Confirming assumptions made by the framework of Role and Reference Grammar through the analysis of Lakota and Cheyenne data[1]

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Abstract

This paper has as its specific objective an attempt to put to the test two important assumptions made by the Role and Reference Grammar framework (henceforth, RRG) (Van Valin, 1993, 2005; Van Valin & LaPolla, 1997) by analysing the evidence provided by two Native American languages, namely Lakota and Cheyenne. These two assumptions, which are concerned with argument encoding and nexus relations, will be supported by evidence provided by the aforementioned languages, which belong to two different linguistic families, namely Siouan and Algonquian, and consequently exhibit very distinctive morpho-syntactic properties. Furthermore, both languages differ greatly from English, hence the findings obtained in this paper will serve to verify the typological orientation of this theoretical framework and its representational flexibility since it is able to represent comparable structures in different languages. Thus, the general purpose of this paper is to check the validity of RRG as one of the most important theoretical frameworks in relation to the analysis of languages, however disparate.

1. Introduction

The organization of this paper is as follows. Section 2 presents the synopsis of the basic tenets of this theoretical framework to ensure a better understanding of the next section of the paper. Section 3 provides a chart comparing the main morpho-syntactic features of the English, Lakota and Cheyenne languages. Section 4 gives a brief account of the view of the relationship between syntax and semantics in RRG to include the encoding of arguments and

attempts to confirm, by means of Lakota examples, the assumption that there should be a correspondence between the number of arguments required by a predicate and the number that are syntactically realised. Section 5 explores the analysis and classification of complex constructions according to the principles of RRG and examines the data from Cheyenne in order to confirm the assumption made by this theoretical framework regarding the existence of three types of nexus relations, rather than two. Finally, Section 6 concludes the paper by summarizing its main findings as well as by reiterating the objectives of this study.

2. Role and Reference Grammar

In this section, a synopsis of the basic tenets of this theoretical framework is presented for a better understanding of the next section of the paper, in which the two different issues, which constitute the object of the study of this paper, are analysed. Unlike the formal paradigm, RRG conceives of language as a system of communicative social action so that it is fully committed to the communicative-and-cognitive perspective (Van Valin & LaPolla, 1997:11). This means that semantic and communicative functions play such a remarkable role that they should be taken into account in order to explain the morpho-syntactic structures and the grammatical rules of a language; consequently, grammar is, to a great extent, determined by semantics and pragmatics. This theory defends the idea that function conditions form, and not vice versa. An interesting point in this approach is that, despite the fact that it gives priority to function over form, it seeks the interaction between the syntactic, semantic and pragmatic components in its study of the process of communication. RRG can then be classified as a moderate model within the functional paradigm, which focuses on the interaction between syntax, semantics, and pragmatics.

Given that Lakota and Cheyenne belong to two different linguistic families, Siouan and Algonquian respectively, the purpose of this study is to check the validity of the RRG as a typologically adequate theoretical framework that is able to make strong cross-linguistic claims in relation to the analysis of most languages, however different. Thus, the analysis used in this paper follows the cognitive-functional foundations as proposed by RRG, in an attempt to find a suitable answer to the following questions: (i) Can the theoretical assumptions in RRG elucidate the morpho-syntactic manifestations of the Lakota and Cheyenne languages?, (ii) Do the findings provided by the Lakota data help to assert the general assumptions in RRG as a theory of universal grammar?, and (iii) Do the findings

provided by the Cheyenne data help us understand which units are involved in complex sentences and the syntactic relations between them?

3. The Lakota and Cheyenne languages

The two languages[2] chosen for analysis in this article are Lakota and Cheyenne, which were and still are spoken in North America by two traditionally allied tribes. Lakota is, along with Dakota and Nakota, one of the three dialects of Sioux, a language belonging to the Siouan family of languages. Cheyenne, like Arapaho, Blackfoot or Gros Ventre, is classified within the Plains Algonquian group, a subgroup of the larger Algonquian family of languages.

Due to the complex morpho-syntactic features exhibited by Lakota and Cheyenne and the fact that English will be compared to them in the analysis of the two constructions, it seems appropriate to include a brief account of their basic morphological and morpho-syntactic aspects, such as word order, argument type, configurationality, marking, frame, branching, referential structure and alignment. The following table offers a summary of this morpho-syntactic analysis:

	English	**Lakota**	**Cheyenne**
Morphology	Rather isolating	Mildly synthetic (partly agglutinative)	Polysynthetic (mainly agglutinative)
Word order	SVO	It seems to have a tendency towards SOV. Order of verbal affixes: I/3-1-2	Word order is pragmatically conditioned
Argument type	Lexical argument	Mixed argument type	Pronominal argument type
Configurationality	Configurational	Quite non-configurational	Non-configurational
Marking	Dependent-marking	Head-marking	Head-marking
Frame	Quite satellite-framed	Satellite-framed	Quite satellite-framed
Branching	Right-branching	Left-branching	Quite left-branching
Referential structure	Reference-dominated	Role-dominated	Reference-dominated
Alignment	Accusative	Split-S or stative / active S (intr.) = { S (tr. action verbs) / O (tr. stative verbs)	Hierarchical alignment: prefix signals the most pragmatic-salient participant according to the hierarchy: 2>1>3>4>I

Table 1: Summary of the typological differences between English, Lakota and Cheyenne

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[2] All examples used in this paper come from two primary sources, namely from published studies and from my native consultants. I wish to express my gratitude to my anonymous language consultants, native speakers of Lakota and Cheyenne, for kindly sharing their knowledge of these languages with me. Needless to say, all errors remain my sole responsibility. Regarding the orthography used for the examples in Lakota and Cheyenne, I follow LLC (2011)´s and Fisher et al (2006)´s spelling systems.

Some of these parameters, such as argument type and configurationality in the case of Lakota, and frame, branching, and configurationality in the case of Cheyenne, are very controversial since it is very difficult to reach a conclusion as to how these languages can be classified.

4. Is there a syntax-semantics mismatch in Lakota?

Regarding argument encoding, it seems plausible to claim that, if a predicate requires a number of core arguments, all of these should be syntactically represented. In relation to this, the RRG theoretical framework posits the existence of a general principle referred to as the Completeness Constraint that governs the linking between semantic and syntactic representation.

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 in order to be interpreted.

Figure 1: Completeness Constraint (Van Valin & LaPolla, 1997)

The idea of this concept comes from the idea of analysing systematic relationships between the semantic content of a predicate, its syntactic behaviour and the influence of the pragmatic information on it. With this set of operations, which is referred to as a linking algorithm, RRG both posits and illustrates the strong bond that exists between these three components, making it clear, bearing in mind the pragmatic background, that the meaning of a predicate exerts a great influence on its syntactic behaviour, so that the syntactic structure is mostly determined by the semantic features. This assumption is illustrated below by means of an example of the linking algorithm.

(1) *Oglála thípi   él   wa-uŋ-ni-yaŋka-pi* [3]

   Oglala reservation on STEM-1:ACT-2SG:STA-see-PL

   ´We saw you on the Oglala Reservation.`

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[3] Lakota has two different series of pronominal affixes: the active pronominal series and the stative pronominal series, which correspond roughly to the syntactic functions of subject and object. See Corral Esteban (2014) for exceptions to this correlation.

From syntax to semantics:[4]
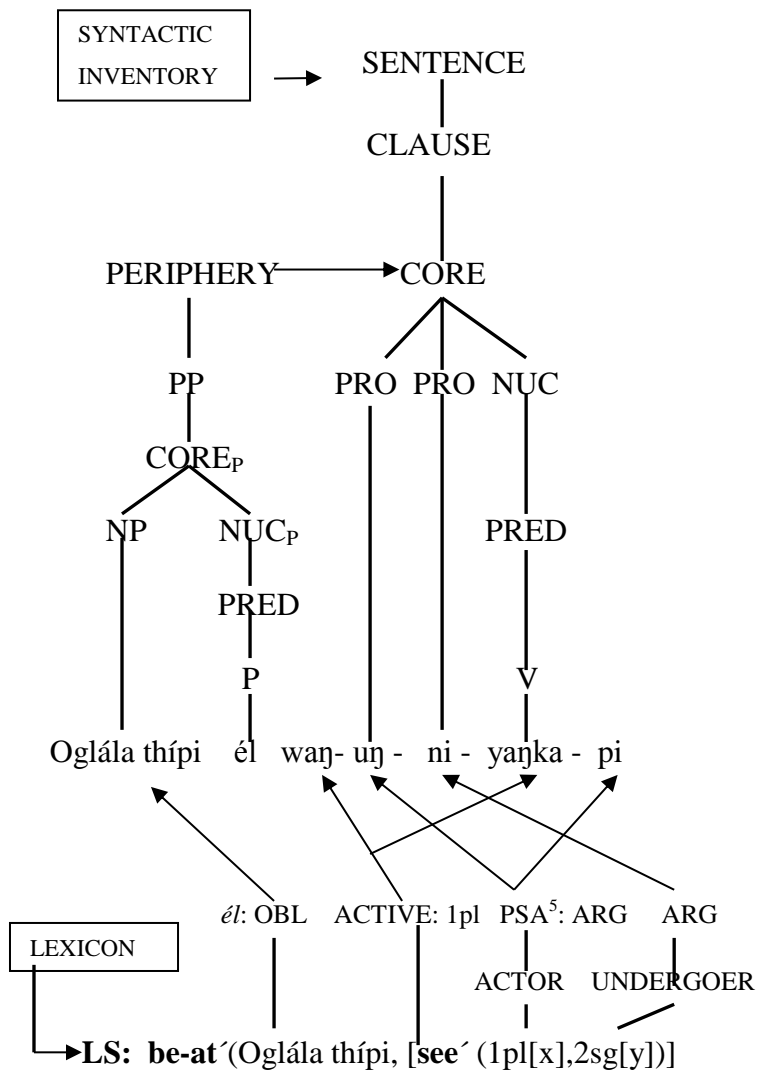
Figure 2: Linking algorithm in Lakota (semantics-to-syntax direction[6])

A) Glosses of Lakota examples: 1 - first person, 2 – second person, 3 – third person; SG – singular, PL – plural; ACT – active series, STA – stative series; DEIC – deictic.

B) Glosses of Cheyenne examples: (1) – first person, (2) – second person, (3) – third person / proximate singular agreement; (4) – fourth person / obviative; (11) – first person plural exclusive: (12) first person plural inclusive; (22) – second person, (33) – third person plural agreement; inanimate; II – intransitive inanimate verb, AI – animate intransitive verb, TI – transitive inanimate verb, TA – transitive animate verb; ASP – aspect; DEIC – deictic; CLM – clause linkage marker.

[5] The RRG notion of Privileged Syntactic Argument (PSA) is a construction-specific relation that requires a restricted neutralization of semantic roles and pragmatic functions for syntactic purposes. For example, in an accusative construction in the active voice, it normally corresponds to the actor macrorole.

RRG recognizes two types of semantic relations: a) traditional thematic roles – agent, theme, patient- goal, recipient, source – which are used only as mnemonics for the argument positions within the Logical Structure[7] of the clause, and b) semantic macroroles – actor and undergoer – which are generalizations across the argument types of particular verbs that have significant grammatical consequences. As they each subsume a number of traditional thematic relations, they are referred to by the name of ´macroroles` or generalized semantic roles.

Owing to the head-marking nature of Lakota and the fact that it is an example of pronominal argument language, all the grammatical relations are expressed on the verbal complex through bound markers, which are the true arguments of the predicate. Thus, each of the pronominal affixes on the verb must be associated with its argument in the Logical Structure (LS)[8] of the predicate *waŋyaŋka* ´see`, that is [see´ (x , y)], which is retrieved from the lexicon. Then, we proceed firstly with the assignment of macroroles, which in this case yields a first person plural actor and a second person singular undergoer, and then the linking of arguments is carried out until all core arguments are linked.

Although the assumption that there should be a correspondence between the number of arguments required semantically by a predicate and the number that are syntactically expressed seems to be supported by the evidence provided by lexical-argument languages like English, where the obligatory core arguments of a predicate are realized by means of overtly expressed NPs and consequently their number is obvious, the truth is that it is not so easy to support it, especially when it comes to analysing pronominal-argument languages where the obligatory core arguments of a predicate are realized syntactically through verbal affixes, and more specifically, when we analyze a language like Lakota, where the third person affix is expressed by a zero marker.

(2) *Wa-škáte* = I play

   Ya-škáte = You play

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[7] The linking algorithm is bidirectional, that is, it maps from semantics to syntax and from syntax to semantics and it is therefore an idealization of what a speaker does (semantics to syntax) and what a hearer does (syntax to semantics). Each of these directions deals with one of the two stages in language processing, that is to say, the semantics-to-syntax linking concerns the production process, while the syntax-to-semantics linking concerns the comprehension process.

[8] The lexical representation of a verb or other predicate is named ´Logical Structure`.

    Ø – škáte = he/she/it plays

    Uŋ-škáta-pi[9]= We play

    Ya-škáta-pi = You play

    Ø-škáta-pi= They play

The fact that the third person in Lakota is not overtly marked raises the question of whether it is actually represented syntactically or not, so that the number of core arguments, which are actually coded in the verbal complex in this language, has always been a long-standing issue. Mithun (1986:195) argues that there is no zero marker for third person participants in Lakota and it is therefore unmarked in this language. She bases her claim on a similar occurrence of a possible zero marker crosslinguistically and a widespread correlation between pronominal-argument languages and pragmatically-based word order. According to her, zero markers mostly appear to be singular, absolutive, third person, and indefinite. Out of these four characteristics, only two appear to work for the Lakota zero marker, namely the singular and third person. Mithun also argues that the fact that Lakota seems to have a fixed canonical word order, namely SOV, is apparently due to the absence of a pronominal affix correferential with third person participants. According to her, as the zero marker is not sufficient to establish a reference, it is necessary to supply an overt nominal to provide the identity of the third person, so that these overtly-expressed nominals – arranged in the clause in the aforementioned order, that is Subject and Object (or, to put it in RRG terminology, Actor and Undergoer) - are the true arguments of the verb, which would suggest that Lakota is a mixed-argument type.

Although it may be impossible to know with absolute certainty if the third person is covertly coded or simply does not exist, there are some examples involving control constructions that seem to confirm its existence. Firstly, we have some subject control verbs like *iyútȟa* ´try`, *uŋspé* ´learn`, *yá* ´go` or *ú* ´come`, which do not require the embedded verb to be inflected for the subject and, accordingly, the only marker in the embedded predicate corresponds to the object, not the subject:

(3) *Thiíkčeya kiŋ   pawóslal iyé-Ø-ye   i-bl-úthe*

    tipi   the upright   STEM-3SG:STA-put STEM-1SG:ACT-try

    ´I tried to put up the tipi.`

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[9] The enclitic *–pi* normally conveys the idea of plurality.

(4) * *Thiíkčeya kiŋ   pawóslal   iyé-Ø-wa-ye*   *i-bl-úthe*

    tipi   the upright   STEM-3SG:STA-1SG:ACT-put up STEM-1SG:ACT-try

    ´I tried to put up the tipi.`

(5) *Thiíkčeya kiŋ pawóslal iyé-Ø-ye*   *i-Ø-yúthe*

    Tipi   the upright STEM-3SG:STA-put up STEM-3SG:ACT-try

    ´He tried to put up the tipi.`

(6) * *Thiíkčeya kiŋ   pawóslal iyéye   iyúthe*

    tipi   the upright   put up STEM-try

    ´He tried to put up the tipi.`

As can be observed in (4), the sentence is not grammatical because the linked verb includes the pronominal affix standing for the subject when it does not exist in this construction. However, there is doubt as to whether we should include zero third person markers (5) or no markers at all (6). Although this example may not provide definitive evidence, it would seem logical to suppose that the correct structure for "He tried to put up the tipi" would be that of example (5), which marks the third person undergoer of the embedded predicate and the third person actor of the matrix predicate by means of a zero marker, but does not mark the third person actor of the embedded predicate, since the only restriction this construction seems to have concerns the presence of a pronominal affix representing the actor of the embedded predicate.

The same reasoning can be followed when we analyse constructions involving object control verbs, such as *ší* ´tell / ask`, which do not allow either the marking of the embedded subject since it is correferential with the matrix object:

(7) *Ptehá   kiŋ   o-Ø-wá*   *ma-ya-ší*

  buffalo.hide the   STEM-3SG:STA-paint 1SG:STA-2SG:ACT-ask

    ´You asked me to paint the buffalo hide.`

(8) * *Ptehá   kiŋ   o-Ø-wá-wa*   *ma-ya-ší*

  buffalo.hide the   STEM-3SG:STA-1SG:ACT-paint 1SG:STA-2SG:ACT-ask

    ´You asked me to paint the buffalo hide.`

(9) *Ptehá   kiŋ   o-Ø-wá   Ø-wa-ší*

   buffalo.hide the STEM-3SG:STA-paint   3SG:STA-1SG:ACT-ask

    ´I asked him to paint the buffalo hide.`

(10) * *Ptehá   kiŋ owá   wa-ší*

    buffalo.hide the   paint   1SG:ACT-ask

    ´I asked him to paint the buffalo hide.`

As the examples in (4-6) show, it seems reasonable to argue that, as the linked predicate cannot be inflected for actor (8), the pronominal affix standing for the embedded actor in these examples does not exist, and that, as nothing prevents us thinking that the third person participants functioning as the objects of both the embedded and matrix predicate are coded syntactically through zero markers, the correct structure for "I asked him to paint the buffalo hide" is (9), rather than (10).

Finally, more conclusive evidence can be obtained from another type of control construction involving such verbs as *čhiŋ* ´want` or *iyúkčáŋ* ´think`, which require the embedded verb to be inflected for the subject[10] (as well as for the object if the verb is transitive):

(11) *Šúŋkawakȟáŋ núŋpa ophé-wičha-wa-tȟuŋ   wa-čhiŋ*

   horse   two   STEM-3PL:STA-1SG:ACT-buy 1SG:ACT-want

    ´I want to buy two horses`

(12) *Šúŋkawakȟáŋ núŋpa   ophé-wičha-Ø-tȟuŋ   wa-čhiŋ*

   horse   two   STEM-3PL:STA-3SG:ACT-buy 1SG:ACT-want

   * ´I want to buy two horses`

    ´I want him to buy two horses`[11]

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[10] ´The verb *okíhi* ´be able to´ also requires the embedded verb to be inflected for actor but, unlike constructions with *čhiŋ* ´want`, the embedded actor and the matrix actor must be correferential.

[11] According to my native consultants, in examples like (12), it is very common to introduce a demonstrative that would be correferential with the third person participant in order to add more clarity, but it is not obligatory at all, especially when the referent appears in the preceding context. Consequently, the zero third person marker is sufficient in itself to establish the reference:

(13) *Šúŋkawakȟáŋ núŋpa opȟé-wičha-Ø-tȟuŋ*   *Ø-čhiŋ*

    horse   two   STEM-3PL:STA-3SG:ACT-buy 3SG:ACT-want

    ´He wants to buy two horses`

(14) * *Šúŋkawakȟáŋ núŋpa   opȟé-wičha-tȟuŋ*   *čhiŋ*

     horse   two   STEM-3SG:STA-buy   want

    ´He wants to buy two horses`

The fact that the Lakota example in (12) cannot be interpreted as ´I want to buy one horse´[12], but must be interpreted as ´I want him to buy one horse´, strengthens the argument that the embedded verb *opȟétȟuŋ* ´buy` encodes two arguments rather than one and consequently, the correct structure is (13), not (14). Thus, although the third person in Lakota is crossreferenced on the verb through a null marker, it does exist, and therefore, it is just being covertly specified, as can be observed in its behaviour in this control construction with no obligatory correferential actors.

In summary, the view that third person pronominal affixes in Lakota do not exist - which is in conflict with the RRG theoretical framework owing to the fact that then two-place predicates would only code one of their direct core arguments - could not be entirely right. The apparent syntax-semantics mismatch is discarded when the evidence provided by instances of control constructions reveals that if we assume that third person affixes do not exist and therefore there are no zero pronominal affixes for third person participants, the meaning of a sentence like (12) would be ungrammatical, when it isn´t; what occurs is that, owing to the fact that a predicate like *čhiŋ* ´want` allows non-coreferential actors, the presence of a zero third person marker functioning as the undergoer of the embedded predicate leads to a different interpretation of the sentence. It does not seem logical to suppose that the absence of a pronominal affix in the embedded verb in this situation can lead to the interpretation of a third person participant.

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(12) *Šúŋkawakȟáŋ núŋpa opȟé-wičha-Ø-tȟuŋ*   *hé   wa-čhiŋ*

   horse   two   STEM-3PL:STA-3SG:ACT-buy DEIC 1SG:ACT-want

   ´I want that to buy two horses`

[12] See Van Valin (1977:136) for a similar example.

5. Does Cheyenne exhibit only two types of nexus types, namely coordination and subordination?

RRG has a very distinctive approach to the study of complex sentences, consisting of three main components: the theories of juncture, nexus, and interclausal relations. Firstly, the theory of juncture deals with the units that make up complex sentences, named nucleus, core, and clause, and stands for the level where the connection between clauses is produced. Apart from these three levels, we could include a fourth one, that is, sentential juncture, where a complex construction is made up of multiple sentences, each with elements in extra-clausal positions. There are, then, four possible levels of ´juncture´ in RRG, namely: nuclear juncture, core juncture, clausal juncture, and sentential juncture.

Secondly, unlike traditional, structural and generative grammars, which all operate on the assumption that there are two linkage or nexus types, namely coordination and subordination, the RRG theory of nexus, which concerns the syntactic relationship between the units in the juncture, adds a further linkage type that is referred to as cosubordination (Olson, 1981; Foley & Van Valin, 1984; Van Valin, 2005). Cosubordination differs from coordination in that it shows a dependency relationship between the two elements at the level of juncture whereby the two units share at least one operator at the corresponding level, and it is also different from subordination in that it does not involve the embedding of one element in the other.

Therefore, there can be examples of: first, clausal juncture, in which full clauses are joined and each clause may be fully independent of the other(s), one clause may be dependent on the other, or the two clauses may share some clausal operator(s); second, core juncture, which involves a single clause containing more than one core, each with its own nucleus and its own set of core arguments, which may be conjoined, as they are independent of each other, one of the cores may function as an argument of the other, or both cores may share some core operator(s); and finally, nuclear juncture entails a single core involving the joining of two nuclei that function as a single complex predicate, which takes a single set of core arguments and whose constituents may be two independent nuclei; one of these nuclei may be somehow or other dependent on the other nuclei or both nuclei may share some nuclear operator(s). Additionally, there can also be examples of sentential coordination and subordination, but not of sentential cosubordination owing to the absence of potentially shared sentential operators. Thirdly, the juncture-nexus combinations are organized into a hierarchy in which they are ranked in terms of the tightness of the syntactic link or bond between them; this is called the

Syntactic Relation Hierarchy. Furthermore, a theory of interclausal semantic relations suggests that the semantic relations themselves can be ranked in a continuum based on the degree of semantic cohesion between or among the units; this is called the Semantic Relation Hierarchy. Finally, the RRG theory of clause linkage juxtaposes these two hierarchies to create the Interclausal Relations Hierarchy. The crucial point is that RRG assumes that there is an implicational hierarchy linking the morpho-syntactic continuum and the semantic continuum.

Unlike many languages, where nuclear junctures are very limited, Cheyenne, owing to its polysynthetic nature, exhibits a great number of constructions showing this type of juncture. The goal of this section will be to prove the existence of a third type of nexus relations, namely cosubordination, by providing several instances of it in this language. Firstly, the following construction shows a clear example of nuclear coordination:

(15) *É-nomáhts(e)-e´hāna*

    (3)-steal–eat.AI.(3)

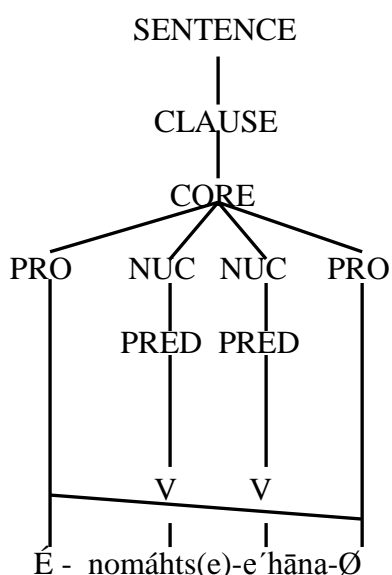   ´He stole something to eat.` (Fisher et al, 2006: 24/200)

Figure 3: Template for nuclear coordination in Cheyenne

Nuclear junctures like this include a single core involving the joining of two nuclei, in this case *nomáhtsé* ´steal` and *e´haná* ´eat`, two predicates that could stand on their own in a clause. Nevertheless, in this construction, they are joined together to function as a complex predicate that takes a single set of core arguments, that is, a third person animate actor. These

two nuclei are neither dependent on each other, nor do they share a nuclear operator (e.g. aspect, negation and directional).

Secondly, we can observe an example of a construction that, although its classification into one type of linkage type is not so evident, seems to yield a nuclear subordination clause linkage:

(16) *Ná-náóots-e-táno*

(1)- sleep.AI-CLM[13]-want.AI.(1)
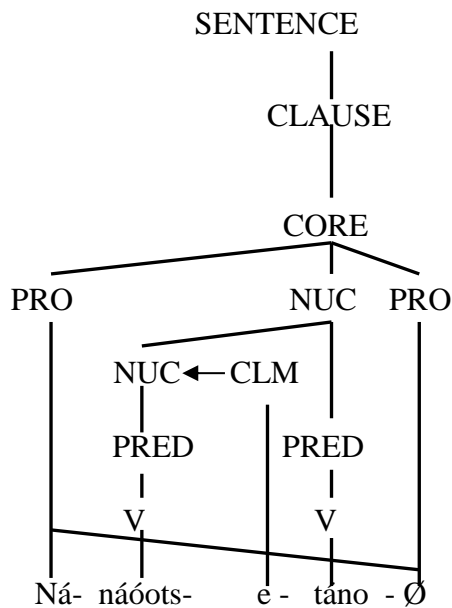
´I want to sleep.`   (Fisher et al, 2006:169)

Figure 4: Template for nuclear subordination in Cheyenne

This sentence also includes two different nuclei, that is *náóotse* ´sleep` and *tanó* ´want`. However, unlike the former example, there is no simple coordination of nuclei, since there seems to be a syntactic dependence of one nucleus on the other. Thus, the fact that in Cheyenne the markers representing the core arguments of the predicate are realized syntactically simultaneously through the verbal prefix and suffix forces the first predicate, that is *náóotse* ´sleep`, to get rid of most of its inflection, which now appears attached to the second predicate *tanó*. This predicate *tanó*, despite not being able to stand on its own in a clause, in this construction becomes the main verb since it varies its form according to the

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[13] Clause-linkage marker or CLM is a grammatical term that includes a variety of morphosyntactic categories, such as complementizers (as *that* in English), articles (as *kiŋ* in Lakota), bound particles (as the prefix *tsé-* in Cheyenne), switch-reference markers (as *ri* in Kewa) etc. that help to link units at every level of juncture.

transitivity of the first verb and the grammatical properties (e.g. animacy, number and obviation) of its participants. Consequently, the verb *tanó* becomes the matrix verb in this construction by adopting the inflection of the first verb, which now becomes dependent on the former, as can be observed in the following examples:

(17) *Ná-hėneˈen-á-tanóˈtov-o*

   (1)-know.TA-CLM-want.TA-(1-3)

   ´I want to know her.`

(18) *Ná-vȯo-ht-á-tanóˈta*   *héˈtóhe mȧhēōˈo*

   (1)-see.TI-CLM-want.TI.(1-I)   DEIC house

   ´I want to see this house.`

It seems as if, in this construction, the first predicate has transferred its grammatical properties to the verb *tanó*, since the latter predicate copies the form of a transitive animate verb in (17) and a transitive inanimate verb in (18) from the predicates *héneˈēna* ´know` and *vóóhtá* ´see` respectively, which possess the aforementioned semantic properties.

The option of nuclear cosubordination is also discarded because the two nuclei cannot share any nuclear operator: for example, the fact that "somebody wants to do something" (i.e. "want to sleep") does not necessarily imply that the action is carried out finally (i.e. "sleep"). Thus, for example, if the negative correlative marker *sáa…he* were added, it would only affect the second predicate *tanó*.

Finally, it is important to note that the dependence of the first predicate on *tanó* is only syntactic, rather than semantic, since the former does not function as an argument of the latter, as is reflected in the information provided by the suffix. On the other hand, it is very striking that the presence of a connective attached to the first verb, namely *e* or *á*, which indicates that the actor of the main and embedded predicates, are coreferential. This connective could be a type of switch-reference marker[14] and a mark of subordination. In summary, it seems

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[14] This connective, which is specific to this construction, may present two different forms, that is *a* or *e*, depending on the verb, and serves to indicate that there is a coreference between the two actors. On the other hand, there is another marker, namely *ahtse*, which is used to indicate that the actor of the matrix verb *tanó* is coreferential with the undergoer of the linked verb, giving way to a passive-like construction:

reasonable to conclude that these constructions involving the use of the predicate *tanó* are examples of nuclear subordination[15].

After analyzing one instance of coordination (14) and another of subordination (16,17 & 18) respectively, we must turn to a study of the following example:

(19) *Kim é-onést(a)-aˊénoˊhāme*

   Kim (3)-test.TI-drive.AI.(3)

   ´Kim learns to drive.` (lit. ´Kim tries driving.`) (Fisher et al, 2006: 224)

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                    SENTENCE
                       |
                    CLAUSE
            NP                CORE
        COREₙ   PRO      NUC        PRO
        NUCₙ          NUC   NUC
                      |     |
                    PRED   PRED
          N          V      V
        Kim       é - onést(a)-aˊénoˊhāme-Ø
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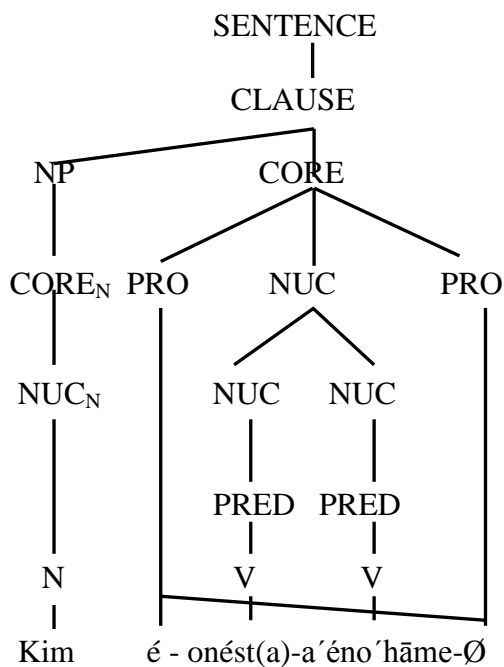
Figure 5: Template for nuclear cosubordination in Cheyenne

In this construction there is also a single complex predicate consisting of two different nuclei, that is *onésta* ´try` and *aˊénoˊhamé* ´drive`. Unlike examples (16 - 18), this example includes

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E.g. *Ná-véstàhém-àhtsé-táno*

   (1)-help.TA-CLM-want.AI.(1)

   ´I want to be helped.`

[15] There are two different types of subordination, that is core (daughter) and adjunct (peripheral) subordination. In this case in particular, it is not possible to understand this structure as an example of ad-nuclear subordination because neither of the two nuclei is an optional modifier, that is, an element which can be omitted without altering the original meaning of the expression. Furthermore, both nuclei predicate, that is, each provides arguments, despite the fact that these two arguments appear to be fused into only one set.

two predicates that can become independent nuclei and there is no marker of subordination, which would lead us to suppose that there is no structural dependence of one nucleus on the other. Nevertheless, unlike (15), the two predicates in this construction are not completely independent of each other, as they show operator dependence, illustrated by the following example that includes a morpheme indicating progressive aspect:

(20) *Kim é-am(e)-onést(a)-aˊénoˊhāme*

    Kim (3)-ASP-test-drive.AI.(3)

    ´Kim is learning to drive.`

The assumption that both nuclei share the nuclear operator of aspect can be confirmed by means of the presence of the aspectual operator *ame,* affecting both nuclei, rather than only one (e.g. "Kim is trying something" and "Kim is driving"). Consequently, this fact leads us to argue that this construction reflects an example of a further nexus relation, different from coordination and subordination, called nuclear cosubordination.

Other constructions confirming the existence of cosubordination are illustrated by these examples:

(21) *É-hoˊ-aˊénoˊhāme*

    (3)-arrive-drive.AI.(3)

    ´He arrived driving.` (Fisher et al, 2006:85)

(22) *Ná-oˊx(e)-éhné-nòtse*

    (1)-carry-walk-TA.(1-3)

    ´I carried him along on my back.`(lit. I walked and carried him.`)

(23) *É-áahtomóne-óeˊ-tov-aaˊe*

    (3)-listen-stand-TA-(33-1)

    ´They stood listening at me.`

In these three constructions, if a morpheme standing for a nuclear operator, such as negation or aspect, were attached to the verbal complex, this would have scope over the whole complex nucleus, rather than only one of the nuclei separately, which entails operator dependence between the two units - in these cases two nuclei, meaning that they should also be considered instances of nuclear cosubordination.

In summary, the RRG theoretical framework posits a distinctive analysis of the study of complex constructions that requires the exploration of a number of semantic and morpho-syntactic factors, such as argument sharing and case marking coding (obligatory or optional co-reference), syntactic and operator dependency, and clause linkage markers (CLMs).

6. Conclusion

In sum, throughout this article, the framework of Role and Reference Grammar is put to the test by means of the application of this theory to actual data from these two Native American languages regarding two complex linguistic issues, such as the coding of third person arguments in Lakota and the existence of cosubordination in Cheyenne. The data presented in this paper confirms the assumptions made by RRG that, firstly, all core arguments of a predicate should be represented syntactically, implying the existence of a zero marker for third person participants in Lakota and, secondly, the existence of a linkage type different from coordination and subordination called cosubordination, which entails operator dependence. All in all, the evidence found in this paper highlights the typological orientation of RRG since it is able to capture all of the universal features of clauses without imposing any of them on languages for which there is no evidence. It can also represent comparable structures in different languages, thereby providing a suitable answer to the questions mentioned at the end of Section 2. Thus, the main aim of this study is to confirm the consideration of RRG as a universal theory for the analysis of a wide range of languages. This linguistic aim goes hand-in-hand with a more general aim that consists in contributing to the preservation and revitalization of the Native American languages, owing to the fact that most of them are critically endangered.

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