

A Role and Reference Grammar Analysis
of
Case-Marking in Croatian

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PART I : The Problem of Case in Croatian

1.0 Introduction:

Case in Slavic languages has been a subject of great interest to both syntacticians and semanticists for many years. In particular, instances of irregular case-marking provide an intriguing challenge for any syntactic analysis of these languages. Since Roman Jakobson first published his influential work on Russian case in 1936, several other theoretical approaches have tried to account for this phenomenon. Of particular importance to Slavic linguistics are Charles Fillmore's Case Grammar (Fillmore 1968) and Noam Chomsky's Transformational-Generative Grammar (Chomsky 1965, 1981). Each has led to a great deal of research in this area, and versions of these theories are still being used extensively. Issues pertaining to the general framework of Case Grammar, for example, have been addressed in work on passivization (Mihailović 1974) and Valency Theory (Žić Fuchs 1993). Likewise, Chomskyan theory has been the basis for studies of case theory in Russian (Babby 1986), the case and structure of the NP in Russian (Franks 1986), and polarity (Progovac 1994). There has also been a considerable amount of attention drawn to the grammatical behavior of specific phenomena such as the dative subject in Russian (Schoorlemmer 1994, Kondrashova 1994), the dative of possession in Croatian (Kučanda 1982), the Polish instrumental (Grochowski 1986), the Russian instrumental (Wierzbicka 1980, Kilby 1986), and many others.

One of the most perplexing questions for linguists researching case in any framework is the interaction between syntax and semantics. In short, should a theory of case marking admit semantic notions into a syntactic analysis? Babby (1986), for instance, posits a theory of "semantic case" distinct from syntactic case. Likewise, the bearing of *experiencer* and other theta roles on dative case selection for subjects is dealt with in both Kondrashova's and Schoorlemmer's treatment of Russian.

For this study, a Role and Reference Grammar (Van Valin 1993, Van Valin & LaPolla 1997) approach will be used to look at the specific issue of case-marking in the Croatian language. A particular concern with the concept of **quirky case-marking** will be addressed following the model put forth in previous studies of case in RRG for such languages as Icelandic (Van Valin 1991) and Latin (Michaelis 1993).

One finds that the Slavic languages are strikingly similar in many regards when contrasted with one another. As Meillet (1934) said:

L'unité des langues slaves ne se traduit pas seulement par le fait que, sous la forme la plus ancienne qui en soit connue, elles sont très pareilles les unes

aux autres. Il y a un autre fait plus caractéristique encore : les mêmes changements tendent à se produire dans toutes ou du moins dans la plupart d'entre elles, sinon exactement de la même manière.¹

In setting out to analyze a particular grammatical system, however, an important issue arises concerning the generality of the data being examined. In particular, the concept of universal rules for Slavic grammar is not always valid when examining the intricacies of individual languages and then of individual speech communities. Much of the work on Slavic linguistics uses Russian data to formulate hypotheses and then posits these notions to be the norm. In other words, Russian has been the primary data source for much of the work done on Slavic case. It becomes quite clear, however, that not all of these findings can be generalized throughout the Slavic language family. Croatian does not always exhibit the same syntactic behavior as her sister languages. Specific instances of this disparity will be drawn out in later sections. Another crucial point is that grammatical phenomena in Croatian are not always the same as those in Serbian. Teasing apart these two grammatical systems can be exceedingly difficult due to their being historically classified as one and the same language. It is also true that until the appearance of Croatia as an independent country in the 1990's, scholars were seldom clear about which language they were actually addressing in their work. So, it is quite possible to pull data from an article on "Serbo-Croatian" and have either a Croat or a Serb think "Well I would never say that." The question is often raised of just how different Croatian and Serbian are from one another. This is a complicated issue both linguistically and politically. Differences in pronunciation, vocabulary, and orthography are easily apparent. The structural differences that concern us here are a bit more difficult. In essence, there appear to be two major syntactic differences that I have come across in data collection. The first is the use of the da or "that" clause. Manger (1991) exemplifies this difference when he states that the most obvious syntactic difference in his eyes is the tendency for a Serbian speaker to use the da-clause for the complement of a matrix verb in the present tense where a Croatian speaker would use an infinitive. Therefore, the following statements would be most common for a Croatian speaker:

(1.0) a. Ja ću čita-ti.
 1sgNOM FUT.1sg read-INF
 I will read.

¹ The unity of the Slavic languages does not only manifest itself by the fact that, under the oldest known form, they are quite parallel to each other. There is another fact that is even more characteristic: the same changes tend to occur in all or at least in the majority of them, and in exactly the same manner.

- b. Ja hoć-u čita-ti.
1sgNOM want-1sg read-INF
I want to read.
- c. Ja mor-am čita-ti.
1sgNOM should-1sg read-INF
I ought to read.
- d. Ja se mor-am uči-ti čita-ti.
1sgNOM CL should-1sg learn-INF read-INF
I must learn to read.

and the following for a Serbian speaker:

- (1.1) a. Ja ću čita-ti.
1sgNOM FUT.1sg read-INF
I will read.
- b. Ja hoć-u da čit-am.
1sgNOM want-1sg CMPL read-1sg
I want to read.
(‘I want that I read’)
- c. Ja mor-am da čit-am
1sgNOM should-1sg CMPL read-1sg
I ought to read.
(‘I should that I read’)
- d. Ja se mor-am da se uč-im da čit-am.
1sgNOM CL should-1sg CMPL CL learn- 1sg CMPL read-1sg
I must learn to read.
(‘I am obliged that I learn that I read.’)

The second major difference concerns the passive construction. It has been found quite recently that Croatian does not have a true passive like Serbian and other Slavic languages do. Though Croatian speakers recognize this form, probably through high exposure to Serbian, they do not in fact use it. This will have major repercussions when looking at case-marking in later sections of this paper, as we have lost an important syntactic test. In essence, however, it is not felicitous to use passive constructions in a discussion of the Croatian language since they are not used by the speakers².

² The use of the term *passive* in this instance refers to a periphrastic construction with a be auxiliary + past participle. The use of reflexive middle constructions, on the other hand, is quite common. An example from Siewierska (1988) illustrates this distinction:

Kuć-a se gradi-l-a dva mjeseca.
house-FsgNOM CL build-PAST-F two months
The house was built in two months.

A third and even more fine grained problem for uncovering generalities in Slavic case is the preponderance of dialectical varieties within Croatia proper - not to mention within the rest of the former Yugoslavia and various immigrant groups throughout the world. It is crucial, therefore, to be specific about which dialect is supplying the data for any analysis of the language. I found in interviewing speakers, for example, that some will reject grammatical forms given by others. As an example of this, the first speaker that I worked with used the Kajkavian dialect, and she felt a marginal acceptance of the passive construction whereas my later štokavian (ijekavski) speaker rejected it completely: (1.2)

(*) Jovan- se uplaši-o od buk-e.
 John-NOM CL frighten-M.PAST by noise-GEN
 John was frightened by the noise.

There are two possible explanations for this divergence of opinion. One is that the Kaj dialect does in fact use passive forms occasionally. The other is that because the Serbian language was taught in the schools as correct during her childhood, the Kaj speaker learned to accept them as formal but not necessarily foreign.

Magner (1991) gives a simplified and workable breakdown of the various groups. He states that the most common criterion for distinguishing the three major Croatian and Serbian dialects is via the word for “what.” Those who use kaj are said to speak **Kajkavski**, those who use čā are said to speak **Čakavski**; and those who say either što or šta belong to the majority group which speaks **Štokavski**. The **Štokavski** (or **štokavian**) dialects can be further divided into **ekavski** (Serbia), **ijekavski** or **jekavski** (Montenegro, Herzegovina, Croatia, Southern Dalmatia and Lika), and **ikavski** (Western Bosnia, Slavonia, Northwestern Dalmatia and in the archipelago north of Pelješac). The Croatian standard speech is based on ijekavski, so we will be drawing our primary data from this dialect.

This is a canonical use of the middle construction. Importantly, the persons doing the building cannot be specified:

*Kuć-a se gradi-l-a dva mjeseca ljudi-ma.
 house-FsgNOM CL build-PAST-F two months people-MplINSTR
 The house was built in two months by people.

*Kuć-a se gradi-l-a dva mjeseca od Mark-a.
 house-FsgNOM CL build-PAST-F two months by Marko-GEN
 The house was built in two months by Marko.

The data used in this study were collected from linguistic articles, grammars, and consultations with native speakers. I worked closely with three native speakers of Croatian. The first was a linguistics professor from the University of Zagreb who visited SUNY Buffalo for one academic year (1995-1996). The two others were Croatian-Americans. The first emigrated from Northern Croatia as a young adult and the second was born in the United States.

1.1 Normal Case Marking:

If we are to cite what makes for quirky case-marking in Croatian, we must first present the morphology of the case forms and their normal or canonical use. There is most commonly said to be six grammatical cases: nominative, accusative, dative, genitive, instrumental, and vocative. It should be mentioned that some grammarians also posit a seventh case called either locative or prepositional. This case, however, nearly always appears to have exactly the same form as the dative. So, for our purposes and for clarity's sake, we will consider them to be one group. Croatian also has three genders: masculine, feminine, and neuter. The interaction between case and gender affects the morphology of the NP as shown in the charts below. These examples are taken from Norris(1993):

I. Masculine

| | (grad = city) | | (prijatelj = friend) | |
|------------|-----------------|---------------|----------------------|---------------|
| | singular | plural | singular | plural |
| nom | grad | gradovi | prijatelj | prijatelji |
| voc | grade | gradovi | prijatelju | prijatelji |
| acc | grad | gradove | prijatelja | prijatelje |
| gen | grada | gradova | prijatelja | prijatelja |
| dat | gradu | gradovima | prijatelju | prijateljima |
| ins | gradom | gradovima | prijateljem | prijateljima |

In the singular of masculine nouns, the accusative of inanimate objects is the same as the nominative. The accusative of animate beings (human and animal) is the same as the genitive. Sometimes there is a penultimate **a** which disappears when case endings are added. The **a** reappears in the genitive plural as shown in the word for *a German*:

Nijemac (nom)

Nijemca (gen. singular)

Nijemaca (gen. plural)

Similarly, in nouns which end in two or more consonants these consonants are usually separated in the genitive plural by **a**, like the word for *student*:

student (nom.) **studenta** (gen. singular) **studentata** (gen. plural)

Most masculine nouns of one syllable add **-ov-** before case endings (like **gradovi**) or **-ev-** after a soft consonant³ (like **muževi**). Most masculine nouns end in a consonant. Some, however, end in **o** which converts to **l** when case endings are added as shown in the word for *work*:

posao (nom.) **posla** (gen, singular)

Some masculine nouns end in **a**. They follow the inflectional pattern of the feminine nouns that end in **a**, but all adjectives and verbs agree with them as if they were masculine:

Ovo je moj tat-a.
 this be.3sg my-*MsgNOM* father-*MsgNOM*
 This is my father.

II. Feminine

| | (žena = woman) | | (stvar = thing) | |
|------------|----------------|--------|-----------------|----------|
| | singular | plural | singular | plural |
| nom | žena | žene | stvar | stvari |
| voc | ženo | žene | stvar | stvari |
| acc | ženu | žene | stvar | stvari |
| gen | žene | žena | stvari | stvari |
| dat | ženi | ženama | stvari | stvarima |
| ins | ženom | ženama | stvari | stvarima |

Note: The important distinction between these two words is the fact that **žena** ends in a vowel whereas **stvar** ends in a consonant. This is not an animacy contrast. Feminine nouns which end in a consonant also have an alternative instrumental singular form with **-ju** (e.g. **stvar** to **stvarju**). In nouns which end in two or more consonants before **a** these

³ Soft consonants include /c/, /č/, /ć/, /dž/, /đ /, /j/, /lj/, /nj/, /š/, and /ž/

consonants are usually separated in the genitive plural by **a** (e.g. **marka** (*stamp*) to **maraka** (*stamps*)). Some also take the alternative ending **-i** (e.g. **torba** (*bag*) to **torbi**(*bags*)).

III. Neuter

| | (selo = village) | | (more = sea) | |
|------------|------------------|---------------|-----------------|---------------|
| | singular | plural | singular | plural |
| nom | selo | sela | more | mora |
| voc | selo | sela | more | mora |
| acc | selo | sela | more | mora |
| gen | sela | sela | mora | mora |
| dat | selu | selima | moru | morima |
| ins | selom | selima | morem | morima |

In nouns which end with two or more consonants before **o** or **e** these consonants are usually separated by **a** in the genitive plural (e.g. **pismo** (*letter*) to **pisama**). Some neuter nouns add **-en-** and others **-et-** before adding the case endings as in *time* and *child*:

vrijeme (nom.) vremena (gen. singular)
dijete (nom.) djeteta (gen. singular)

Now that we have a good idea of what the various forms are, we will look at their use. The choice of case in Croatian is usually fairly straightforward - based on either grammatical function in the sentence or on which preposition is used. For prepositions that govern more than one case, semantic notions also come into play.

The **Nominative Case** is used for the subject of a sentence. It is the NP which controls verb agreement for person and for gender in the past tense. The **Accusative** is usually the direct object of the verb :

(1.3) Dječak- uč-i lingvistik-u
boy-MsgNOM study-3sg linguistics-FsgACC
The boy studies linguistics.

(1.4) Marij-a je razbi-l-a prozor- .
Marija-NOM have.3sg broke-PAST-F window-MsgACC
Marija broke the window.

After certain prepositions, there is a choice between accusative and dative for the NP - which is generally attributed to the distinction between the concepts informally referred to as "motion" versus "rest".

(1.5) Id-em u grad- . (motion)
go-1sg to town-MsgACC
I go to town.

(1.6) Id-em u škol-u. (motion)
go-1sg to school-FsgACC
I go to school.

- versus -

(1.7) Ja sam u grad-u. (rest)
1sgNOM be.1sg in town-MsgDAT
I am in town.

(1.8) Ja sam u škol-i. (rest)
1sgNOM be.1sg at school-FsgDAT
I am at school.

This variation is consistent after the prepositions 'u' and 'na.' Another point of interest is that Croatian has two words for 'where', depending on what is being asked:

(1.9) Kamo ide-te?
where go-2pl
Where are you going?
and

(1.10) Gdje živi-te?
where live-2pl
Where do you live?

Dative is normally used to designate an indirect object:

(1.11) Jasn-a mor-a pisa-ti Rudolf-u.
Jasna-NOM must-3sg write-INF Rudolf-DAT
Jasna must write Rudolf.

(1.12) Mor-am kupi-ti sapun- mam-i.
must-1sg buy-INF soap-MsgACC mom-FsgDAT
I must buy soap for mom.

It follows then that the role of the NP can be understood regardless of its order relative to other constituents in the sentence. Croatian does, in fact, exhibit relatively free word order:

(1.13) a. Sandr-a daj-e žen-i novac- .
Sandra-NOM give-3sg woman-FsgDAT money-MsgACC
Sandra gives the money to the woman.

b. Sandra daje novac ženi.

c. Novac Sandra daje ženi.

The dative is also frequently used with verbs that require a se clitic as an accusative object cannot occur in these instances. This would include *svipa mi se* meaning 'it is pleasing to me':

(1.14) Svip-a mi se plivanj-e.
please-3sg 1sgDAT CL swimming-NsgNOM
I like swimming.

(1.15) Sandr-i se svip-a Zagreb- .
Sandra-DAT CL please-3sg Zagreb-NOM
Sandra likes Zagreb.

and can be used to express 'to me' with the verb 'seems':

(1.16) Čin-i mi se...
seems-3sg 1sgDAT CL
It seems to me...

The long form is used for emphasis

(1.17) Meni se čin-i...
me.1sgDAT CL seem-3sg
To me it seems...

The dative also appears in impersonal expressions:

(1.18) Lako mi je.
easy 1sgDAT be.3sg
It is easy for me.

(1.19) Teško mu je.
difficult 3sgDAT be.3sg
It is difficult for him.

The appearance of the dative in these forms will be discussed further in the section on quirky case marking.

Things become more complicated when we consider the **Genitive Case**. This case is said to have two main functions. First, it is used with numbers and to express quantity.

The numbers two, three, and four take the genitive singular:

- (1.20) a. dva stol-a
two table-MsgGEN
- b. dvije kav-e
two coffee-FsgGEN
- c. četiri kovert-e
four envelope-FsgGEN

The numbers five to twenty require the genitive plural:

- (1.21) sedam kav-a
seven coffee-FplGEN

The genitive also expresses the quantity 'some' or 'any'. This partitive genitive is very common in Indo-European languages:

- (1.22) a. Ima vod-e
there is water-FsgGEN
There is some water.
- b. Gdje je kruh- ?
where be.3sg bread-MsgNOM
Where is the bread?
- c. Ima-te li kruh-a?
have-2pl Q bread-MsgGEN
Have you any bread?

The genitive's second function is after certain position words:

- (1.23) a. ispred hotel-a
before hotel-MsgGEN
in front of the hotel
- b. Evo Jasn-e
here Jasna-GEN
Here is Jasna.
- c. blizu spomenik-a
near monument-MsgGEN
near the monument
- d. ispod drvet-a
under tree-NsgGEN
under the tree

This could be confused with the locative function of the dative. To complicate matters further, we see that with the prepositions 'k' and 'kod', the **dative describes motion**

(meaning towards) and the genitive rest (meaning at the house of):

- (1.24) a. Id-em k Rudolf-u
go-1sg towards Rudolf-DAT
I am going to Rudolf's.
- b. Sad sam kod Rudolf-a.
now be.1sg at Rudolf-GEN
Now I am at Rudolf's.

The genitive can also be used in its prototypical function of expressing possession where it is marked on the dependent:

- (1.25) a. knjig-e Mark-a Marković-a
 book-FplNOM Marko-GEN Marković-GEN
 Marko Marković's books
- b. u centr-u grad-a
 in center-MsgDAT town-MsgGEN
 in the center of town

This, however, is not always quite straightforward. If a possessor is definite, singular, animate, and expressed by one word, it often forms an adjective. The adjective must agree with its head in gender, number, and case. (see Browne 1993):

- (1.26) Mark-ov-e knjig-e
 marko-adj-FplNOM book-FplNOM
 Mark's books.

Croatian also uses dative constructions in this capacity. (see Kučanda 1985):

- (1.27) Razbi-o mi je vaz-u
 broke-M.PAST 1sgDAT be.3g vase-FsgACC
 He broke my vase.
 (cf. colloquial English: "He broke it on me.")

In addition, the genitive can be used, like the dative, with certain verbs that take the se clitic:

- (1.28) Sjeć-am se stan-a u London-u.
 remember-1sg CL flat-MsgGEN in London-DAT
 I remember the flat in London.

The **Instrumental Case** is used to express the use of an object as a means of doing something:

- (1.29) Piš-em per-om.
 write-1sg pen-NsgINSTR
 I am writing with a pen.

It is also used as a comitative:

- (1.30) Id-em s brat-om.
 go-1sg with brother-MsgINSTR
 I am going with (my) brother.

It is also governed by the use of the preposition *s* (with) in more abstract senses as well as with *iza* (behind).

(1.31) a) *Žen-a je zadovo-ljna sa maćk-om.*
woman-FsgNOM be.3sg pleased-FEM with cat-FsgINSTR
The woman is pleased with the cat.

b) *Maćk-a je iza žen-om*
cat-FsgNOM be.3sg behind woman-FsgINSTR
The cat is behind the woman.

The instrumental is also used to express English 'by':

(1.32) a. *Id-em taksij-em.*
go-1sg taxi-MsgINSTR
I am going by taxi.

b. *Mark- će posla-ti pism-o gospodin-a Marković-*
Mark-NOM FUT.3sg send-INF letter-NsgACC mister-MsgGEN Marković-
a faks-om.
MsgGEN fax-MsgINSTR
Mark will send Mr. Marković's letter by fax.

and place along which one moves (path):

(1.33) *Išli su ulic-om.*
go.3plPAST be.3pl street-FsgINSTR
They went down the street.

and on a certain day (time):

(1.34) *utork-om*
Tuesday-MsgINSTR
on Tuesdays

And again, like the dative and genitive, the instrumental is used with some reflexive verbs:

(1.35) a. *Bav-im se sport-om.*
engage-1sg CL sport-MsgINSTR
I engage in sport.

b. *Žen-i se Njemic-om.*
marry-3sg CL German-INSTR
He is marrying a German.

The **Vocative Case** is, in comparison, much simpler to account for. It is used when addressing people directly in speech or in a letter.

- (1.36) a. Bog-
 God-NOM
 God
- b. Bož-e!
 god-VOC
 Oh my God!

Case marking is used for personal names just as for any other noun phrase. Surnames which end in a consonant, however, do not have overt case-marking when they are used for a woman.

1.2 Quirky Case Marking:

In the Croatian language not all case assignment seems to follow the guidelines presented in the previous section. We have examples of what appear to be accusative and dative subjects:

- (1.37) a. Moju je mam-u sram- /*sram-a.
 my-FsgACC be.3sg mother-FsgACC ashamed-NEUTER/*ashamed-Fsg
 My mother is ashamed.
- a'. Žen-e je/*su sram- /*sram-e.
 woman-FplACC be.3sg/*be.3pl ashamed-NEUTER/*ashamed-Fpl
 The women are ashamed.
- b. Djevojci je slabo/*slab-a od kav-e.
 girl-FsgDAT be.3sg nauseous-NEUTER/*nauseous-Fsg from coffee-FsgGEN
 The girl is becoming nauseous from coffee.
- b'. Djevojci-ama je/*su slabo/*slab-e od kav-e.
 girl-FplDAT be.3sg/*be.3pl nauseous-NEUTER/*nauseous-Fpl from coffee-FsgGEN
 The girls are becoming nauseous from coffee.
- c. Žen-i je neugodn-o/*neugodn-a.
 woman-FsgDAT be.3sg uncomfortable-NEUTER/*uncomfortable-Fsg
 The woman is uncomfortable.
- c'. Žen-ama je/*su neugodn-o/*neugodn-e.
 woman-FplDAT be.3sg/*be.3pl uncomfortable-NEUTER/*uncomfortable-Fpl
 The women are uncomfortable.

There are two important things to note about these accusative and dative 'subjects'. First, they do not trigger verb agreement. This can be seen in all the primed examples. The verb

always appears in the third person singular form regardless of whether the NP is plural or singular. It also does not matter which person the NP is in:

- d. Men-i je neugodn-o.
 1sg-DAT be.3sg uncomfortable-Nsg
 I am uncomfortable.

It should also be noted that these NP's do not trigger adjective agreement, as the adjective must always appear in the neuter form as (a) - (d) show. In fact, there is an interesting paradigm with the notion of being hot or cold. If something is hot or cold to the touch, the nominative case is used. If, on the other hand, something or someone is feeling the internal state of hotness or coldness, the dative is used:

- (1.38) a. Maćk-a je vruć-a. Maćk-a je hladn-a.
 cat-FsgNOM be.3sg hot-Fsg cat-FsgNOM be.3sg cold-Fsg
 The cat is hot. (external) The cat is cold. (external)
- a'. Maćk-e su/*je vruć-e. Maćk-e su/*je hladn-e.
 cat-FplNOM be.3pl/*be.3sg hot-Fpl cat-FplNOM be.3pl/*be.3sg cold-Fpl
 The cats are hot. (external) The cats are cold. (external)
- b. Maćk-i je vruć-e. Maćk-i je zim-a
 cat-FsgDAT be.3sg hot-NEUTER cat-FsgDAT be.3sg cold-NEUTER
 The cat is hot. (internal) The cat is cold. (internal)
- b. Maćk-e je/*su vruć-e. Maćk-e je/*su zim-a
 cat-FplDAT be.3sg/*be.3pl hot-NEUTER cat-FplDAT be.3sg/*be.3pl cold-NEUTER
 The cats are hot. (internal) The cats are cold. (internal)

Even more numerous are examples of dative, genitive, and instrumental objects which would correspond to direct objects in English:

- (1.39) a. Žen-a vjeruj-e djevoj-c-i.
 woman-FsgNOM believe-3sg girl-FsgDAT
 The woman believes the girl.
- b. Plaš-im se mrak-a.
 fear-1sg CL dark-MsgGEN
 I am afraid of the dark.
- c. On je vlada-o zemlj-om.
 3MsgNOM be.3sg rule-M.PAST country-FsgINSTR
 He ruled the country.

What we might ask then is whether or not these are examples of real syntactic subjects and direct objects or are they something else? Do they exhibit different behavior from the canonical forms? And most importantly, we must decide if quirky case-marked NPs can in fact be **predicted** from syntactic or semantic properties of the predicates and their arguments. It does seem that listing each of these verbs as irregular in the lexicon would be quite cumbersome. Therefore, capturing the generalities that they share would supply valuable rules for an account of the grammar.

PART 2 : An Overview of Croatian Grammar

Before an analysis of quirky case-marking is possible, the regular rules for Croatian grammar must be made explicit. This discussion will be divided into two sections following the standard process for a Role and Reference Grammar presentation of basic syntactic and semantic functions. First the systems of lexical representation and semantic roles for the verbs of the language will be presented. Based on this analysis, section two will investigate the issue of grammatical relations. The RRG theory of case-marking is strongly dependent on both of these facets of linguistic structure.

2.0 Verbs and Roles:

Rather than positing an abstract representation of a sentence, RRG relies on a direct mapping of syntax to semantics (comprehension) and of semantics to syntax (production). The semantic end of this model is based on the division of verbs into four central classes: states, achievements, accomplishments, and activities. These groupings are referred to as *Aktionsart* classes and were originally proposed in Vendler (1957 [1967]). Examples of English verbs fitting each of these categories would include:

| <u>(2.0) States</u> | <u>Achievements</u> | <u>Accomplishments</u> | <u>Activities</u> |
|---------------------|---------------------|------------------------|-------------------|
| think | shatter | melt | walk |
| know | pop | freeze | sing |
| believe | explode | learn | study |
| love | receive | dry | listen |
| fear | recognize | teach | read |

Verbs can be assigned to one of these four classes according to their inherent properties of [+/- static], [+/- telic], and [+/- punctual]. The static feature refers to whether or not the verb codes a happening. In other words, a [-static] verb can answer the question *what happened?* or *what is happening?*. This would exclude states: *What is happening? *John fears spiders*. The telic feature distinguishes verbs with an intrinsic temporal boundary (achievements and accomplishments) from verbs without one (states and activities). Therefore, there will be an end to the process in a [+telic] verb with a subsequent result state:

- The window shattered. > The window is shattered.
The sun melted the snow. > The snow is melted.

The punctual feature determines if a telic event has internal duration (accomplishment) or is instantaneous (achievement). Since state and activity verbs are atelic, they must cover a span of time and be [-punctual]. The following list summarizes the *Aktionsart* verb feature matrix (Van Valin & LaPolla 1997):

| | | | |
|------------------------|-----------|----------|-------------|
| (2.1) State: | [+static] | [-telic] | [-punctual] |
| Activity: | [-static] | [-telic] | [-punctual] |
| Accomplishment: | [-static] | [+telic] | [-punctual] |
| Achievement: | [-static] | [+telic] | [+punctual] |

The syntactic and semantic tests which were originally presented in Dowty [1979] are used in a modified form in the RRG framework. This set of tests will isolate specific features in order to systematically categorize the verbs of any language with minor, language-specific adjustments. The chart will be reproduced below to clarify the analysis of the Croatian data to follow. For a thorough presentation and discussion of the Aktionsart classes and their tests, see Van Valin & LaPolla (1997):

| Criterion | States | Achievements | Accomplishments | Activities |
|--|--------|--------------|-----------------|------------|
| 1. Occurs with progressive | No | No | Yes | Yes |
| 2. Occurs with adverbs like <i>vigorously, actively</i> , etc. | No | No | No | Yes |
| 3. Occurs with adverbs like <i>quickly, slowly</i> , etc. | No | No | Yes | Yes |
| 4. Occurs with <i>X for an hour, spend an hour Xing</i> | Yes | No | Irrelevant | Yes |
| 5. Occurs with <i>X in an hour</i> | No | No | Yes | No |

(2.2) Tests to determine Aktionsart Class

In addition to the four central verb classes, there are an additional five that complete the paradigm. For each spontaneous state of affairs, there is a corresponding induced or causative form:

| | |
|-------------------------------|-------------------------------|
| (2.3) a. State: | The girl is sick. |
| a'. Causative state: | The candy sickened the girl. |
| b. Achievement: | The window shattered. |
| b' Causative Achievement: | The boy shattered the window. |
| c. Accomplishment: | The clothes dried. |
| c'. Causative Accomplishment: | The sun dried the clothes. |
| d. Activity: | The dog walked. |
| d'. Causative Activity: | The woman walked the dog. |

The causative forms of these verbs are more complex than the originals as they contain a causing activity which brings about the given state of affairs.

The ninth category is active accomplishments which refer to the accomplishment use of an activity verb. The difference can be drawn out in an example like:

- (2.4) a. Sarah ate cake.
 b. Sarah ate a cake.

In (a) Sarah is simply performing the activity of eating cake with no inherent temporal boundary. In (b), however, once the cake is gone, Sarah is done eating. Therefore, this reading with a specified quantity would pass test #5 and is [+telic].

We will find that versions of these tests work for Croatian as well. Since Croatian does not have a progressive aspectual form as in English, test one is not valid. The remaining four, however, do classify the verbs systematically. For the second test, the two best adverbs to use to specify dynamic action are snažno = *vigorously* and nježno = *gently*. As predicted, they only work consistently with activity verbs:

(2.5)

- a. STATE: *Čuj-em glazb-u snažno/nježno.
 hear-1sg music-FsgACC vigorously/gently.
 I am hearing music vigorously/gently.
- b. ACTIVITY: Djevojk-a hod-a snažno.
 girl-FsgNOM walk-3sg vigorously.
 The girl is walking vigorously.
- b'. Žen-a je šiva-l-a nježno.
 woman-FsgNOM be.3sg sew-PAST-F gently
 The woman sewed gently.
- c. ACHIEVEMENT: *Primi-o sam pism-o snažno/nježno.
 receive-1sg be.1sg letter-NsgACC vigorously/gently
 I received a letter vigorously/gently.
- d. ACCOMPLISHMENT: *Snijeg- se otopi-o snažno/nježno.
 snow-NsgNOM CL melt-M.PAST vigorously/gently
 The snow melted vigorously/gently.

There is one important clarification to be made about this test. Its main function is to separate [-static] verbs into [+/- dynamic] distinctions. Therefore, in English, activities are [+dynamic] whereas both achievements and accomplishments are [-dynamic]. In Croatian, however, the vast majority of achievement verbs can occur with these adverbs. It could be

that snažno is not a direct translation of vigorously though it was the best that could be found:

- (2.6) a. Lopt-a je poskoči-l-a snažno.
ball-FsgNOM be.3sg bounce-PAST-F vigorously.
The ball bounced (one time) vigorously.
- b. Kuć-a je eksplodira-l-a snažno.
house-FsgNOM be.3sg explode-PAST-F vigorously
The house exploded vigorously.

Therefore, the test clearly distinguishes activities from states and accomplishments but not from achievements which will group with activities in this instance more often than not.

For test three, the equivalents of *quickly* = brzo and *slowly* = sporo may be used. This test will differentiate [-static] verbs into [-punctual] and [+punctual] groups. One must be careful, however, in noting that due to the instantaneous nature of achievement verbs, the adverb *quickly* often sounds fairly acceptable: *The house exploded quickly*. Therefore, it is best to only use *slowly* for achievement verbs in order to be sure that the adverb is, in fact, coding temporal duration and not merely the speaker's impression of the state of affairs. In other words, achievements are inherently quick as they are instantaneous. Therefore, using *quickly* in such an utterance is not really giving any useful information as the speed of the event in question is never relative. With this precaution in mind, the test works well:

- (2.7)
- a. ACTIVITY: Djevojk-a je pjeva-l-a brzo/sporo.
girl-FsgNOM be.3sg sing-PAST-F quickly/slowly
The girl sang quickly/slowly.
- b. ACHIEVEMENT: *Balon- je puknu-o sporo.
balloon-MsgNOM be.3sg pop-M.PAST slowly
The balloon popped slowly.
- c. ACCOMPLISHMENT: Vod-a se zaledi-l-a brzo/sporo.
water-FsgNOM CL freeze-PAST-F quickly/slowly
The water froze quickly/slowly.

Tests four and five determine the telicity of a verb. Either of the expressions jedan sat = *one hour* or sat vremena = *an hour's time* can code duration whereas za sat vremena = *in an hour's time* codes completion. Hence jedan sat / sat vremena can be used with states, accomplishments, and activities as they all have duration in time whereas achievements do not. This is because they are [+punctual]:

(2.8)

- a. STATE: Voli-l-a sam svoga psa sat vremena.
love-PAST-F be.1sg my dog-MSGGEN hour's time.
I loved my dog for an hour.
- b. ACTIVITY: Dječak- je je-o sat vremena.
boy-MSGNOM be.3sg eat-M.PAST hour's time
The boy ate for an hour.
- c. ACHIEVEMENT: *Čaš-a se slomi-l-a sat vremena.
glass-FsgNOM CL shatter-PAST-F hour's time
The glass shattered for an hour.
- d. ACCOMPLISHMENT: Neb-o se zacrvenil-o sat vremena.
sky-NsgNOM CL redden-N.PAST hour's time
The sky reddened for an hour.

Za sat vremena will only work with verbs that have an inherent terminal point when the action will be completed. Generally, achievement and accomplishments will be compatible with an *in-* phrase as they are [+telic]. Logically, however, the achievement form will only work with an adverb that denotes an extremely fast time interval like *in a split second*. Here are some examples of the *in an hour* adverbial phrase:

(2.9)

- a. STATE: *Vidi-o sam slik-u za sat vremena.
see-M.PAST be.1sg picture-FsgACC in hour time
I saw the picture in an hour.
- b. ACTIVITY: *Beb-a je guguta-l-a za sat vremena.
baby-FsgNOM be.3sg gurgle-PAST-F in hour time
The baby gurgled in an hour.
- c. ACCOMPLISHMENT: Rublj-e se osušil-o za sat vremena.
clothes-NsgNOM CL dry-N.PAST in hour time
The clothes dried in an hour.

There is an interesting division of Croatian accomplishment verbs into perfective and imperfective forms:

(2.10)

- a. Snijeg- se o-topi-o. (Perfective)
snow-NsgNOM CL PERF-melt-N.PAST
The snow melted.
- a'. Snijeg- se topi-o. (Imperfective)
snow-NsgNOM CL melt-N.PAST

- b. The snow was melting.
 Vod-a se zaledi-l-a. (Perfective)
 water-FsgNOM CL freeze-PAST-F
- b'. The water froze.
 Vod-a se zalepiva-l-a. (Imperfective)
 water-FsgNOM CL freeze-PAST-F
 The water was freezing.
- c. Rublj-e se o-sušil-o. (Perfective)
 clothes-NsgNOM CL PERF-dry-N.PAST
 The clothes dried.
- c'. Rublj-e se sušil-o. (Imperfective)
 clothes-NsgNOM CL dry-N.PAST
 The clothes were drying.

The perfective versions of these verbs behave like canonical accomplishment verbs. Crucially, they do pass the *in an hour* test and are [+telic].

(2.11)

- a. Vod-a se zaledi-l-a za sat vremena. (Perfective)
 water-FsgNOM CL freeze-PAST-F in hour time
 The water froze in an hour.
- b. *Vod-a se zalepiva-l-a za sat vremena. (Imperfective)
 water-FsgNOM CL freeze-PAST-F in hour time
 The water was freezing in an hour.

The imperfective or activity-like forms, on the other hand, do not pass the *in an hour* test and are [-telic]. The most common way to use these forms then would be to use the imperfective in the present tense because the action is still ongoing and the perfective in the past tense to show that the action was completed. This aspectual distinction can be achieved in English too between *the snow melted* and *the snow was melting*. In Croatian, however, the perfective/imperfective difference is much stronger and more productive as can be seen in:

- (2.12) a. Snijeg- se o-topi-o za sat vremena. (Perfective)
 snow-NsgNOM CL PERF-melt-N.PAST in hour time
 The snow melted in an hour.
- b. *Snijeg- se o-topi-o sat vremena. (Perfective)
 snow-NsgNOM CL PERF-melt-N.PAST hour's time
 The snow melted for an hour.

The English version of (b) works because all it really shows us is that melt is not punctual. Therefore, it is considered a redundant point. Yet, in Croatian it does not work because a

perfective form must have an explicit temporal boundary and this fact cannot be overridden by context.

- (2.13) a. Snijeg- se topi-o sat vremena. (Imperfective)
snow-NsgNOM CL melt-N.PAST hour's time
The snow was melting for an hour.
- b. Snijeg- se topi-o za sat vremena. (Imperfective)
snow-NsgNOM CL melt-N.PAST in hour time
The snow was melting in an hour =
The snow was melting for an hour.

Interestingly, the (b) sentence does work with the imperfective form, but both of these sentences have the exact same meaning. In essence, the imperfective form of the verb cancels the temporal boundary implication of the *in phrase*.

The perfective/imperfective distinction also affects the interaction between activity and achievement verbs:

- (2.14)
- a. ACHIEVEMENT: Lopt-a je poskoči-l-a. (Perfective)
ball-FsgNOM be.3sg bounce-PAST-F
The ball bounced. (one time)
- a'. ACTIVITY: Lopt-a je poskakiva-l-a (Imperfective)
ball-FsgNOM be.3sg bounce-PAST-F
The ball bounced. (repeatedly)
- b. CAUSATIVE
ACHIEVEMENT: Djevojk-a je slomi-l-a čaš-u. (Perfective)
girl-FsgNOM be.3sg shatter-PAST-F glass-FsgACC
The girl shattered the glass.
- b'. CAUSATIVE
ACTIVITY: Djevojk-a je lomi-l-a čaš-u. (Imperf)
girl-FsgNOM be.3sg shatter-PAST-F glass-FsgACC
The girl was shattering glass. (repeatedly)

We can see that sometimes the imperfective form alters the meaning of the verb giving it an iterative interpretation. In many cases, however, it is extremely difficult to find a context where the imperfective achievement verb is not semantically anomalous:

- (2.15) ? Balon je puca-o...
The balloon was popping...

This is another way to distinguish achievement verbs from accomplishment verbs. In fact, the imperfective is said to be akin to the progressive. Verbs that do not take the progressive

- b. The man ate a pizza. (ACTIVE ACCOMPLISHMENT)

In English, the active accomplishment form involves the use of the indefinite article a thereby giving a specified quantity. In (b), he must have eaten the entire pizza. In Croatian, as there are no articles, this distinction must be coded with the imperfective/perfective forms of the verb:

- (2.19) a. Čovjek- je je-o juh-u. (Imperfective)
 man-MSGNOM be.3sg eat-M.PAST soup-FsgACC
 The man ate soup.
- b. Čovjek- je po-je-o juh-u. (Perfective)
 man-MSGNOM be.3sg PERF-eat-M.PAST soup-FsgACC
 The man ate up the soup.

There are other means of alternating verb classes, between causatives and non-causatives for example, which will be shown in the following section.

The formal representation of the Aktionsart verb classes in RRG is based on a system of lexical decomposition. The term for the decomposed form of a verb is its **Logical Structure**. This term is borrowed from Dowty (1979) though the RRG logical structure is generally somewhat different. States and activities are taken to be the most basic predicates with the other classes and the causative forms building upon their structure. For a thorough explanation of this system, the reader is again referred to Van Valin & LaPolla (1997):

| Verb Class | Logical Structure |
|-----------------------|--|
| 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)]) |
| ACCOMPLISHMENT | BECOME predicate' (x) or (x,y) or BECOME do' (x, [predicate' (x) or (x,y)]) |
| ACTIVE ACCOMPLISHMENT | do' (x, [predicate1' (x)]) & BECOME predicate2' ((y), x) |
| CAUSATIVE | A CAUSE B, where A, B are LSs of any type |

(2.20) Lexical Representations for Aktionsart Classes

The following list shows the LS for a selection of Croatian verbs:

(2.21)

STATE: Žena se prestrašila.
The woman is frightened.
frightened' (žen-)

CAUSATIVE

STATE: Žena je prestrašila muža.
The woman frightened her husband.
[**do'**(žen-,)] CAUSE [**frightened'** (muž-)]

ACTIVITY: Čovjek je jeo juhu.
The man ate soup.
do'(čovjek-, [**eat'**(čovjek-, juh-)])

CAUSATIVE

ACTIVITY: Djevojka je okretala ploču
The girl spun the record.
[**do'**(djevojk-,)] CAUSE **do'**(ploč-, [**spin'**(ploč-)])

ACHIEVEMENT:

Balon je puknuo.
The balloon popped.
INGR **pop'**(balon-)

CAUSATIVE ACHIEVEMENT:

Ivan je digao kuću u zrak.
"John blew the house into the air"
John blew up the house.
[**do'**(Ivan-,)] CAUSE [INGR **explode'** (kuč-)]

ACCOMPLISHMENT:

Snijeg se otopio.
The snow melted.
BECOME **melted'**(snijeg-)

CAUSATIVE ACCOMPLISHMENT:

Sunce je otopila snijeg.
The sun melted the snow.
[**do'**(sunc-,)] CAUSE [BECOME **melted'** (snijeg-)]

ACTIVE ACCOMPLISHMENT:

Čovjek je pojeo juhu.
The man ate up the soup.
[**do'**(čovjek-, [**eat'**(čovjek-, juh-)]) & [BECOME **eaten'** (juh-)]

The next step in lexical decomposition is the assignment of semantic macroroles. There are two possible macroroles that a verb can take: ACTOR or UNDERGOER which are the two primary arguments of a transitive predication. Though they often appear quite similar to the traditional syntactic terms subject and object, they are not equivalent. This is because in English, for example, an undergoer can serve as the subject of an intransitive sentence. Actor is most prototypically the first argument of an activity structure and undergoer is most prototypically the single argument of a stative predicate. The markedness for an argument to be realized as a particular macrorole is shown in the chart below from Van Valin & LaPolla(1997):

ACTOR

UNDERGOER

| | | | | |
|------------|------------------|-------------------|-------------------|-----------------|
| Arg of | 1st arg of | 1st arg of | 2nd arg of | Arg of state |
| DO' | do'(x,... | pred'(x,y) | pred'(x,y) | pred'(x) |

(2.22) The Actor-Undergoer Hierarchy

The macroroles can then be assigned following the Default Macrorole Assignment Principles (Van Valin & LaPolla (1997)):

- 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.

(2.23) Default Macrorole Assignment Principles

There is an important distinction to be made between syntactic and semantic transitivity. Whereas syntactic transitivity refers to the number of overt syntactic arguments or direct core arguments that a verb takes, semantic transitivity refers to its number of macroroles. Because there are only two possible MRs, a verb may be semantically atransitive (0 MR), intransitive (1 MR) or transitive (2 MR). So, a verb like rain in English is syntactically intransitive having only one core argument it, but semantically atransitive as

there is no actor or undergoer. Cases of exceptional macrorole transitivity would need to be listed in the lexicon with a verb's logical structure.

2.1 Grammatical Relations & Case:

Rather than using the traditional grammatical terms *subject* and *object*, RRG relies on the concept of a **Privileged Syntactic Argument** (Van Valin & LaPolla 1997). This is because the traditional terminology can be misleading. As we saw in the previous section where instances of quirky case-marking were presented, forms that might be called “subject” and “object” do not behave like their canonical definitions. The “subjects”, for example, do not trigger verb agreement, adjective agreement, and so on. Therefore, grouping them together with regularly case-marked NPs on semantic grounds (i.e. subjects act and objects are acted upon) fails to explain their odd behavior. A privileged syntactic argument or PSA, on the other hand, “requires a restricted neutralization of semantic roles for syntactic purposes.” (Van Valin 1991) It is construction dependent and therefore, completely syntactically determined. The PSA can act as a controller by triggering verb and adjective agreement. It can also act as the controller of reflexives, pronouns, null anaphors, and floating quantifiers. In a complex construction containing conjunction reduction, the PSA serves both as syntactic pivot⁴ and as the controller of the obligatory gap. In addition, the PSA is usually the only argument that can undergo raising. A discussion of some of these phenomena will follow in this section.

We find that the nominative NP acts as the PSA for many constructions in Croatian. As stated earlier, it is the controller for verb agreement in person, number, and gender (in the past tense):

(2.24) a) Ja sam ispod drvet-a.
 1sgNOM be.1sg under tree-NsgGEN
 I am under the tree.

b) Žen-a je ispod drvet-a
 woman-FsgNOM be.3sg under tree-NsgGEN
 The woman is under the tree.

c) Žen-e su ispod drvet-a.
 woman-FplNOM be.3pl under tree-NsgGEN
 The women are under the tree.

⁴ RRG also makes use of semantic and pragmatic pivots which are not crucial for the present discussion. See Van Valin & LaPolla (1997 - Chapter 6) for a detailed presentation of these elements.

- d) On-a je bi-l-a ispod drvet-a.
 she-FsgNOM be.3sg be-PAST-F under tree-NsgGEN
 She was under the tree.
- e) On- je bi-o ispod drvet-a.
 he-MsgNOM be.3sg be-M.PAST under tree-NsgGEN
 He was under the tree.

It also triggers adjective agreement in number and gender:

- (2.25) a) On-a je star-a
 she-FsgNOM be.3sg old-Fsg
 She is old.
- b) On- je star- .
 he-MsgNOM be.3sg old-Msg
 He is old.
- c) On-e su star-e.
 they-FplNOM be.3pl old-Fpl
 They (F) are old.
- d) On-i su star-i.
 they-MplNOM be.3pl old-Mpl
 They (M) are old.

The nominative acts as PSA in many other constructions as well. There are three that will be of particular significance to this paper: equi/control, conjunction reduction, and reflexive control.

Examples of equi/control are seen in the following sentences:

- (2.26) a. Jasmin-a⁽ⁱ⁾ žel-i ⁽ⁱ⁾ trča-ti u park-u.
 Jasmin-3sgNOM want-3sg run-INF in park-MsgDAT
 Jasmina⁽ⁱ⁾ wants ⁽ⁱ⁾ to run in the park.
- b. Jasmin-a⁽ⁱ⁾ žel-i ⁽ⁱ⁾ bi-ti viš-a.
 Jasmin-3sgNOM want-3sg be-INF taller-Fsg
 Jasmina⁽ⁱ⁾ wants ⁽ⁱ⁾ to be taller.
- c. Jasmin-a⁽ⁱ⁾ žel-i ⁽ⁱ⁾ pojesti juh-u.
 Jasmin-3sgNOM want-3sg eat-INF soup-FsgACC
 Jasmina⁽ⁱ⁾ wants ⁽ⁱ⁾ to eat soup.
- d. *Jasmin-a⁽ⁱ⁾ ne žel-i da policij-a uhi-ti ⁽ⁱ⁾
 Jasmina-3sgNOM NEG want-3sg CMPL police-FsgNOM arrest-INF
 Jasmina⁽ⁱ⁾ doesn't want the police to arrest ⁽ⁱ⁾

Each of these sentences contains a syntactic gap - syntactically speaking there is a missing NP in each of the dependent cores. So one could paraphrase sentence (a), for example, as

‘Jasmina wants’ + ‘Jasmina run in the park’. In equi/control constructions, semantic criteria are used to interpret the missing NP. We can see that this is true because it is the meaning of the matrix verb that determines which argument will control the gap in a syntactically transitive sentence⁵. A verb like promise, for example, would exhibit "subject" control whereas a verb like persuade would exhibit "object" control: 'John promised Mary (John) to go' but 'John persuaded Mary (Mary) to go':

- e. \check{Z} en-e_(I) su obeća-l-a djevojc-i_(J) ______(I) trčat-i u park-u.
 woman-FplNOM be.3pl promise-PAST-F girl-FsgDAT run-INF in park-MsgDAT
 The women_(I) promised the girl_(J) _(I) to run in the park.
- f. \check{Z} en-a_(I) je nagovori-l-a djevojc-i_(J) _(J) vozi-ti dom-a.
 woman-FsgNOM be.3sg persuade-PAST-F girl-FsgDAT drive-INF home-MsgGEN
 The woman_(I) persuaded the girl_(J) _(J) to drive home.
- g. \check{Z} en-a_(I) je dozvoli-l-a djevojc-i_(J) _(J) vozi-ti⁶.
 woman-FsgNOM be.3sg allow-PAST-F girl-FsgDAT drive-INF
 The woman_(I) allowed the girl_(J) _(J) to drive.

⁵ See Foley & Van Valin [1984] and Pollard & Sag [1991] for a discussion of these phenomena.

⁶ Both of the following sentences are grammatical though, interestingly in light of the data given on pages 3 & 4, both of my speakers preferred the first. This might depend on the transitivity of the matrix clause:

- (a) \check{Z} ena je dozvolila djevojci da voz-i.
 The woman allowed the girl CMPL drive-3sg
- (a) \check{Z} ena je dozvolila djevojci vozi-ti.
 The woman allowed the girl drive-INF

With the verb persuade, on the other hand, a slight difference was found between these two constructions:

- (b) \check{Z} ena je nagovorila djevojci da voz-i/ da voz-i dom-a.
 The woman persuaded the girl CMPL drive-3sg REL drive-3sg home-MsgGEN
- (b) \check{Z} ena je nagovorila djevojci *vozi-ti/ vozi-ti dom-a.
 The woman persuaded the girl drive-INF drive-INF home-MsgGEN

If the infinitive is used, the sentence must specify where the girl will drive in order to sound natural.

- h. \check{Z} en-a_(I) je prisili-l-a djevojk-u_(J) (J) vozi-ti aut-o.
 woman-FsgNOM be.3sg force-PAST-F girl-FsgACC drive-INF car-NsgACC
 The woman_(I) forced the girl_(J) (J) to drive.

These examples show that the missing NP must be the PSA of the verb in the linked core. The semantic macrorole varies, in (a) the missing NP is an actor and in (b) it is an undergoer, yet this does not affect the structure of the sentence. Therefore, we can conclude that it is not macrorole status that determines the interpretation of the missing argument. Rather, we find that only the "subject" of the dependent core can be omitted regardless of whether it is an actor (as in (a) and (c)) or an undergoer (as in (b)). In all of these sentences ((a) - (c)), the NP Jasmina is considered to be the "subject" (or PSA) of both verbs. Therefore, example (d) in which the missing NP is undergoer but not PSA is ungrammatical. Equi/control examples prove that PSA status is not equivalent to MR status, as the semantic MRs are neutralized in these constructions. These grammatical phenomena cannot be explained in terms of semantic roles alone.

The defining feature of a conjunction reduction construction consists of a zero in the second clause which is controlled by an argument in the first clause. This gives rise to two syntactic questions. First, we need to determine where the zero can occur in the second clause. In other words, which argument can be omitted. Secondly, we need to know which argument in the first clause controls the zero. The missing argument in the second clause is represented by pro, a phonologically null pronoun. Examples of conjunction reduction include:

- (2.27)a) \check{C} ovjek-_(i) je iša-o nizbrdo i *pro*_(i) vidi-o je psa.
 man-MsgNOM_(i) be.3sg go-M.PAST downhill and *pro*_(i) see-M.PAST be.3sg dog.MsgGEN
 The man_(i) went downhill and *pro*_(i) saw the dog.

- b) * Pas_(i) je iša-o nizbrdo i \check{c} ovjek- je vidio *pro*_(i)
 dog.MsgNOM_(i) be.3sg go-M.PAST downhill and man-MsgNOM_(i) be.3sg see-M.PAST *pro*_(i)
 The dog_(i) went downhill and the man saw *pro*_(i).

We see that in both English and Croatian, when there are coreferential arguments in two linked clauses in active voice, the one in the second clause can be represented by a zero pronoun only if it is the PSA of each clause. Consider the following examples:

- (2.28) a) \check{C} ovjek-_(i) je iša-o nizbrdo i *pro*_(i) vidi-o je psa.
 man-MsgNOM_(i) be.3sg go-M.PAST downhill and *pro*_(i) see-M.PAST be.3sg dog.MsgGEN
 The man_(i) (**actor**) went downhill and *pro*_(i) (**actor**) saw the dog.

b) Čovjek- (I) je opa-o i *pro*(I) zva-o je pomoč.
 man-MsgNOM(I) be.3sg fall-M.PAST and *pro*(i) call-M.PAST be.3sg help
 The man(I) (**undergoer**) fell down and *pro*(I) (**actor**) called for help.

c) Čovjek- (I) je iša-o nizbrdo i *pro*(I) pa-o je.
 man-MsgNOM(I) be.3sg go-M.PAST downhill and *pro*(i) fell-M.PAST be.3sg
 The man(I) (**actor**) went downhill and *pro*(I) (**undergoer**) fell.

d) Čovjek- (I) je pa-o i *pro*(I) umri-o je.
 man-MsgNOM(I) be.3sg fall-M.PAST and *pro*(i) die-M.PAST be.3sg
 The man(I) (**undergoer**) fell down and *pro*(I) (**undergoer**) died.

This set of four sentences exemplify all the possible MR and PSA combinations. Once again (as in equi/control) it is important to note that it is not the semantic MR (actor/undergoer) that acts as pivot. Instead it is the status of the NP as PSA in the second clause which is crucial. The PSA in the first clause (always appearing in the nominative case) is acting as the controller of the gap in the second clause, and in the second clause the PSA is realized as a pivot. We find, therefore, that a sentence like (2.3)(b) can be made grammatical in English by putting the second clause into passive voice. This makes the undergoer of the second clause PSA rather than the actor which is moved into the periphery. This does not work for Croatian, however, as there is no passive construction:

(2.29) The dog_(i) went downhill and *pro*_(i) was seen by the man.
 * Pas_(i) je išao nizbrdo i *pro*_(i) bio vipem od čovjeka.

At this point, we have answered question one. The argument which can occur as a zero in the second clause is the PSA of the second clause. Its MR status is irrelevant. Now we can move on to question two: which argument in the first clause controls the zero in the second? Remember that in all the examples given above, the choice for controller was not at issue because the first clause in all these sentences is intransitive. We will look at transitive first clauses in the following section.

A question could be raised as to the nature of the gap present in the conjunction reduction examples which we have looked at so far. As a pro-drop language, Croatian will allow dependent cores to stand on their own as complete utterances:

(2.30) a) On- (I) se smij-e i *pro*(I) jed-e juh-u.
 he-MsgNOM(I) CL laugh-3sg and *pro*(I) eat-3sg soup-FSGACC
 He(I) laughs and *pro*(I) eats soup.

- b) Jed-e juh-u.
eat-3sg soup-FSGACC
He eats soup.

This issue is addressed in Comrie (1988). In working with the intuitions of native speakers, he did find strong constraints on coreference in the conjunction reduction context. As an example, consider the two following English examples:

- (2.31) a) Peter hit Paul and ran away.
b) Peter hit Paul and he ran away.

In (a) it is unquestionable that it was Peter who ran away. In (b), on the other hand, the referent of he is ambiguous. So which case is more like Croatian?:

- (2.32) a) Petar- je udari-o Pavl-a i otrča-o je.
Peter-3sgNOM be.3sg hit-M.PAST Paul-MsgACC and flee-M.PAST be.3sg
Peter hit Paul and ran away.

In fact, Comrie found that it must be Peter who ran. In order to interpret the sentence with Paul running away, the NP of the second clause must appear overtly:

- b) Petar- je udari-o Pavl-a i on- je otrča-o
Peter-3sgNOM be.3sg hit-M.PAST Paul-MsgACC and he-MsgNOM be.3sg flee-M.PAST
Peter hit Paul and he ran away.

So, it appears quite clear that the PSA of the first clause must control the gap and that it is the only choice for syntactic controller. There is the further possibility that this is only the semantic understanding that a native speaker of Croatian reaches upon hearing these sentences. Comrie proves that this is not the case when he tests for gender and number agreement:

- (2.33) a) * Petar- je poljubi-o Marij-u i otrča-l-a je.
Peter-3sgNOM be.3sg kiss-M.PAST Mary-FsgACC and flee-PAST-F be.3sg
Peter kissed Mary and she ran away.

- b) Petar- je poljubi-o Marij-u i ona je otrča-l-a.
Peter-3sgNOM be.3sg kiss-M.PAST Mary-FsgACC and she-FsgNOM be.3sg flee-PAST-F
Peter kissed Mary and she ran away.

Because the verb flee in the second clause of sentence (a) is feminine, it would seem that a person should have no problem identifying Mary as the person who ran away. This is, however, an ungrammatical sentence even though each clause could stand on its own:

- (2.34) a) Petar- je poljubi-o Marij-u.
Peter-3sgNOM be.3sg kiss-M.PAST Mary-FsgACC
Peter kissed Mary.

- b) Otrča-l-a je.
flee-PAST-F be.3sg
She ran away.

Therefore, the referent in (2.7) must appear overtly in the second clause. The same is true for number agreement:

(2.35) a) * Petar- je poljubi-o Marij-u i otrča-l-i su.
 Peter-3sgNOM be.3sg kiss-M.PAST Mary-FsgACC and flee-PAST-PL be.3pl
 Peter kissed Mary and they ran away.

b) Petar- je poljubi-o Marij-u i on-i su otrča-l-i.
 Peter-3sgNOM be.3sg kiss-M.PAST Mary-FsgACC and they-MplNOM be.3pl flee-PAST-PL
 Peter kissed Mary and they ran away.

As Comrie states, "This restriction even carries across where real-world probabilities effectively exclude conflicting interpretations". To summarize then, the pivot in the second clause is PSA (S, A) and the controller in the first clause is PSA (S, A).

Another example using conjunction would be the use of adjectives, as in:

(2.36) Mačk-a je malen-a i žalosn-a.
 cat-FsgNOM be.3sg small-Fsg and sad-Fsg
 The cat is small and sad.

This sentence would be understood as 'The cat is small' + 'The cat is sad'. Neither the nominative NP nor the copula needs to be repeated after the conjunction. As simple as this may seem, we will find (section 3) that this is not true for the quirky case verbs.

The last important test for grammatical relations that needs to be addressed is reflexive control. Possession in Croatian can be expressed with either a possessive pronoun or the reflexive svoj. In the third person, these two forms are used to disambiguate between his, her, their (own) and his, her, their (someone else's):

(2.37) a) On_(I) daj-e jel-o svojoj_(I) žen-i.
 he give-3sg dish-NsgACC his wife-FsgDAT
 He gives the dish to his (own) wife.

a') On_(I) daj-e jel-o njegovoj_(I) žen-i.
 he give-3sg dish-NsgACC his wife-FsgDAT
 He gives the dish to his (someone else's) wife.

b) On-i_(I) gleda-ju svoju_(I) kuć-u.
 they look.at-3pl their house-FsgACC
 They look at their (own) house.

b') On-i_(I) gleda-ju njihovu_(I) kuć-u.
 they look.at-3pl their house-FsgACC
 They look at their (someone else's) house.

In these sentences, the reflexive must refer back to the PSA - the nominative NP. This can be proven by the following pair of sentences which are ambiguous only in English:

c) On_(I) daj-e njemu_(J) svoju_(I) knjig-u.
he give-3sg him his book-FsgACC
He gives him his book.

c') On_(I) daj-e njemu_(J) njegovu_(J) knjig-u.
he give-3sg him his book-FsgACC
He gives him his book.

Therefore, the nominative case is also a reflexive controller in Croatian.

The linking of arguments in a logical structure to the morphosyntactic positions of the clause is a two step process in an RRG analysis. First the arguments are assigned macrorole status following the Actor-Undergoer Hierarchy given in part one of this section. The highest ranking MR may then be assigned PSA status⁷. This is always the case in Croatian as there are no voice alternations. The rules for canonical case-marking and finite verb agreement in Croatian can now be given as follows:

(2.38) Case assignment rules for Croatian:

- 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)

(2.39) Finite verb agreement rule for Croatian:

The finite verb agrees with the highest ranking macrorole argument.

A clear example of these rules is shown in the following sentence:

(2.40) Žen-a daj-e salat-u djevojk-i.
woman-FsgNOM give-3sg salad-FsgACC girl-FsgDAT
The woman gives the salad to the girl.

The LS of the verb **give'** is:

[**do'** (žen-,)] CAUSE [BECOME **have'** (djevojk-, salat-)]

Therefore, given the Actor-Undergoer Hierarchy, we can determine that žena is the actor since it is the first argument of an activity predicate. Salata is the choice for undergoer as it is the second argument of a state predicate. Djevojka is not assigned a macrorole. Following

⁷ As Croatian is an accusative type language, the actor is highest ranking: Actor > Undergoer

rule (a) of (2.6), the highest ranking macrorole, the actor, is assigned nominative case. This will be the PSA of the sentence. The other macrorole argument receives accusative case. The non-macrorole argument then receives the default dative case. We find that the agreement rule works properly also - daje is in third singular tense agreeing with žena.

In the next section, we will look at how these rules apply in instances of quirky case-marking and present a unified analysis of their occurrence.

PART 3 : RRG Analysis of Croatian Quirky Case-Marking:

We will now look at examples of quirky case verbs and how these arguments behave syntactically. First, the problem of quirky "subjects" will be addressed. This section will use the constructions from Part 2 in order to show the variance from canonical structure. The second section will look at quirky "objects" - a form which appears quite frequently in Croatian. The verbs that take these types of objects will be examined in terms of reflexivization and other grammatical phenomena.

3.0 Quirky "Subjects":

As was shown in Part 1 (p.15), the quirky predicates which take a non-nominative "subject" do not exhibit either verb agreement or adjective agreement. These predicates always have the structure be + ADJ:

- (3.0) a. Moju je mam-u sram- /*sram-a.
my-FsgACC be.3sg mother-FsgACC ashamed-Nsg/*ashamed-Fsg
My mother is ashamed.
- a'. Žen-e je/*su sram- /*sram-e.
woman-FplACC be.3sg/*be.3pl ashamed-Nsg/*ashamed-Fpl
The women are ashamed.
- a". Men-e je/*sam sram- .
1sg-ACC be.3sg/*be.1sg ashamed-Nsg
I am ashamed.
- b. Djevojc-i je slab-o/*slab-a od kav-e.
girl-FsgDAT be.3sg nauseous-Nsg/*nauseous-Fsg from coffee-FsgGEN
The girl is becoming nauseous from coffee.
- b'. Djevojc-ama je/*su slab-o/*slab-e od kav-e.
girl-FplDAT be.3sg/*be.3pl nauseous-Nsg/*nauseous-Fpl from coffee-FsgGEN
The girls are becoming nauseous from coffee.
- b". Men-i je/*sam slab-o.
1sg-DAT be.3sg/*be.1sg nauseous-Nsg
I am nauseous.
- c. Žen-i je neugodn-o/*neugodn-a.
woman-FsgDAT be.3sg uncomfortable-Nsg/*uncomfortable-Fsg
The woman is uncomfortable.
- c'. Žen-ama je/*su neugodn-o/*neugodn-e.
woman-FplDAT be.3sg/*be.3pl uncomfortable-Nsg/*uncomfortable-Fpl
The women are uncomfortable.

c'. Men-i je/*sam neugodn-o.
 1sg-DAT be.3sg/*be.1sg uncomfortable-Nsg
 I am uncomfortable.

These sentences show that predicates like sram (**feel'**(X, [**shame'**])), slabo (**feel'**(X, [**nauseous'**])) and neugodno (**feel'**(X, [**uncomfortable'**])) (among others) have no privileged syntactic argument present to control for agreement.

The equi/control structures differ also. In the following examples, the main verb želi *want* takes a regular nominative argument with the quirky predicates appearing in the dependent core. In sentence (a) below, we have a regularly case-marked adjective vesel- (**feel'**(X, [**happy'**])), in order to demonstrate again how these constructions work normally, followed by the quirky examples:

(3.1) a) Djevojk-a_(I) žel-i _(I) bi-ti vesel-a.
 girl-FsgNOM want-3sg be-INF happy-Fsg
 The girl_(I) wants _(I) to be happy.

b) *Mačk-a_(I) ne žel-i _(I) bi-ti zim-a.
 cat-FsgNOM NEG want-3sg be-INF cold-Nsg
 The cat_(I) does not want _(I) to be cold.

b') Mačk-a_(I) ne žel-i da joj_(I) bud-e zim-a.
 cat-FsgNOM NEG want-3sg CMPL PRO.FsgDAT be-3sgPERF cold-Nsg
 The cat does not want to be cold.
 ['The cat_(I) does not want that she_(I) become cold.']

c) *Moj-a mam-a_(I) ne žel-i ______(I) bi-ti srama.
 my-Fsg mother-FsgNOM NEG want-3sg be-INF ashamed-Fsg
 My mother_(I) does not want _(I) to be ashamed

c') Moj-a mam-a_(I) ne žel-i da ju_(I) je sram.
 my-Fsg mother-FsgNOM NEG want-3sg CMPL PRO.FsgACC be.3sg ashamed-Nsg
 My mother does not want to be ashamed.
 ['My mother_(I) does not want that she_(I) be ashamed.']

d) *Djevojk-a_(I) ne žel-i ______(I) bi-ti slab-a⁸.
 girl-FsgNOM NEG want-3sg be-INF nauseous-Fsg
 The girl_(I) does not want _(I) to be nauseous.

d') Djevojk-a_(I) ne žel-i da joj_(I) bud-e slab-o.
 girl-FsgNOM NEG want-3sg CMPL PRO.FsgDAT be-3sgPERF nauseous-Nsg
 The girl does not want to be nauseous.
 ['The girl_(I) does not want that she_(I) become nauseous.']

⁸ Actually, this is a grammatical sentence, but the meaning of the verb changes from nauseous to weak.

What we notice about the grammatical, primed examples is that the sentence is constructed quite differently. There is a complement da + tensed clause rather than an infinitive. Importantly, there is no syntactic gap. The argument which denotes the same referent as the PSA of the matrix verb cannot appear as a zero in the dependent clause. Rather, it must appear as an overt pronoun in the dative case. The pronoun is not the PSA of the verb in the dependent clause. This fact is in accordance with the finding in Part 2 (p.34) that only the "subject" (or PSA) of the dependent core can be omitted. In these examples, there appears to be no "subject" (or PSA) in the dependent core.

Examples of conjunction reduction also act differently than expected when a quirky predicate is present. When two clauses are joined in a Croatian sentence with canonical verbs, only the new information needs to be stated overtly:

- (3.2) a. Čovjek- (I) je pa-o i *pro*(I) umri-o (je).
 man-MSGNOM(I) be.3sg fall-M.PAST and *pro*(I) die-M.PAST (be.3sg)
 The man(I) fell down and *pro*(I) died.

As was stated in Part 2, čovjek controls the gap in the second clause and as syntactic pivot, it need not be restated overtly. Interestingly, the form of be is also optional in the second clause. With a quirky predicate, however, there is no choice. In the (b) examples below, the quirky predicate sram appears after the conjunction, and in (c) the quirky predicate slabo appears before the conjunction:

- b. Čovjek- (I) je opa-o i bi-o ga(I) je sram- .
 man-MSGNOM be.3sg fall-M.PAST and be-N.PAST MSGACC be.3sg ashamed-Nsg
 The man fell down and he was ashamed.

- b'. *Čovjek- (I) je opa-o i *pro*(I) bi-o sram- .
 man-MSGNOM(I) be.3sg fall-M.PAST and *pro*(I) be-N.PAST ashamed-MSG
 The man(I) fell down and *pro*(I) was ashamed.

- c. Žen-i(I) je bi-o slab-o i on-a(I) je opao-l-a.
 woman-FsgDAT be.3sg be-N.PAST nauseous-Nsg and PRO-FsgNOM be.3sg fall-PAST-F
 The woman was nauseous and she fell down.

- c'. *Žen-i(I) je bi-o slab-o i *pro*(I) opao-l-a.
 woman-FsgDAT(I) be.3sg be-N.PAST nauseous-Nsg and *pro*(I) fall-PAST-F
 The woman(I) was nauseous and *pro*(I) fell down.

Here are further examples showing the linking of two adjectives. The first example shows two canonical predicates *be small* and *be sad*. Notice that when the quirky zima *be cold* is used in (b)-(d), the form of *be* after the conjunction is no longer optional:

- (3.3) a) Mačk-a je malen-a i žalosn-a (je).
 cat-FsgNOM be.3sg small-Fsg and sad-Fsg (be.3sg)
 The cat is small and sad.
- b) Mačk-i je zim-a i žalosn-a je.
 cat-FsgDAT be.3sg cold-Nsg and sad-Fsg be.3sg
 The cat is cold and she is sad.
- c) Mačk-am je zim-a i žalson-e su.
 cat-FplDAT be.3sg cold-Nsg and sad-Fpl be.3pl
 The cats are cold and they are sad.
- d) *Mačk-i je zim-a i žalosn-a.
 cat-FsgDAT be.3sg cold-Nsg and sad-Fsg
 The cat is cold and sad.

Since we know already that dative subjects do not trigger verb or adjective agreement, the question is raised as to where the second clauses in (b) and (c) get their feminine and plural agreement. It seems that in these examples we have two completely independent clauses with pro-drop in clause two. The fact that the je is mandatory proves that they must both be able to stand alone. There is no pivot present with quirky verbs - just coreference. The NP cat(s) is a semantic controller (since we do understand that the second adjective applies to this NP and not some other referent) but evidently not a syntactic controller of clause two nor a pivot. Therefore, only clausal junctures are allowed with quirky verbs not core junctures.

The same is true when the quirky verb is in the second clause:

- (3.4) Žen-a je žalosn-a i neugodn-o joj je.
 woman-FsgNOM be.3sg sad-Fsg and uncomfortable-Nsg PRO.FsgDAT be.3sg
 The woman is sad and she is uncomfortable.

As in the equi/control examples (see the primed examples in 3.1), the argument co-referential with the PSA of the first clause must appear overtly in the second clause when the quirky predicate comes second. There is no syntactic pivot present, and once again both clauses are syntactically independent of one another. It is evident that the NP žena in the first clause has a different syntactic function from the dative pronoun joj in the second clause. Though both have subject-like semantics, only the first could be called a PSA or real syntactic subject.

Reflexive control is another interesting illustration of the role that a quirky case NP can play in a specific syntactic construction. Notice that the reflexive possessive svoj cannot be used in the following examples:

- (3.5) a) *Sandr-i se svidj-a svoj-a sestr-a.
 Sandra-DAT CL please-3sg her-Fsg sister-FsgNOM
 Sandra likes her own sister.
- b) Sandr-i se svidj-a njen-a sestr-a.
 Sandra-DAT CL please-3sg her-Fsg sister-FsgNOM
 Sandra likes her sister.
- c) *Sandr-i se svidj-a svoj-o aut-o.
 Sandra-DAT CL please-3sg her-Nsg car-NsgNOM
 Sandra likes her own car.
- d) Sandr-i se svidj-a njen-o aut-o.
 Sandra-DAT CL please-3sg her-Nsg car-NsgNOM
 Sandra likes her car.
- e) *Sandr-i je nužn-o svoj-o aut-o.
 Sandra-DAT be.3sg necessary-Nsg her-Nsg car-NsgNOM
 Sandra needs her own car.
- f) Sandr-i je nužn-o njen-o aut-o.
 Sandra-DAT be.3sg necessary-Nsg her-Nsg car-NsgNOM
 Sandra needs her car.

Verbs like svidjeti se to please and je nužda be necessary (which are often referred to as impersonal expressions in grammars) take both a nominative and a dative argument. We see that the dative arguments cannot control a reflexive possessor like a nominative can (see p. 39). This is an instance where Croatian does not behave like Russian which does allow this form of dative control. This fact is illustrated in an example taken from Schoorlemmer (1994):

- (3.6) Emu bylo stydno pered mater'ju za svoje povedenie.
 him(I-DAT) was(N) ashamed(N) in-front-of mother(J) of own(I/*J) behavior
 He was ashamed of his behavior in front of his mother.

The question now arises of how to account for the appearance of quirky case-marking and the syntactic phenomena that accompany it. If we look back to the rules for case assignment given in Section 2 (2.38), there seems to be two possible methods for generalizing about these data. One would be to say that a predicate like zima (feel'(X, [cold'])), with one direct core argument, is macrorole intransitive. Because this is a state, that one MR would be undergoer as predicted. We would then need to stipulate that the

undergoer of **feel'**(X, [**cold'**]) is quirky because it occurs in the dative case. Further, we would need to say that dative undergoers cannot be privileged syntactic arguments in order to account for the fact that it cannot serve as a syntactic controller or pivot. Remember the principle for PSA selection in accusative type languages is to choose the highest ranking MR. We see that this formulation violates rule (c) of (2.38) which states that only non-macrorole arguments should appear in dative case. For a predicate like sram (**feel'**(X, [**shame'**])), we would need to specify that its undergoer has quirky accusative case and that accusative undergoers also cannot serve as PSA. This violates rule (b) of the case assignment rules which states that only the second highest ranking MR should receive accusative case. So, basically, if we maintain that these predicates are semantically intransitive, our case rules do not work at all. We are also led to wonder why a nominative undergoer with an intransitive verb can have PSA status whereas an accusative or dative undergoer cannot. This analysis seems quite arbitrary.

The other possibility would be to posit that the quirky case predicates are MR atransitive. Though these predicates each have one direct core argument, this argument is neither an actor nor an undergoer. So for zima (**feel'**(X, [**cold'**])), we simply need to state in the lexicon [MR]. Then when we apply the case rules, they work as they would for a canonical verb: *assign the default dative case to non-macrorole arguments*. This accounts for the appearance of the dative case with such predicates as well as for all the syntactic and morphological phenomena that accompany them. Because the dative arguments are non-macrorole arguments, they cannot function as the PSA for any construction. This explains all of the quirky behavior that we saw in the previous section. In essence, the inability of non-macrorole arguments to serve as PSA accounts for the fact that quirky case-marked NPs cannot act as controller for verb or adjective agreement, for reflexive pronouns, nor for a syntactic gap in two conjoined clauses. Further, we see why they cannot function as pivot in the dependent core of an equi/control structure nor as pivot in the second clause of a clausal juncture. A large number of what might have previously appeared to be arbitrary exceptions are now accounted for quite naturally. So, with one simple specification in the lexicon, these grammatical phenomena seem much less irregular. It is evident that this second analysis is to be preferred over the first one.

There does seem to be one problem, however. All of the quirky "subjects" given in this paper are dative except for sram (**feel'**(X, [**shame'**])) which appears in the accusative. There are two alternative ways of looking at this. One would be to say that there is some nominative actor which is suppressed. This hypothesis is not all that unreasonable since Croatian has similar structures:

- (3.7) a. Tet-u bol-i.
 aunt-FsgACC hurt-3sg
 The aunt is in pain.
 ['The aunt hurts']
- a'. Tet-e bol-i.
 aunt-FplACC hurt-3sg
 The aunts are in pain.
 ['The aunts hurt']
- a". Tet-u bol-e zub-i.
 aunt-FsgACC hurt-3pl tooth-MplNOM
 The aunt's teeth hurt.
 ['The teeth hurt the aunt']
- b. Tet-u srb-i.
 aunt-FsgACC itch-3sg
 The aunt is itchy.
 ['The aunt itches']
- b'. Tet-e srb-i.
 aunt-FplACC itch-3sg
 The aunts are itchy.
 ['The aunts itch']
- b". Tet-u srb-e ruk-e.
 aunt-FsgACC itch-3pl hand-FplNOM
 The aunt's hands itch.
 ['The hands itch the aunt']

If the cause for the pain or the itching is not expressed, the verb simply carries a general reading. It would be a causative state with the actor/causer suppressed: [**do'**(,)] CAUSE [**feel'** (tet-, [**itchy'**])].

It is impossible, however, to add a nominative actor/causer NP to a sentence with sram (**feel'**(X, [**shame'**])):

- (3.8) a. *Moj-u je mam-u sram- maćk-a.
 my-FsgACC be.3sg mother-FsgACC ashamed-Nsg cat-FsgNOM
 My mother is ashamed of the cat.
 ['The cat shames my mother']

Instead cat must occur as an oblique:

- b. Moj-u je mam-u sram- zbog maćk-e.
 my-FsgACC be.3sg mother-FsgACC ashamed-Nsg because cat-FsgGEN
 My mother is ashamed of the cat.
 ['My mother is ashamed because of the cat']

This leads us to believe that je sram is not structured like boli or srbi. It does not appear to be a causative state.

The other analysis would be to say that sram (**feel'**(X, [**shame'**])) is semantically atransitive [MR] like the other quirky case predicates. Since all the other quirky "subjects" are non-causative with a **feel'** logical structure, this fits the pattern. But, we would need to add that it is even quirrier yet as it takes accusative case rather than the default dative. One way to make sense of this would be to explore the possibility that it is a different type of quirky state predicate. It seems that this is the most satisfying explanation as we shall see below.

Wierzbicka (1986) addresses this problem of dative and accusative arguments in Polish. Interestingly, Polish also takes accusative arguments for the verbs to itch and to hurt:

- (3.9) a. Boli mnie brzuch.
hurts me:ACC stomach:NOM
My stomach hurts [me].
- b. Swedzi mnie noga.
itches me:ACC leg:NOM
My leg itches [me].

Since Wierzbicka is looking to explain case from a purely semantic viewpoint in her article, she states that the "meaning" of the accusative case in this context is: "a 'bad' state of the body or of a particular body part." In other words, accusative arguments express pain from an internal objective cause whereas dative arguments express purely subjective feelings.

Polish has an interesting pair with:

- (3.10) a. Mdli mnie.
it-nauseates me:ACC
I feel nauseous.
['It nauseates me.']
- b. Niedobrze mi.
unwell:ADV me:DAT
I feel nauseous.

Wierzbicka states that sentence (a) would be used when a person attributes nausea to "a specific internal cause such as some exceedingly sweet food, eaten in excess, or prolonged hunger." Sentence (b), on the other hand, would have no concrete internal cause. Rather, it could be the result of 'viewing something unsightly', for example. This is still a tricky problem, however, because though a sentence like (a) presupposes a causer of the nausea, the causer cannot appear as a nominative, actor, direct core argument. Rather, it must appear in a by clause. Therefore, this verb must be considered quirky also. It is unlike to itch or to hurt which have the option of giving an overt causer as a nominative actor. We do find in the

Slavic languages a set of quirky accusative "subjects" as well as quirky dative "subjects" to describe states:

(3.11) a. Mene nudit'. (Ukrainian)

me:ACC it-nauseates
I feel nauseous.
['It nauseates me.']

a'. Meni nedobre.
me:DAT unwell
I feel nauseous.

b. Menja tošnit. (Russian)

me:ACC it-nauseates
I feel nauseous.
['It nauseates me.']

b. Mne nexorošo.
me:DAT unwell
I feel nauseous.

Though these forms are glossed the same, they could reflect the subtle difference between being nauseous (**nauseous'** (X)) with the accusative and feeling nauseous (**feel'**(X,[**nauseous'**])) with the dative.

This contrast could explain the syntactic behavior of je sram in Croatian, as well. If it patterns like be nauseous (i.e. (**shamed'**(X))) rather than feel nauseous (**feel'**(X,[**shame'**])), we would expect the accusative with both the activity verb to shame [X (NOM) shamed aunt (ACC)] as in (a) below and with the state be shamed [be shamed aunt (ACC)] as in (b) below:

(3.12) a. Tet-e sramot-i maćk-a. (ACTIVITY)

aunt-FplACC shame-3sg cat-FsgNOM
The cat shames the aunts.

a'. Tet-u sramot-e maćk-e.
aunt-FsgACC shame-3pl cat-FplNOM
The cats shame the aunt.

b. Tet-u je sram- . (STATE)

aunt-FsgACC be.3sg ashamed-Nsg
The aunt is ashamed.

b. *Tet-i je sram- .
aunt-FsgDAT be.3sg ashamed-Nsg
The aunt is ashamed.

This seems like an adequate explanation for the appearance of accusative case rather than dative for je sram. In essence, it may not be a **feel'** predicate of internal experience like

the other quirky states we have looked at so far. Instead it may belong to another paradigm of quirky states describing "condition". It may be that this paradigm takes accusative case in the Slavic languages.

It is interesting to note that the canonical predicate for (**feel'**(X,[**shame'**])) in all of these Slavic languages is based on forms of the adjective "stid" and do take a dative argument⁹.

(3.13) a. *Žen-i je bi-l-o postipeno.* (Croatian)
 woman-FsgDAT be.3sg be-PAST-N ashamed.
 The woman was ashamed.

a'. *Žen-ama je bi-l-o postipeno.*
 woman-FplDAT be.3sg be-PAST-N ashamed.
 The women were ashamed

a. *YiR bulo vstidno.* (Ukrainian)
 she:DAT was ashamed.

b. *Koške bylo stydno.* (Russian)
 cat:DAT was ashamed.

c. *Adamowi bylo wstyd.* (Polish)
 Adam:DAT was ashamed.

Note the following possible contrast between the Croatian form of postipeno given above and stid:

(3.14) a. *Žen-ama je bi-l-o postipeno.*
 woman-FplDAT be.3sg be-PAST-N ashamed.
 The women feel ashamed.

b. *Žen-e je bi-l-o stid.*
 woman-FplACC be.3sg be-PAST-N ashamed
 The women are ashamed.
 ['It shames the women']

These state verbs would need a thorough lexical decomposition to truly ascertain their nature.

3.1 Quirky "Objects":

⁹ Sram and stid seem to be synonymous in Croatian. Forms of sram exist in Russian also, but they are considered archaic. They do not exist at all in Ukrainian.

In addition to non-nominative "subjects", Croatian has a fair number of verbs that take what appear to be non-accusative "direct objects":

- (3.15) a. *Žen-a pomaž-e maćk-i.*
 woman-FsgNOM help-3sg cat-FsgDAT
 The woman helps the cat.
- b. *Žen-a vjeruj-e djevojč-i.*
 woman-FsgNOM believe-3sg girl-FsgDAT
 The woman believes the girl.
- c. *Ja sjeć-am se stan-a u London-u.*
 1sgNOM remember-1sg CL flat-MsgGEN in London-DAT
 I remember the flat in London.
- d. *Plaš-im se mrak-a.*
 fear-1sgNOM CL dark-MsgGEN
 I am afraid of the dark.
- e. *On- je vlada-o zemlj-om.*
 he-MsgNOM be.3sg rule-M.PAST country-FsgINSTR
 He ruled the country.

In order to account for verbs like these, an analysis can be formulated that is similar to the one for quirky "subjects". Though these verbs have two direct core arguments, they would be semantically intransitive: [MR 1]. Once again, this exception would need to be marked in the lexicon. In order to see how this would work, we will look at these examples more closely.

A verb like help would have the following LS: **do'**(x, [**help'**(x, (y))]). Based on the actor-undergoer hierarchy, the X argument would be actor as it is the first argument of an activity predicate. Therefore, because it is the highest ranking macrorole argument, it receives nominative case. The Y argument for a regular activity predicate would be the undergoer and take accusative case. But, since the verb help is specified in the lexicon as MR intransitive [1 MR], this is not possible. Therefore, it has non-macrorole status and is assigned the default dative case.

The verb believe would have this LS: **believe'**(x, y). According to the actor-undergoer hierarchy, the Y argument would be an undergoer as it is the second argument of a state predicate, and the X argument would be an actor as it is the first argument of a state predicate. Therefore, in sentence (b), the NP woman should be actor and the NP girl undergoer. Once again, however, we have a MR intransitive verb that takes only one macrorole. What is interesting about this predicate is that it is the actor which is chosen. This violates both of the default macrorole assignment principles given in (1.24)(p. 30). Not

only does it violate number (if a verb has two or more arguments in its LS, it will take two macroroles) but also the nature principle which states that when a verb takes one MR and has no activity predicate, that MR will be undergoer. So, woman, as actor and highest ranking macrorole argument, receives nominative case while the non-macrorole NP girl is assigned dative. This marked assignment of MR would need to be accounted for in the lexicon as well as the exceptional MR transitivity, (i.e. [1 MR, MR=A]).

This is also true of the example given in (c) with **remember'** (x,y). Though this is a state logical structure, it is the actor - X argument- which is assigned the one macrorole and therefore takes nominative case. A similar analysis has been given for Latin **remember'** (memini) which also takes a nominative actor and genitive non-macrorole argument (Michaelis 1993). In addition, **remember'** in Hindi also takes a quirky genitive object (Narasimhan 1995). The fact that verbs meaning remember (which are not cognate) in three branches of Indo-European all take genitive objects suggests that this is not an arbitrary fact about Croatian but has its roots somewhere deeper in the language family.

The sentences in (d) and (e) would work in a similar fashion to (b) and (a) respectively. They are interesting in that they default to genitive and instrumental case respectively instead of dative. Sometimes these defaults appear to have a semantic basis and other times they appear quite arbitrary. This is a complex issue that will not be addressed here. It is well enough to say that the dative is the most general and the most common case for non-macrorole "direct objects".

It is evident that an analysis of "direct objects" is more difficult than one of "subjects". This is because we do not have a rich set of syntactic tests for objecthood equivalent to those for subjecthood (in the form of determining status as a privileged syntactic argument). In a language like Croatian, we also lack the important passivization test. We wonder then if there is any data that might help support our analysis of quirky objects. Croatian does, we find, exhibit an interesting interaction between objects and the clitic se. The issue of reflexivization is treated thoroughly in Van Valin and LaPolla (1997)¹⁰. We will only make brief mention of it here.

We have seen throughout this paper that a normal accusative direct object never occurs with a verb that has a se clitic associated with it. In fact, this clitic appears to affect the transitivity of sentences in an interesting way. In a syntactically intransitive sentence with a se clitic, one can make the verb transitive by doing one of two things. One can drop the se and add an accusative direct object:

¹⁰ Section 7.5 addresses the issue of lexical reflexives, coreference reflexives, and clitic reflexives with examples from Croatian.

- (3.16) a. On-a se umiv-a.
 she-FsgNOM CL wash-3sg
 She is washing herself.
- b. On-a umiv-a djevojk-u.
 she-FsgNOM wash-3sg girl-FsgACC
 She is washing the girl.

Or, with some verbs, the se is retained and a dative direct object is added:

- (3.17) a. Žen-a se čud-i.
 woman-FsgNOM CL wonder-3sg
 The woman is amazed.
 ['The woman wonders/marvels.']
- b. Žen-a se čud-i mačk-i.
 woman-FsgNOM CL wonder-3sg cat-FsgDAT
 The woman is amazed by the cat.
 ['The woman wonders/marvels at the cat.']

According to our analysis, we have posited that a verb of type one (3.16) is semantically transitive. We would assume that it has both an actor and an undergoer macrorole since it does not exhibit quirky case-marking. A verb of type two (3.17), on the other hand, we have called semantically intransitive because of the dative "direct object". So, though both (b) examples are syntactically transitive, we would call the first semantically transitive also but the second semantically intransitive. There may be some evidence for this analysis in the fact that se in (3.16)(a) specifies who is being washed. It is truly reflexive in this sense. The se in (3.17)(a), however, is not. In order to specify that she is amazing herself, one must use the full coreference form of the reflexive:

- c. Žen-a se čud-i sam-a seb-i.
 woman-FsgNOM CL wonder-3sg only-F SELF-DAT
 The woman amazes herself.
 ['The woman wonders/marvels at herself.']

These two patterns seem to work for many verbs of the language. Here are some further examples - first of the semantically transitive, se dropping variety then of the semantically intransitive non se dropping variety. (It is important to remember that though se occurs with both verbs that we would call semantically transitive and semantically intransitive, it, itself, is always **syntactically** intransitive.)

- (3.18) a. On- se ubi-o.
 he-MsgNOM CL kill-M.PAST
 He killed himself.

- a'. On- je ubi-o žen-u.
 he-MsgNOM be.3sg kill-M.PAST woman-FsgACC
 He killed the woman.
- b. Moj- sin- će se vrati-ti sutra.
 my-Msg son-MsgNOM will CL return-INF tomorrow
 My son will return tomorrow.
- b'. Moj- sin- će vam vrati-ti vašu knjig-u.
 my-Msg son-MsgNOM will 2plDAT return-INF your book-FsgACC
 My son will return your book to you.
- (3.19) a. On- se smij-e.
 he-MsgNOM CL laugh-3sg
 He is laughing.
- a'. On- se smij-e maćk-i.
 he-MsgNOM CL laugh-3sg cat-FsgDAT
 He is laughing at the cat.
- b. Ja se smiješ-im.
 1sgNOM CL smile-1sg
 I am smiling.
- b'. Ja se smiješ-im djevojc-i.
 1sgNOM CL smile-1sg girl-FsgDAT
 I am smiling at the girl.

These generalizations seem to work too for quirky verbs that do not occur with se:

- (3.20) a. Žen-a vjeruj-e djevojc-i.
 woman-FsgNOM believe-3sg girl-FsgDAT
 The woman believes the girl.
- b. * Žen-a se vjeruj-e.
 woman-FsgNOM CL believe-3sg
 The woman believes herself.
- c. Žen-a vjeruj-e sam-a seb-i.
 woman-FsgNOM believe-3sg only-F SELF-DAT
 The woman believes herself.

We can posit then that a quirky object verb is truly semantically macrorole intransitive. Whether se occurs with it or not, we do not know who or what is receiving the effects of the action unless an additional non-macrorole argument is added to the sentence.

To summarize, se appears to have three separate functions. With a canonical verb like umivati *to wash*, it indicates that the actor and undergoer are the same participant. This is a truly reflexive use. Many of the verbs that take quirky objects like smijati se *to laugh* appear with a se that is not reflexive but devoid of any meaning or function. These could be called inherent reflexives following the terminology used for similar phenomena in Romance languages. The third function of the se clitic is to form states from causative states and accomplishments from causative accomplishments (compare p.26 (2.4b) to p.23 (2.8c)). The first category would include verbs like plašiti *to scare* from example (2.0)(c). Note the following:

- (3.21) a. Plaš-im djevojk-u.
 scare-1sg girl-FsgACC
 I scare the girl.
- b. Ja se plaš-im.
 1sgNOM CL scare-1sg
 I am scared.
- c. Plaš-im se mrak-a.
 scare-1sg CL dark-MsgGEN
 I am scared of the dark.
- d. Plaš-im se sama sebe.
 scare-1sg CL only-F SELF-FsgGEN
 I am scared of myself.

In (a) we have a causative state. When the causer is not specified, the se is introduced to form a simple stative. In essence, the se works to decausativize the verb. This form can then be built upon by adding an oblique source for the fear as in (c). The dark in this sentence is not an actor like I in sentence (a) - there is no activity predicate. Note that se is not reflexive in these examples as a full adjectival reflexive is needed to indicate that one is scaring SELF, as in sentence (d). This certainly does not answer all the questions about quirky objects. This would be a fascinating area for further study.

3.2 Conclusion:

This analysis of quirky case-marking has successfully explained many of the idiosyncrasies of Croatian grammar. We found that by positing exceptional MR transitivity for verbs taking quirky case, we could easily and efficiently account for their odd syntactic behavior. The fact that non-macrorole arguments cannot serve as PSA for any construction in the language is a crucial facet of the RRG analysis of Croatian grammar. This explains

why such arguments never act as controllers nor as pivots. The concepts of semantic macroroles (actor and undergoer), semantic versus syntactic transitivity, and privileged syntactic argument have all been proven to be valuable tools for understanding and even predicting what might have otherwise seemed to be random irregularities.

The Role and Reference Grammar framework is a particularly efficient approach as it helps us to capture the generalities which languages share as well as to recognize what are truly language specific phenomena. We find that there are general patterns that case systems follow, often accompanied by specific rules for grammatical relations. In the previous RRG studies of case in German and in Icelandic (Van Valin & LaPolla 1997), for example, it was found that the major difference between these two languages is in the nature of their principles for privileged syntactic argument selection. Whereas German restricts PSA status to MR arguments, Icelandic assigns it to the highest ranking direct syntactic argument within the core - whether it is a MR or not. Our findings in this paper indicate that Croatian patterns like German in this respect. Aside from the selection of the PSA, one finds that the case assignment rules work quite generally for all three of the languages in question. Given as they are stated in Van Valin and LaPolla 1997:

(3.22) Case Assignment Rules for German and Icelandic [and Croatian]:

1. Assign nominative case to the highest ranking macrorole argument.
2. Assign accusative case to the other macrorole argument.
3. Assign dative case to non-macrorole arguments (default).

Interestingly, Van Valin and LaPolla also found a correlation between PSA selection and word order. Because the PSA is always the nominative argument in German, its placement in the sentence is not crucial - allowing for freer word order. Icelandic, on the other hand, depends on an argument's position to determine PSA, therefore necessitating a rigidly fixed word order. Once again we see that Croatian is much like German in that it allows extremely free word order.

Another valuable asset of the RRG analysis is that both syntactic and semantic phenomena are taken into account when looking at case-marking. Just as it is difficult to explain quirky case systematically with traditional syntax alone, it is also virtually impossible to refer only to semantic notions. It is always important to differentiate syntactic behavior from semantic behavior. An example of this would be the RRG theory of control (Foley & Van Valin [1984], Van Valin & LaPolla [1997]). We found in the previous section that the controller of the gap in equi/control constructions is semantically determined. Interestingly, a non-macrorole argument can control this gap:

(3.23) \check{Z} en-a(I) je nagovori-l-a djevojc-i(I) (I)vozi-ti dom-a.
 woman-FsgNOM be.3sg persuade-PAST-F girl-FsgDAT drive-INF home-MsgGEN
 The woman(I) persuaded the girl(I) (I) to drive home.

In this example, we see that the NP girl is a dative, non-MR argument, yet it still controls the gap: [The woman persuaded the girl] + [The girl to drive home]. Importantly, however, a gap that is syntactically controlled must be controlled by a MR argument. This fact can not be overridden by context as was shown in the section on conjunction reduction - a construction with a gap that is syntactically controlled.

The relationship between macroroles and case and between macroroles and grammatical relations are the fundamental principles for formulating an accurate account of a language. It could be an insight into the rules that are an essential component of the knowledge that the speakers of these languages possess.

APPENDIX

Quirky Case Verbs addressed in this study:

- (1) ACCUSATIVE "SUBJECT" (verbs that may suppress the nominative argument):

| | |
|----------|---------|
| boljeti | to hurt |
| svrbjeti | to itch |

- (2) ACCUSATIVE "SUBJECT"

| | |
|---------|------------|
| je sram | be ashamed |
|---------|------------|

- (3) DATIVE "SUBJECT"

| | |
|--------------|------------------|
| je neugodno | be uncomfortable |
| je postipeno | be ashamed |
| je slabo | be nauseous |
| je vruće | be hot |
| je zima | be cold |

- (4) DATIVE "DIRECT OBJECT"

| | |
|------------|-------------|
| čuditi se | to marvel |
| dozvoliti | to allow |
| nagovoriti | to persuade |
| obećanje | to promise |
| pomoći | to help |
| smijati se | to laugh |
| vjerovati | to believe |

- (5) GENITIVE "DIRECT OBJECT"

| | |
|------------|-------------|
| plašiti se | to fear |
| sjetiti se | to remember |

- (6) INSTRUMENTAL "DIRECT OBJECT"

| | |
|---------|---------|
| vladati | to rule |
|---------|---------|

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