual changes of state or onsets of activity, and thus they can be expressed either by a state predicate or by an activity predicate plus an INGR (i.e. ingressive) operator. By the same token, semelfactives and accomplishments can also be based on either states or activities. As for active accomplishment, it is composed of an activity predicate and a change of state that indicates the telic feature; the "&" in the logical structures means "and then". The causative predicate is expressed by

[3] The causative predicates pass the diagnostic tests in a similar, but not identical manner as their non-causative counterparts except that for the causative paraphrase test, their results are all "yes". As the tests I will employ in Chapter 4 are primarily related to the non-causative verbs, I will not go into the details of the Aktionsart tests for causative predicates in this section.

[4] The logical structures are formulated in the conventions of formal semantics, in which constants (i.e. the predicates) are presented in boldface followed by a prime, while variable elements are presented in normal typeface. Notice that the elements in boldface + prime are matalinguistic vocabulary, not words from any particular language.

a complex structure containing a predicate (usually an activity) indicating the causing event and a predicate indicating the resulting state, and the two predicates are linked by the operator CAUSE.

The decompositional system in Table 2.4 will be employed to represent the semantic structures of Amis predicates in this dissertation. Nevertheless, as pointed out in VV (2005:46), this model is just an approximation to a decompositional system that is required for further and deeper semantic lexical analysis. In the later discussion, I will also point out the limit of the current system on the analysis of Amis verbs and propose some tentative solutions.

2.2.2 Semantic Roles

Another important issue in the discussion of the semantic representation is the semantic relation between a predicate and its arguments, namely, the semantic roles of the arguments. This issue, as mentioned in VV (2005), has been pursued under three different levels of generality. The first level is verb-specific semantic roles such as killer, hearer, broken, etc. The second level is concerned with the thematic relations generalized across the verb-specific semantic roles. Typical examples of this level include agent, instrument, experiencer, theme, and patient. The third type is generalized semantic roles that are generalizations across thematic roles. Figure 2.5 (VV 2005:54) summarizes relationships among the three levels of semantic roles in a continuum that indicates the generalization progressing from verb-specific semantic roles to grammatical relations:

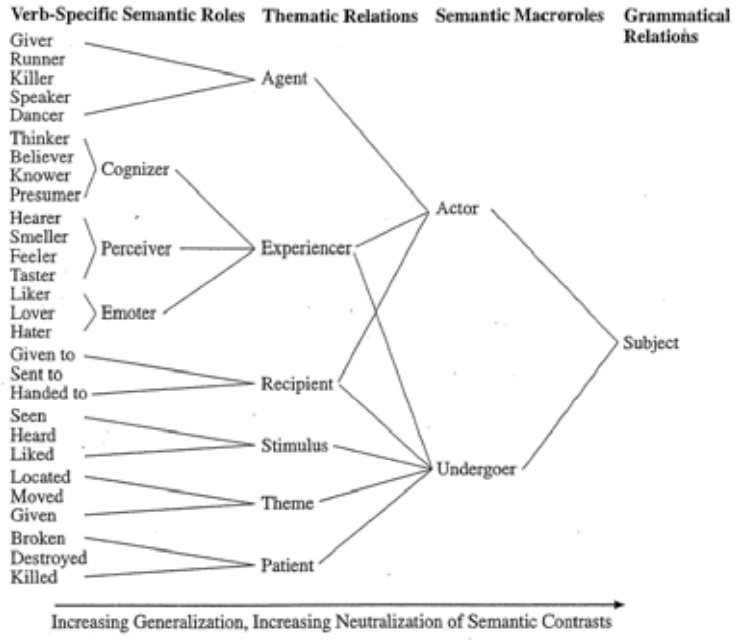

Figure 2.5 Continuum for Verb-specific Semantic Roles to Grammatical Relations

Only the last two levels of semantic roles are relevant to the RRG framework. Nevertheless, unlike the thematic relations discussed in the traditional literature (cf. Fillmore 1968), RRG makes only five distinctions among them in terms of the argument positions in the LS. Figure 2.6 below shows the correspondence between traditional thematic relations and the five argument positions in the LS (VV 2005:58):

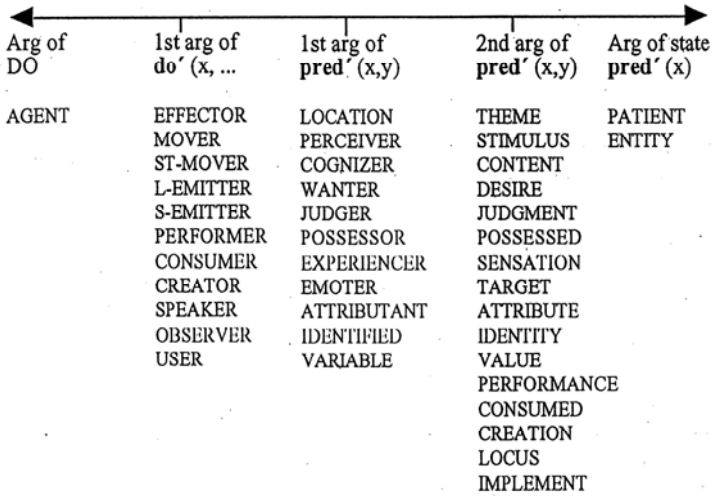

Figure 2.6 Thematic Relations Continuum in Terms of LS Argument Positions

Only these five argument positions in the LS are deemed important in the RRG framework; the thematic relations, which presumably can be non-exhaustive in number, are treated merely as mnemonics for these positions. Notice that in Figure 2.6, there is an operator DO, which does not show up in the logical structures in Table 2.4. This operator signals agency of the logical structure of a verb that lexicalizes this feature. As argued in Van Valin and Wilkins (1996), in most cases, agency is only an implication of the way a particular verb is used in a sentence, not an inherent lexical property. The following examples demonstrate the contrast between verbs with agentive implicature and verbs with lexicalized agency:

(2.3) (1) a. The man *killed* his neighbor.
b. The man *intentionally killed* his neighbor.
c. The man *accidentally killed* his neighbor.
(2) a. The man *murdered* his neighbor.
b.?The man *intentionally murdered* his neighbor.
c.*The man *accidentally murdered* his neighbor.
(3) a. *A branch falling from Pat's tree killed* his neighbor.
b.**A branch falling from Pat's tree murdered* his neighbor.

As illustrated in the examples, verbs with only the agentive implicature can co-occur with agency-canceling expressions such as *accidentally*, agentive expressions such as *intentionally*, and an inanimate actor (e.g. *a branch*), but true agentive verbs are either banned in these contexts or marginally acceptable. The operator DO only shows up in the logical structure for the verbs with lexicalized agency, such as English *murder*, but not verbs with agentive implicature. The constrast is given in (2.4):

(2.4) a. *kill*: [**do'** (x, Ø)] CAUSE [BECOME **dead'** (y)]
b. *murder*: DO (x, [**do'** (x, Ø)] CAUSE [BECOME **dead'** (y)])

In RRG, agent is strictly defined as the first argument of DO. As for the first argument

of **do'** (i.e. an activity predicate), it is called an effector, which can be animate or inanimate. Notice that this view is very different from many of the works reviewed in Chapter 1. In these works, agent is treated as a basic thematic relation, and even the only thematic relation that the single argument bears with the intransitive predicate, regardless of the nature of the argument and the predicate.

Besides the thematic relations displayed in Figure 2.6, RRG also posits two generalized semantic roles, termed macroroles: actor and undergoer. These two macroroles can be conceived as the two primary arguments of a transitive predicate, and either one of them can serve as the single argument of an intransitive predicate. This is another difference of RRG from some of the previous studies that only acknowledge one semantic relation for the single argument of intransitive verbs (e.g. Patient in Chen (1987) and Agent in Liu (1999)). The two generalized semantic roles are called macroroles because they represent two groups of thematic relations, as shown in Figure 2.5, that are treated alike in grammatical constructions. For example, the patient and the theme thematic relations in the undergoer group can both serve as the direct object in an active sentence and the subject in a passive sentence. If these grammatical phenomena are described in terms of individual thematic relations, some important generalizations shared by these thematic relations may be missing.

The realization of an argument as a macrorole is determined by the Actor-Undergoer Hierarchy (AUH) in Figure 2.7 and a set of principles stated in (2.5) (VV 2005:126):

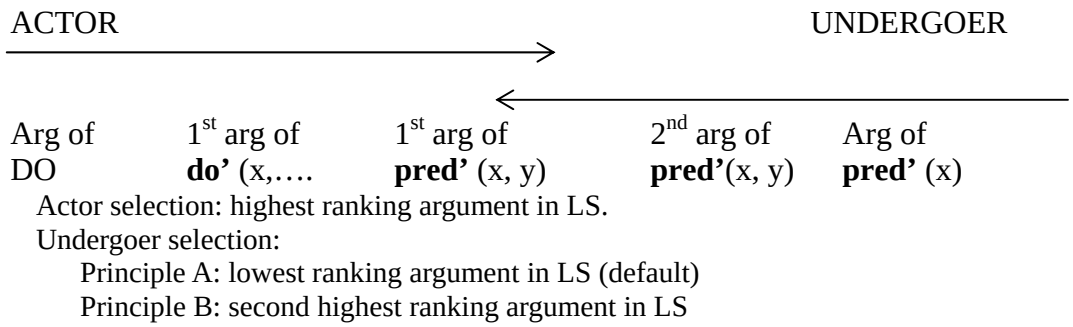

Figure 2.7 Actor-Undergoer Hierarchy (AUH)

(2.5) Default Macrorole Assignment Principles
a. Number: the number of macroroles a verb takes is less than or equal to the number of arguments in its logical structure
1. If a verb has two or more arguments in its LS, it will take two macroroles.
2. If a verb has one argument in its LS, it will take one macrorole.

b. Nature: for verbs which take one macrorole,
1. If the verb has an activity predicate in its LS, the macrorole is actor.
2. If the verb has no activity predicate in its LS, the macrorole is undergoer.

As seen in Figure 2.7, this hierarchy is closely related to the argument positions in the logical structure. By default, the higher the argument position is on the hierarchy, the more possibility that it will be realized as an actor; the lower the position is, the more likely this argument will be an undergoer. This hierarchy and the principles will be utilized in Chapter 5 for the discussion of the macrorole assignment in Amis in Chapter 5.

In RRG, transitivity of a verb is determined by the number of macroroles that the verb takes (i.e. M-transitivity). Notice that this number does not necessarily equal to the number of the core arguments of the verb (i.e. Semantic Valence, Syntactic-transitivity or S-transitivity).[5] In other words, it is possible that a core argument of a verb is not

[5] Here "semantic valence" and "syntactic-transitivity" are viewed as the same thing; both refer to the number of the core arguments. However, strictly speaking, semantic valence refers the number of the argument positions in the LS of a verb, while syntactic transitivity refers the number of the direct core arguments. It is possible to find a mismatch between the two. For example, in an English passive sentence, the semantic valence is two, but the S-transitivity value is one, as one of the core arguments in the LS (i.e. the effctor) is realized as an adjunct. Hence, syntactically, there is only one core argument.

assigned with a macrorole and thus becomes a non-macrorole (NMR) core argument. The comparison of S-transitivity and M-transitivity is illustrated in the following table with examples from English (VV 2005:64):

Table 2.5 Macrorole Number and Transitivity

English Example	Semantic Valence	Macrorole Number	M-transitivity
snow	0	0	Atransitive
die	1	1	Intransitive
drink [ACTIVITY]	1 or 2	1	Intransitive
drink [ACT ACCOMPL]	2	2	Transitive
kill	2	2	Transitive
set	3	2	Transitive
send	3	2	Transitive

As shown in the table, a good example that illustrates the mismatch between S-transitivity and M-transitivity is a plain activity verb that has a non-referential second argument (e.g. *beer* in *John drank beer.*). Such activity verbs have only one macrorole, though they have two core arguments in the LS. Furthermore, as the maximum number of macroroles that a verb can take is two, it means that for three-place predicates, there is always at least one of the core arguments that is not assigned with a macrorole. The competition for obtaining the macrorolehood among the arguments of three-place predicates lies in the selection of the undergoer. There are two possible candidates, and as shown in Figure 2.7, there are two principles governing the selection. The English examples in (2.6) illustrate the application of two principles:

(2.6) a. [**do´** (Pat, Ø)] CAUSE [BECOME **have´** (Chris, book)]
b. Pat [actor] gave the book [undergoer] to Chris.
c. Pat [actor] gave Chris [undergoer] the book

For the three-place predicate *give* in (2.6), the unmarked choice of the undergoer will be the theme participant *the book*, the lowest ranking argument in the LS, as predicted by the application of Principle A. However, the recipient participant *Chris* is also a possible

undergoer choice in the construction known as dative shift shown in (2.6c). This alternative undergoer selection is explained by the application of Principle B that selects the second highest ranking argument in the LS as the undergoer. The preference of either one of the principles in general corresponds to the distinctions of Direct-object/ Indirect-object (DO/IO) languages and Primary-object/Secondary-object (PO/SO) languages proposed in Dryer (1986); the former follows Principle A by default regarding undergoer selection, while the latter, Principle B. However, as argued in Guerrero Valenzuela and Van Valin (2004), most languages tend to present a mixed system concerning the undergoer selection and thus need both principles to adequately account for all the patterns. I will discuss this issue of Amis in Chapter 5.

2.3 Grammatical Relations

Unlike many other theories, RRG does not view grammatical relations as a basic component for a language system, nor does it regard grammatical relations as a language universal. Many grammatical phenomena in a language can be accounted for solely by semantic roles, which are deemed universal in RRG.[6] Instead of positing three grammatical relations (i.e. subject, direct object, and indirect object) as discussed in traditional grammar, RRG recognizes only one syntactic function, which is called "privileged syntactic argument" (PSA). This notion is related to the selection of two privileged syntagmatic functions, controllers and pivots, in various constructions. The controller refers to the argument that triggers verb agreement, serves as the antecedent of a reflexive, or controls the interpretation of a missing argument in a linked unit. As for the pivot, it usually serves as a missing argument in a linked core. The selection of the

[6] In fact, there are languages (e.g. Achenese, as discussed in VVLP 1997:255-260) that do not have grammatical relations in their language system.

two privileged syntagmatic functions can be motivated by syntactic, semantic, or even pragmatic factors. Only a privileged syntagmatic function that is defined syntactically is counted as a privileged syntactic argument (i.e. a grammatical relation) in RRG; that is, a grammatical relation only exists when the distinction of two or more semantic roles is neutralized (i.e. a restricted neutralization) for syntactic purposes in a given construction. Otherwise, one cannot claim that there is grammatical relation in this language.

Take the following English sentences as an example:

(2.7) English Control Construction

a.	Chris wants to drink a beer.	(Actor of transitive V)
b.	Chris wants to sing in the park.	(Actor of intransitive V)
c.	Chris wants to be stronger.	(Undergoer of intransitive V)
d.	*Chris$_i$ doesn't want the journalist to interview __$_i$.	(Undergoer of transitive V, active)
e.	Chris doesn't want to be interviewed by the journalist.	(Undergoer of transitive V, passive)

In the sentences in (2.7), there is a missing argument (i.e. a pivot) in the linked core (i.e. the core following *want*), and the semantic role of this missing argument is specified next to the example. As shown in the illustration, this missing argument can be an actor or an undergoer; in other words, there is a neutralization of the semantic roles. However, as shown in (2.7d), the pivot is an undergoer, just like the one in (2.7e), but (2.7d) is rendered ungrammatical. The contrast between (2.7d) and (2.7e) indicates that the neutralization is restricted, but the restriction cannot be stated in terms of semantic roles. The restriction is determined by the position of the NP; that is, the pivot has to be the core-initial argument, which is known as the traditional subject in English. Hence, there exists a grammatical relation in this control construction. However, consider another construction that also involves the control phenomenon:

(2.8) a. $Chris_j$ persuaded Pat_i to [$\_\_\__i$ visit Leslie].
CONTROLLER PIVOT

b. Pat_j was persuaded by $Chris_i$ to [$\_\_\__i$ visit Leslie].
CONTROLLER PIVOT

We now focus on the discussion of the controller in this control construction with the verb *persuade*. As indicated in the data, it is always the undergoer of the matrix core that serves as the controller for the missing argument in the linked core, no matter whether this undergoer is a "direct object" (i.e. (2.8a) or a "subject" (i.e. (2.8b)) in the analysis based on traditional grammatical relations. Hence, the controller is a semantic controller.

As illustrated in the discussion about, the existence of PSA is construction-specific. Nevertheless, most languages tend to have the same PSA for the major syntactic constructions in the language. The term "subject" then can be used to refer to a generalized PSA in languages that have the same restricted neutralization in many or all of its syntactic phenomena, and such languages can be characterized as syntactically accusative or ergative based on this consistency. That is to say, in syntactically accusative languages such as English, this restricted neutralization is often found with the actor of a transitive clause and the only argument of an intransitive clause, while in syntactically ergative languages, this PSA treats the undergoer of a transitive clause the same as the only argument of an intransitive clause. The difference preference of selecting its PSA can be stated with reference to the hierarchy in (2.9) and the principles in (2.10) (VV 2005:100):

(2.9) **Privileged Syntactic Argument Selection Hierarchy**
Arg of DO > 1st arg of **do'** > 1st arg of **pred'** (x, y) > 2nd arg of **pred'**(x, y) > Arg of **pred'** (x)

(2.10) **Accessibility to Privileged Syntactic Argument Principles**
Accusative languages: highest ranking direct core argument in terms of (2.9) (default)
Ergative languages: lowest ranking direct core argument in terms of (2.9) (default)

Closely related to the markedness of PSA selection are the voice constructions found in different languages. Syntactically accusative languages can have a marked PSA choice by means of the passive construction; as for syntactically ergative languages, it is the antipassive construction that is often utilized to affect the PSA selection. There are two functions performed by voice constructions cross-linguistically, as stated in (2.11):

(2.11) a. PSA modulation voice: permits an argument other than the default argument in terms of the PSA selection hierarchy in (2.9) to function as the privileged syntactic argument.

b. Argument modulation voice: gives non-canonical realization to a macrorole argument.

A voice construction can perform either both functions (e.g. the passive voice in English) or just one of them (e.g. the antipassive voice of Sama, as discussed in VV 2005:117). Notice that the non-canonical realization of a macrorole argument of an argument modulation voice includes realizing this argument as an adjunct or as a non-macrorole core argument. The former can be illustrated by the passive construction of English in which the actor is realized as an adjunct. As for the latter, it can be exemplified by the antipassive construction of Kalkutungu discussed in VV (2005:98 & 117). In this construction, the undergoer of the active voice seems to retain its core argument status in spite of being stripped of its macrorole status by the voice operation.

Based on the above discussion, we can see that traditional GR-based terms play no role in the RRG framework. Instead, the grammatical phenomena in a language are described by means of the status of an NP as a PSA, macrorole, and NMR core argument

in this theory. The following two sets of case marking rules are an example:

(2.12) Case assignment rules for accusative languages
a. Assign nominative case to the highest ranking macrorole argument.
b. Assign accusative case to the other macrorole argument.
c. Assign dative case to non-macrorole arguments (default).

(2.13) Case assignment rules for ergative languages
a. Assign absolutive case to the lowest ranking macrorole argument.
b. Assign ergative case to the other macrorole argument.
c. Assign dative case to non-macrorole arguments (default).

2.4 The Linking Algorithm: From Semantics to Syntax

In this section, Iwill briefly introduce the linking algorithm in RRG, in particular, the linking from semantics to syntax. The linking system of RRG is diagrammed in Figure 2.8 (VV 2005:129):

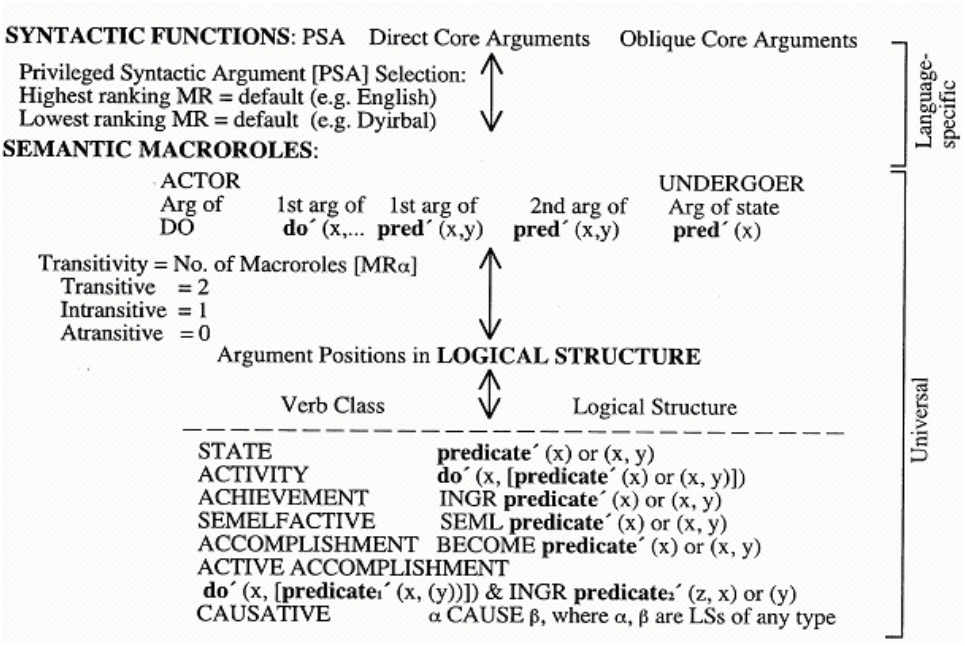

Figure 2.8 Summary of RRG Linking System

The linking from semantics to syntax follows a very general constraint “the completeness constraint”, stated in (2.14) (VV 2005:129-130):

(2.14) Completeness Constraint

All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence, and all of the referring expressions in the syntactic representation of a sentence must be linked to an argument position in a logical structure in the semantic representation of the sentence.

The semantic representation of a sentence is built around the logical structure of the predicate, and this information is stored in the lexicon. As for the syntactic representation, it is stored in the syntactic inventory that consists of various syntactic templates, which was introduced earlier. The information recorded in the semantic representation crucially influences the selection of the template, as one can see from the following principles that govern the selection of the syntactic template (VV 2005:130):

(2.15) a. Syntactic template selection principle:

The number of syntactic slots for arguments within the core is equal to the number of distinct specified argument positions in the semantic representation of the core.

b. Language-specific qualifications of the principle in (a):

1. All cores in the language have a minimum syntactic valence of 1.
2. Argument-modulation voice constructions reduce the number of core slots by 1.

As shown in Figure 2.8, there are two phases of linking from the argument positions in the LS to the syntactic representation. The first phase is concerned with the selection of macroroles. This phase makes crucial reference the AUH in Figure 2.7 and the principles stated in (2.5). The second phase is related to the linking of the macroroles and the NMR arguments to the syntactic functions. The case assignment and the selection of PSA are relevant to this phase of linking.

In this dissertation, I will argue that the previously established four-voice or four-focus system in Amis is actually composed of two voices: actor and undergoer. The

so-called instrumental voice and locative voice are applicative constructions that indicate a marked choice of undergoer. Functionally speaking, these two mechanisms affect different phases of linking. The applicative constructions affect the phase linking the argument positions to the macroroles, while the voice operations influence the phase linking the macrorole and NMR core arguments to the syntactic functions.

In the above introduction, I have presented rules and principles that capture the cross-linguistic and cross-constructional generalizations. However, there are still some idiosyncratic properties that are pertinent to a particular construction. These properties are recorded in the constructional schema of that particular construction. Table 2.6 shows an example of the constructional schema for the English passive construction (VV 2005:132):

Table 2.6 Constructional Schema for English Passive (Plain)[7]

CONSRUCTION: English passive (plain)
SYNTAX:
Template(s): (5.6b2)
PSA: (4.15a,c2), Variable [± pragmatic influence]
Linking: (4.43a)
(4.43b): omitted or in peripheral *by*-PP
MORPHOLOGY:
Verb: past participle
Auxiliary: *be*
SEMANTICS:
PSA is not instigator of state of affairs but is affected by it (default)
PRAGMATICS:
Illocutionary force: Unspecified
Focus structure: No restrictions; PSA = topic (default)

2.5 Summary

In this chapter, I briefly introduced the RRG framework that the discussion of this dissertation is based upon. As one can see, this theory approaches the three main

[7] The numbers in the table refer to the example numbers in VV (2005).

research issues (i.e. verb classification, case marking, and grammatical relations) in ways very different from the previous studies of Amis. In light of this framework, Amis verbs will be classified based on their features of lexical aspect in addition to case frames and voice-related morphology, and they will be presented in the decomposition-based logical structures. Furthermore, besides being discussed under the level of thematic relations, semantic roles and case marking patterns will also be analyzed in terms of generalized semantic roles (i.e. macroroles). The incorporation of macrorole in the analysis will also lead us to a new definition of transitivity in Amis, which will help us better understand the ergative nature of this language. Finally, instead of assuming that the NP marked by the nominative case is the "subject" of Amis, the issue of grammatical relations will be re-addressed through investigating the controller or pivot types in some major grammatical constructions, and the functions of the two major voice constructions, actor voice and undergoer voice, will also be more thoroughly examined.