

Chapter 3

Semantic Representation

3.0. Introduction

In the previous chapter a theory of morphosyntactic structure which elucidated the structure of simple sentences and noun phrases was presented. At many points there, I made crucial reference to predicates and their arguments and to the semantic representation of sentences. The purpose of this chapter is to present an analysis of predicates and their arguments.

This chapter discusses the semantic representation of Farsi simple sentences. The organization of this chapter is as follows: Section (3.1) will present RRG's verb classification and different semantic and syntactic tests used for this in the theory. The aspectual classification of Farsi verbs and a sample of each verb class will be presented in Section (3.2). The formal representation of basic aktionsart types, called logical structures, will be discussed in Section (3.3). The topic of Section (3.4) is thematic relations, the relations between a predicate and its arguments. In Section (3.5) the generalized semantic roles, macroroles and problems concerning them such as transitivity and two-place activity predicates will be studied. Ultimately Section (3.6) will be the summary of this chapter.

3.1. The lexical representation of verbs and their arguments

In most of the communication based theories of grammar, the communicative functions of language are crucial to the analysis of its structure. One of the main functions of language is reference and predicating, that is, representing things that happen in the world and the participants involved in those situations. In theories such as RRG or FG (Dik 1989) a typology of states of affairs is made. The classification of states of affairs goes back to Aristotle who first paid attention to the differences between verbs. Generally speaking, four basic types of states of affairs are distinguished in the literature (VanValin and LaPolla 1997:83). These four basic states of affairs are situations, events, processes and actions.

Situations are non-dynamic. They may involve the location of a participant, the state or condition or an internal experience. They don't have an inherent terminal point. Events are those states of affairs which seem to happen instantly, therefore, they have a terminal point. Processes involve change and take place over time. Of course, they do have inherent terminal points. Actions are dynamic states of affairs in which a participant does something.

The linguistic means for describing states of affairs typically consist of verbs and other predicating elements, which express the situation, event, process or action, and noun phrases and other

referring expressions, which indicate the participants. Therefore, what verbs mean is related to the states of affairs they express.

3.1.1. Verb classes

The system of lexical decomposition employed in RRG is based on the distinctions in Aktionsart proposed originally in Vendler (1957 [1967]). He presented fourfold distinct categories of verbs by their restrictions on time adverbials, tenses, and logical entailments. Vendler distinguished states, activities, accomplishments, and achievements. Many linguists have adopted or redefined his scheme to their own views.

In 1979, David Dowty introduced an English verb classification for the four types of aspect proposed by Vendler. He tried not only to present a taxonomy of verbs, but also seek to explain just why each of the categories has the properties it does. Therefore, he proposed criteria that separate subsets of the four categories as summarized in the following chart.

Criterion	States	Activities	Accomplishments	Achievements
1. meets non-stative tests	no	yes	yes	?
2. has habitual interpretation in simple present tense	no	yes	yes	yes
3. Ø for an hour, spend an hour Øing	ok	ok	ok	bad
4. Ø in an hour, take an hour to Øing	bad	bad	ok	ok
5. Ø for an hour entails at all times in the hour	yes	yes	no	d.n.a
6. x is Øing entails x has Øed	d.n.a	yes	no	d.n.a
7. complement of stop	ok	ok	ok	bad
8. complement of finish	bad	bad	ok	bad
9. ambiguity with almost	no	no	yes	no
10. x Øed in an hour entails x was Øing during that hour	d.n.a	d.n.a	yes	no
11. occurs with studiously, attentively, carefully, etc	bad	ok	ok	bad

Ok = the sentence is grammatical, semantically normal

bad = the sentence is ungrammatical, semantically abnormal

d.n.a = the test does not apply to verbs of this class

Ø = verb

Table 3.1 Dowty's verb classification criteria (Dowty 1979:60 quoted in Foley and VanValin 1984)

These syntactic and semantic tests proposed by Dowty are used in a modified form in RRG. This set of tests will isolate specific features

in order to systematically classify the verbs of any language with minor language specific adjustments. In RRG, Aktionsart is the term used for the inherent temporal properties of verbs. Examples of English verbs fitting each of the four categories are given as follows in the literature (Foley and VanValin 1984, VanValin 1999d, Wyngaerd 2001, among others).

- (3.1) a. **States:** be sick, know, believe, love, fear, have
b. **Achievements:** pop, explode, collapse, die, receive
c. **Accomplishments:** melt, freeze, learn, dry
d. **Activities:** walk, sing, study, think, swim, write, eat,
read, march

These four classes are distinguished from each other on the basis of their temporal properties. States are non-dynamic and temporally unbounded, activities are dynamic and temporally unbounded, achievements are temporally bounded instantaneous changes, while accomplishments are temporally extended, i. e. instantaneous changes of state leading to a result. Vendler proposed this taxonomy based merely on the analysis of English verbs, and yet it has proved to be of great cross-linguistic validity. Analysis of the following languages have shown that these contrasts are central to the organization of their verbal system: Lakhota (Foley and VanValin 1984), Hausa (Abdoulaye 1992), Sama (Walton 1986), Korean (Yang 1994), Italian (Centineo 1996, Bentley 2002),

Japanese (Toratani 1997), Icelandic (VanValin 1991, Minger 2002), Beja (Wedekind et al. 2002), to name just a few.

VanValin and LaPolla (1997) define these four classes in terms of three features, [\pm static], [\pm punctual] and [\pm telic] as summarized in (3.2).

(3.2) a. State [+static], [-telic], [-punctual]

b. Activity [-static], [-telic], [-punctual]

c. Accomplishment [-static], [+telic], [-punctual]

d. Achievement [-static], [+telic], [+punctual]

The static feature refers to whether or not the verb codes a happening. Indeed, a [-static] verb can answer the question *what happened?* The telic feature distinguishes verbs with an intrinsic temporal point (achievements and accomplishments) from verbs without it (states and activities). The distinction between telic and atelic is also referred to as bounded and unbounded, or delimited and non-delimited events (Wyngaerd 2001). The final feature [\pm punctual] distinguishes telic events with internal duration from those which are instantaneous. The following syntactic and semantic tests for English verb classification in RRG are presented in VanValin and LaPolla (1997:94) as Table (3.2)

Criterion	States	Achievements	Accomplishments	Activities
1. Occurs with progressive	No	No	Yes	Yes
2. Occurs with adverbs like vigorously, actively, etc.	No	No	No	yes
3. Occurs with adverbs like quickly, slowly, etc.	No	No*	Yes	Yes
4. Occurs with X for an hour	Yes*	No	Irrelevant	Yes
5. Occurs with X in an hour	No	No*	Yes	No

Table 3.2 Tests for determining Aktionsart type

These tests are intended to have cross-linguistic validity, with some qualifications. Although, they are not perfect, and it is probable that some of them don't work in a specific language.

In addition to the four main verb classes, there is also an active accomplishment¹ category which refers to the accomplishment use of an activity verb (Dowty 1979, VanValin and LaPolla 1997). It can be illustrated by the following two sentences.

(3.3) a. John ate cake.

b. John ate the cake.

In (a) the action of eating cake has no inherent temporal boundary.

In (b), however, once the cake is gone, the act of eating is done. The verb in sentence (3.3b) would pass test 5 and is telic. VanValin and LaPolla (1997) are the first to propose to term this class active accomplishment.

For each of the basic Aktionsart classes (states, activities, accomplishments, achievements) and active accomplishment class, there is a corresponding causative class, which corresponds to the induced state of affairs. This is exemplified in (3.4).

- (3.4) a. State The girl is afraid.
- a'. Causative state The dog frightens the girl.
- b. Achievement The window shattered.
- b'. Causative achievement The boy shattered the window.
- c. Accomplishment The snow melted.
- c'. Causative accomplishment The sun melted the snow.
- d. Activity The dog walked.
- d'. Causative activity The man walked the dog.
- e. Active accomplishment The soldiers marched to the
barracks.
- e'. Causative active accomplishment The sergeant
marched the soldiers to the barracks.

3.2. Aspectual classification of verbs in Farsi

RRG claims that the four main Aktionsart classes are universal. However, it is assumed that each language has its own variations on the tests for aspectual classification of verbs. In this Section, I will study Farsi verb classification using RRG framework and establish diagnostic tests for its verb classification.

3.2.1. Progressive formation

Progressive formation is universally accepted as a test for determining stativity. The progressive applies to something that is not state, but rather an action or process. Farsi does not have a distinct progressive aspectual form like English, but it has an imperfect aspect that is marked by the prefix *mi-*. This imperfective marker can occur with almost all stative verbs, except for the possessive verb *dâstan* ‘to have’ and the copular verb *budan* ‘to be’. As Vahidian and Emrani (2000:44) have noted, this imperfective marker in Modern Persian (Farsi) no longer expresses progressive aspect. From this fact, one may conclude that progressive test is not valid in this language. Nevertheless, there are some other morphosyntactic constructions to express progressive aspect. These constructions are termed as periphrastic progressive by Kahnemuyipour (2001a). As Dabir-Moghaddam (1998) has pointed out, one way to express the progressive aspect is the expression *dar hâl-e* or *mašqul-e* ‘in the process of’. These expressions serve as the head of an EZAFE construction followed by the infinitive form of the verb as their dependents.² It should be noted that *mašqul* is usually used with an animate subject. This can be illustrated by the following examples:

(3.5) a. Ali dar hâl-e raftan ast.

Ali in process-EZ go-INF be-3sg

‘Ali is leaving.’

b. mâ mašqul-e xordan hast-im.

We in process-EZ eat-INF be-1pl

‘We are eating.’

The observation above indicates that Farsi has some grammaticalized expressions to exhibit progressive aspect in spite of the fact that it lacks a morphological marker for this aspect on the verb. Having demonstrated the existence of progressive aspect in Farsi, now, I test the four Aktionsart types with this progressive constructions.

(3.6) **State** a. * dânešju-yân dar hâle fahmidan hast-and.

student-PL in process-EZ understand be-3pl

*‘The students are understanding.’

b. * u mašqul-e dânestan ast.

He in process-EZ know-INF be-3sg

*‘He is knowing.’

(3.7) **Achievement**

One. *Minâ dar hâl-e šenâxtan-e ân mard bud.

Mina in process-EZ recognize-INF that man be-PAST

*‘Mina was recognizing that man.’

Two. * mariz mašqul-e mordan bud.

patient in process-EZ die-INF be-PAST-3sg

‘The patient was dying.’

(3.8) Accomplishment

One. yax-hâ dar hâl-e âb šodan ast.

ice-pl in process-EZ water become be-1sg

‘The ice is melting.’

b. bačče-hâ mašqul-e yâd gereftan hastand.

child-pl in process-EZ learn be-3pl

‘The children are learning.’

(3.9) Activity

a. Ali mašqule kâr kardan ast.

Ali in process work do be-3sg

‘Ali is working.’

b. ânhâ mašqule qadam zadan hastand.

They in process step hit be-3pl

‘They are walking.’

From the above sentences, I can conclude that the progressive formation with *darhâle* or *mašqule* can occur with activities and accomplishments, but not with states and achievements. Thus, the progressive test distinguishes states and achievements from activities and accomplishments. Moreover, it has been shown that although Farsi doesn’t have a distinct morphological progressive, it has some types of periphrastic progressive constructions (Kahnemuyipour 2001a) functioning as the progressive aspect, in

languages like English, in the sense that they can occur with activities and accomplishments.

3.2.2. Occurs with adverbs like bešeddat ‘vigorously’ and bâjeddiyat ‘actively’, etc.

The second test is whether the verb can occur with adverbs like vigorously, actively, etc. This test is used to distinguish states and achievements from accomplishments and activities.

(3.10) States

a.* Ahmad mâdar-aš râ bâjeddiyat dust dârad.

Ahmad mother-poss OBJ actively like have-3sg

‘Ahmad likes his mother actively.’

b.* man u râ bešeddat mi-šenâs-am.

I 3sg OBJ vigorously IMP-know-1sg.

‘I know him/her vigorously.’

(3.11) Achievements

a.* u bešeddat dir be xâne resid.

3sg vigorously late to home arrive-PAST-3sg

‘S/he arrived home late vigorously.’

b.* šišē bešeddat šekast.

glass vigorously break-PAST.

‘The glass broke vigorously.’

(3.12) Accomplishments

a. dast-e Farid bešeddat suxt.

hand-EZ Farid vigorously burn-PAST-3sg

‘Farid’s hand burnt vigorously.’

b. daryâçe bešeddat yax zade ast.

lake vigorously ice hit be-3sg.

‘The lake has frozen vigorously.’

(3.13) Activities

a. Minâ bâjeddiyat dars mi-xânad.

Mina actively lesson IMP-read-3sg

‘Mina studies actively.’

b. Ali bâjeddiyat be ostâd guš mi-dahad.

Ali actively to professor ear IMP-gives

‘Ali listens to the professor actively.’

The above sentences show that Farsi activity and accomplishment verbs can occur with *bešeddat/bâjeddiyat* ‘vigorously/actively,’ but states and achievements cannot.

3.2.3. Occurs with adverbs like *besor* ‘at ‘quickly’ *âheste* ‘slowly’, etc.

This test applies only to [-static] verbs and distinguishes [+punctual] from [-punctual] verbs. Adverbs like quickly, rapidly and slowly that are termed ‘pace adverbs’ by VanValin and LaPolla (1997:95) can occur with [-static] event involving temporal duration.

(3.14) a. **State** u javâb-hâ râ âheste mi-dânest.

3sg answer-PL OBJ slowly IMP-know-PAST.

‘*S/he knew the answers slowly.’

b. **Achievement** *tup âheste tarakid.

ball slowly pop-PAST-3sg

*‘The ball popped slowly.’

c. **Accomplishment** ân-hâ besor’at zendâni râ âvordand.

They quickly prisoner OBJ bring-PAST-3PL

‘They brought the prisoner quickly’

d. **Activity** gozârešgar besor’at mi-nevešt.

reporter quickly IMP-write-PAST-3sg

‘The reporter was writing quickly.’

These sentences show that test 3 works for Farsi perfectly. Accomplishments and activities can occur with *âheste* ‘slowly’ and *besor’at* ‘quickly’, whereas achievements and states can not occur with these two adverbs. It is important to note that the adverb *besor’at* ‘quickly’ often looks acceptable for achievements because of the instantaneous nature of this type of predicate. The grammaticality of (3.15) evidences this.

(3.15) tup besor’at tarakid

ball quickly pop-PAST-3sg

‘The ball popped quickly.’

As stated before, achievements are inherently quick and instantaneous. Accordingly, using the adverb *besor'at* in these sentences gives no useful information. It is best to only use *âheste* ‘slowly’ for this class of verbs in order to confirm that the verb has not a temporal duration. As VanValin (in press: ch2) has pointed out, it is necessary to use pace adverbs which indicate a relatively slow process.

3.2.4. Occurs with (barâye) yek sâ'at ‘for an hour’

This test isolates the property of having duration in time; it shows that states, accomplishments and activities all have temporal duration, but achievements do not.

(3.16)

a. **State:** mâ yek sâ'at dar madrese hast-im.

we one hour in school be-1pl.

‘We are in school for an hour.’

b. **Achievement:** *pesar-hâ šišē rā yek sâ'at šekastand.

boy-pl glass OBJ one hour break-PAST-3pl

*‘The boys broke the glass for an hour.’

c. **Accomplishment:** ostad yek sâ'at dars midahad.

Professor one hour lesson gives

‘The professor teaches for an hour.’

d. **Activity:** man yek sâ'at be rādyu guš dādam.

1sg one hour to radio ear give-PAST-1sg.

‘I listened to the radio for an hour.’

From the above sentences, we can say that the occurrence with *yek sâ’at* ‘for an hour’ can be used as a test to distinguish achievements from the other verb classes in Farsi. Thus, achievement verbs in Farsi are [+punctual].

3.2.5. Occurs with *dar yek sâ’at* ‘in an hour’

This test will only work with verbs that have an inherent terminal point when the action will be completed. Achievements and accomplishments in Farsi will be compatible with an *in-phrase*. However, the achievement form may only work with an adverb that denotes an extremely fast time interval like *dar yek lahze*. ‘in an instant’ or *dar yek čašm be ham zadan* ‘in a twinkling of an eye.’ Here are some examples of the in-adverbial phrases:

(3.17) a. **State:** *man dar yek sâ’at aks râ xâstam.

1sg in one hour picture OBJ want-PAST-1sg.

*‘I wanted the picture in an hour.’

b. **Achievement:** a. mariz dar yek sâ’at mord.

patient in one hour died

‘The patient died in an hour.’

a’. divâr dar yek lahze foru rixt.

wall in an instant collapsed.

‘The wall collapsed in an instant.’

c. **Accomplishment:** kê-e man dar yek sâ’at tamâm šod.

work-EZ 1sg in one hour finish become past.

‘My work was finished in an hour.’

d. **Activity:** *u dar yek sâ’at qadam mi-zanad.

3sg in one hour step IMP-hits

‘He walks in an hour.’

This test applies only to [+telic] verbs because only these two classes have terminal points. If something is done in ten minutes, then explicit reference is being made to the termination point of the event. Having presented the above tests and their applications to different verb classes, I can now summarize tests for determining Farsi verb classification as follows:

Criterion	States	Achievements	Accompl	Activities
1. Occurs with <i>dar hâle</i> or <i>mašqule</i> , ‘in process of’	No	No	Yes	Yes
2. Occurs with <i>bešeddat/bâjeddyat</i> ‘vigorously/actively.’	No	No	Yes	yes
3. Occurs with <i>besor’at/âheste</i> ‘quickly/slowly’	No	No*	Yes	Yes
4. Occurs with <i>(barâye) yek sâ’at</i> ‘for an hour’	Yes	No	Yes	Yes
5. Occurs with <i>dar yek sâ’at</i> ‘in an hour’	No	No*	Yes	No

Table 3.3 Tests for determining Aktionsart type in Farsi.

The ‘*’ on ‘No’ in the achievement column with test 3 indicates that pace adverbs indicating very short temporal intervals are marginally acceptable with these verbs (see Section 3.2.3). This symbol is also used with test 5 indicating that in-phrases specifying longer periods are incompatible with this test.

As mentioned above, these five tests enable us to distinguish different verb classes. However, these tests do not work perfectly and not all of them are equally useful. Actually, these tests are sensitive to what VanValin and LaPolla term as "local cooccurrence effects"³. For example, suppose we apply test 3 to the Farsi verb *šetâftan* ‘to rush’ in order to determine whether this verb has temporal duration or not, yielding sentences such as (3.18).

(3.18) a. mardom besor’at be komake seyl zadegân šetâftand.

people quickly to help flood victims rush-PAST-3pl.

‘People rushed to help the victims of the flood quickly.’

b.* mardom âheste be komake seyl zadegân šetâftand.

people slowly to help flood victims rush-PAST-3pl.

*‘People rushed to help the victims of the flood slowly.’

While the adverb *besor’at* ‘quickly’ is compatible with the verb, the occurrence of *âheste* ‘slowly’ is incompatible. This is an example of local cooccurrence effect. Since part of the inherent meaning of *šetâftan* ‘to rush’ is to do something with some degree of speediness, *âheste* conflicts with this aspect of the meaning of

šetâftan. The incompatibility of *šetâftan* and *âheste* is due to an aspect of the meaning of the verb which is unrelated to what test 3 is testing for. Moreover, it is possible that only one of the class of adverbs of the type mentioned in test 2 is compatible with a particular verb; that would be adequate to show that the verb rates a ‘yes’ for the test. Hence, the analyst should be sensitive to these local cooccurrence effects in interpreting the results of the tests.

Having applied these five tests to Farsi verbs, now, I can present a sample of each verb class in this language. However, it should be noted that the actual class of each verb is determined within the context in which it occurs. Examples of Farsi verbs fitting each of four categories are given in (3.19).

(3.19) a. States		b. Achievements	
dânestan	‘to know’	tarakidan	‘to pop’
dâştan	‘to have’	šenâxtan 2	‘to recognize’
dust dâştan	‘to like’	foru rixtan	‘to collapse’
šenâxtan 1	‘to know sb’	residan	‘to arrive’
budan	‘to be’	šekastan	‘to break’
tarsidan	‘to fear’	mordan	‘to die’
xâstan	‘to want’	koştan	‘to kill’
didan	‘to see’	oftâdan	‘to fall’
šenidan	‘to hear’		

c.Accomplishments		d.Activities	
sâxtan	‘to build’	davidan	‘to run’
dorost kardan	‘to make’	xordan	‘to eat’
âb šodan	‘to melt’	xândan	‘to read / to recite’
âmuxtan	‘to learn’	qadam zadan	‘to walk’
xaridan	‘to buy’	nušidan	‘to drink’
âvordan	‘to bring’	guš kardan	‘to listen’
suxtan	‘to burn’	neveštan	‘to write’
yax zadan	‘to freeze’	šenâ kardan	‘to swim’
		xandidan	‘to laugh’
		gerye kardan	‘to cry’
		raqsidan	‘to dance’

As demonstrated above, the Aktionsart of verbs is determined on the basis of distributional tests, not on the basis of the states of affairs which they denote. Therefore, as Bently (2002) points out, it is possible that quasi-synonymous predicates represent different Aktionsart types cross-linguistically. VanValin and LaPolla (106) mention the verb ‘*die*’, which can be used in the progressive form in English, hence is classified as an accomplishment, while it belongs to the category ‘achievement’ in Mandarin, since in this language it is necessarily punctual. Interestingly, as it was shown in sentence (3.17b) *mordan* ‘to die’ in Farsi is an achievement.

3.3. Logical structure and lexical representation

The formal representation of the Aktionsart classes in RRG is based on a system of lexical decomposition proposed by Dowty (1979). The term for the decomposed form of a verb is its Logical Structure. In Dowty's lexical decomposition system, states are basic and other classes are derived from them. Hence, this system is unable to derive activities from states. RRG considers states and activities as basic while achievements and accomplishments are derived (Yang 1994). A more refined version of lexical representations for Aktionsart classes is presented in VanValin and LaPolla (1997) as in Table (3.4).⁴

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) [Predicate' ₁ (x, (y))]) and BECOME Predicate' ₂ (z, x) or (y)

Table 3.4 Lexical representations for Aktionsart classes.

In this system of logical structure, states are represented as simple predicates, e.g. **see'**(x,y) for *Mary saw John* or **be'** (x, [**pred'**]) for *Ali is a student*. Activity logical structures contain the generalized activity predicate **do'**, e.g. *the children cried*, **do'** (the children, [**cry'**(the children)])

Achievement and accomplishment verbs are composed of a state or activity predicate plus a symbol of change. 'INGR' stands for 'ingressive' and encodes instantaneous changes; these may be changes of state or activity. Accomplishments are coded by BECOME which does change over some temporal span, plus a state predicate.

After presenting the logical structures for Aktionsart classes, I represent the logical structures of some Farsi verbs:

(3.20) States:

a. Ahmad dânešju-st.

Ahmad student-be 3sg

'Ahmad is a student.'

be' (Ahmad, [**dânešju'**])

b. ketâb ruye miz ast.

book on table be-3sg

'The book is on the table.'

be-on' (miz, ketâb)

c. havâ sard ast.

weather cold be-3sg

‘The weather is cold.’

be' (havâ, [**sard'**])

(3.21) Achievements

a. Amir be madrese resid.

Amir to school arrived

‘Amir arrived at the school.’

INGR **be-at'** (madrese, Amir)

b. hamsâye-hâ dozd râ šenâxtand.

neighbor-pl thief OBJ recognized.

‘The neighbors recognized the thief.’

INGR **šenâxtan'** (hamsâyehâ, dozd)

c. bâdkonak tarakid.

balloon pop-PAST-3sg

‘The balloon popped.’

INGR **tarakidan'** (bâdkonak)

(3.22) Accomplishments

a. havâ târik šod

air dark become.

‘The air darkened’

BECOME **târik'** (havâ)

b. barf-hâ âb šod

snow-pl water become

‘The snow melted.’

BECOME **âb'** (barfhâ)

c. qazâ suxt.

food burn-PAST.3sg

‘The food burnt.’

BECOME **suxtan'** (qazâ)

(3.23) Activities

a. bačče-hâ qazâ xordand.

child-pl food eat-PAST-3pl

‘The children did food eating.’

do' (baččehâ , [**eat'** (baččehâ, qazâ)])

b. Ali midavad.

‘Ali runs.’

do' (Ali [**davidan'** (Ali)])

(3.24) Active Accomplishments

a. ostâd yek maqâle nevešte ast.

Professor a paper written be-3sg

‘The professor has written a paper.’

do' (ostâd, [**neveštan'** (ostâd, maqâle)])

and BECOME **exist'** (maqâle)

b. man yek nušâbe xord-am.

I a drink eat-PAST-1sg

‘I drank a drink.’

do' (man, [**xordan'** (man, nušâbe)]) and BECOME
consumed' (nušâbe)

(3.25) Causatives

a. Rostam Sohrâb râ košt.

Rostam Sohrab OBJ kill-PAST-3sg

‘Rostam killed Sohrab.’

[**do'** (Rostam, ø)] CAUSE [BECOME **dead'** (Sohrâb)]

b. bačče bâdkonak râ tarakând.

child baloon OBJ pop-PAST-3sg.

‘The child popped the baloon.’

[**do'** (bačče, ø)] CAUSE [INGR **pop'** (bâdkonak)]

3.3.1. Attributive and result state constructions

VanValin and LaPolla (1997:103) point out that the logical structure **be'** (x, [**pred'**]) is for identificational constructions, e.g. *Sam is a policeman*, and attributive constructions, e.g. *Mary is tall*. These constructions are different from result state, e.g. *The watch is broken*. They believe that these predicates require a different logical structure. Foley and VanValin (1984:66) note that in Tagalog this contrast is marked by the prefixation of the state verb. The bare stem is used for attributive constructions, and *ma-*is prefixed to it when the property is the result of some kind of process. English uses the same copular for both meanings. In Farsi, the contrast is

indicated by the occurrence of *budan* ‘be’ for stative predicates, i.e. identificational and attribution, and *šodan* ‘become’ for result states. This contrast is illustrated by the following examples.

(3.25) a. barf sefid ast.

snow white be-3sg.

‘Snow is white.’

a'. zamin sefid šod.

ground white becom-PAST-3sg

‘The ground turned white.’

b. havâ târik ast.

weather dark be-3sg

‘The weather is dark.’

b'. havâ târik šod

weather dark become-PAST-3sg

‘The weather got dark.’

Sentences (3.25 a-b) represent attributive predicates but (3.25 a'-b') are result state constructions.

VanValin and LaPolla propose the logical structure **be'** (x, [**pred'**]) for attributive predicates and BECOME **pred'** (x) for result state predicates. The logical structures of the above examples can be presented as follows:

(3.25) a. **be'** (barf, [**sefid'**])

a'. BECOME **sefid'** (zamin)

b. **be'** (havâ, [**târik'**])

b'. BECOME **târik'** (havâ)

3.4. Thematic relations

The semantic relations between a predicate and its arguments which express the participant roles in the state of affairs denoted by the verb are called thematic relations (VanValin and LaPolla 1997:113). Thematic relations were first described in the generative framework by Gruber (1965). Jackendoff (1972, 1976) expanded and developed Gruber's work, and his proposal became the standard approach to the phenomena. In this approach which is adopted by RRG, thematic relations will be defined in terms of argument positions in logical structures. Since states and activities are the two primitive verb classes, all types of semantic relations are defined with reference to argument positions in the logical structures of these verb classes. VanValin and LaPolla (1997) define thematic relations in terms of LS argument position as in Table (3.5)

I State verbs

a. Single argument

1 State or condition	broken' (x)	x=PATIENT
2 Existence	exist' (x)	x=ENTITY

b. Two arguments

1 Pure location	be'-loc' (x, y)	x=LOCATION, y=THEME
2 Perception	hear' (x, y)	x=PERCEIVER, y=STIMULUS
3 Cognition	know' (x, y)	x=COGNIZER, y=CONTENT
4 Desire	want' (x, y)	x=WANTER, y=DESIRE
5 Propositional attitude	consider' (x, y)	x=JUDGER, y=JUDGMENT
6 Possession	have' (x, y)	x=POSSESSOR, y=POSSESSED
7 Internal experience	feel' (x, y)	x=EXPERIENCER, y=SENSATION
8 Emotion	love' (x, y)	x=EMOTER, y=TARGET
9 Attrib/identificational	be' (x, y)	x=ATTRIBUTANT, y=ATTRIBUTE

II Activity verbs

a. Single argument

1 Unspecified action	do' (x, \emptyset)	x= EFFECTOR
2 Motion	do' (x, [walk' (x)])	x= MOVER
3 State motion	do' (x, [spin' (x)])	x= ST-MOVER
4 Light emission	do' (x, [shine' (x)])	x= L-EMITTER
5 Sound emission	do' (x, [gurgle' (x)])	x= S-EMITTER

b. One or two arguments

1 Performance	do' (x, [sing' (x, (y))])	x= PERFORMER y= PERFORMANCE
2 Consumption	do' (x, [eat' (x, (y))])	x= CONSUMER y= CONSUMED

3 Creation	do' (x, [write' (x, (y))])	x= CREATOR y= CREATION
4 Repetitive action	do' (x, [tap' (x, (y))])	x= EFFECTOR y= LOCUS
5 Direct perception	do' (x, [see' (x, (y))])	x= OBSERVER y= STIMILUS
6 Use	do' (x, [use' (x, (y))])	x= USER y= IMPLEMEN

Table 3.5 Definition of thematic relations in terms of argument positions

The above table shows that all thematic relations are defined in terms of argument positions in state and activity logical structures; all other logical structure types are composed of them plus elements like BECOME, INGR and CAUSE. It is important to note that there is no listing of thematic relations in a verb's lexical entry in RRG. In terms of these definitions, in (3.20) *Ahmad* is an attributant, the first argument of an identificational predication, while *ketâb* 'book' is a theme. In the last examples *havâ* 'weather' is also an attributant. These examples are all state verbs. The other class of primitive predicates is activity verbs. Let us look at the sentences in (3.23) regarding the thematic relations. In (3.23a) *xordan* 'eat' is a two-place activity predicate having a consumer *baččehâ* 'children' and a consumed *qazâ* 'food'. However, in (3.23b) the predicate has a single argument, thus *Ali* is a mover. In Farsi, activity verbs tend strongly to be single-argument, but there are some which take two

arguments, e.g. *xordan* ‘eat’, *nušidan* ‘drink’, *xândan* ‘read’, etc. I will analyze two-place activity predicates in Farsi in Section (3.5.4).

The labels usually used for thematic relations are basically the same as those used for participant roles. In order to avoid confusing the two types of roles, participant roles are usually given in normal typeface and thematic relations in small capitals. So, ‘patient’ will refer to a participant role, while ‘PATIENT’ will refer to thematic relation. Participant roles refer to the role a participant plays in a state of affairs, whereas thematic relations refer to the semantic interpretation of an argument in a logical structure and in a sentence. Thematic relations are linguistic entities and part of natural-language semantics, while participant roles are not, they are properties of states of affairs in the world. RRG claims that the assignment of thematic relations to verbs is independently motivated because syntactic and semantic criteria determining the class of verb make no reference at all to thematic relations (Table 3.2). Moreover, the thematic relations which a verb assigns to its arguments are to a great extent attributable to its class and accordingly to its logical structure. As Cowper (1992:50) pointed out, it cannot be predicted which thematic relation a given noun phrase will have given only its structural position. In fact, in order to establish the thematic relation of each noun phrase, we need know what the verb means.

As Table (3.4) showed, RRG posits a great many thematic relations, nevertheless there are only five relevant distinctions. The five distinctions correspond to the five possible argument positions in logical structures. This can be represented as in Figure (3.1) from VanValin (in press:ch2)

← 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)
AGENT	EFFECTOR	LOCATION	THEME	PATIENT
	MOVER	PERCEIVER	STIMULUS	ENTITY
	ST-MOVER	COGNIZER	CONTENT	
	L-EMITER	WANTER	DESIRE	
	S-EMITER	JUDGER	JUDGMENT	
	PERFORER	POSSESSOR	POSSESSED	
	CONSUMER	EXPERIENCER	SENSATION	
	CREATOR	EMOTER	TARGET	
	SPEAKER	ATTRIBUTANT	ATTRIBUTE	
	OBSERVER		PERFORMANCE	
	USER		CONSUMED	
			CREATION	
			LOCUS	
			IMPLEMENT	

Figure 3.1 Thematic relations continuum in terms of LS argument positions

Agents are willful, controlling instigating participants in states of affaires, while patients are strongly affected participants. Regarding these as endpoints on the continuum makes it possible to

place the other thematic roles with respect to them. The Do of lexicalized agency always cooccurs with the **do'** (x, ... which defines effector and its subtypes. Role-types in the first two columns are participants which do something. At the other end of the continuum fall patient and theme, etc. The single argument of state **predicate'** (x) includes those participants which are crushed, killed, shattered, broken, destroyed, etc. On the other hand, the second argument of **predicate'** (x, y) includes the participants that are placed, moved, given, possessed, seen, heard, loved, etc. Into the middle of the continuum falls the first argument of **predicate'** (x, y). If one compares it with the first argument of **do'**, it would be clear that seeing, thinking, liking, possessing, etc. are less agent-like than are speaking, doing, moving, consuming, hence their placement to the right of the effector. If, on the other hand, it is compared with the second argument of **predicate'** (x, y), then the reverse conclusion follows. Thus, the participants demoted by the first argument are more active and more agent-like than the participants referred to by the second argument.

Thematic relations have traditionally played two clear-cut roles in syntactic theories: first, they have been part of semantic representation of the verb, and second, they have played a role in the formulation of grammatical constructions and processes. VanValin (in press) states that in RRG, thematic relations have only

the second function; the logical structure of the verb is its semantic representation, and the role labels like ‘effector’ and ‘theme’ are simply mnemonics for the argument positions in logical structure.

3.5 Macroroles

The nature of the semantic relationships holding between a verb and its arguments have been the focus of much research and controversy since the mid-1960s. Starting from Gruber’s (1965) notion of thematic relations and Fillmore (1968)’s concept of roles, most contemporary theories of grammar assume some system of semantic predicate-argument relations. Most theories postulate a set of thematic relations like agent, patient, theme, instrument, etc. which map into a set of grammatical relations (e.g. Lexical-Functional Grammar) or structural positions in clauses (Government and Binding Theory).

The RRG theory of semantic roles is different from that of other theories, in that it posits two types of tiers of semantic roles. The first are specific thematic relations which were represented in Section (3.4). The second are generalized semantic roles called semantic macroroles. These semantic relations are referred to as macroroles, since each of them subsumes a number of specific semantic relations. The terms to be used for these two arguments are ‘Actor’ and ‘Undergoer’, originally introduced in RRG by

VanValin and Foley (1980). Actor is a generalization across agent, experiencer, instrument and other roles, while undergoer is a generalization subsuming patient, theme, recipient and other roles.⁵ According to VanValin (1999a, 2002b) the essential insight motivating the postulation of these two macroroles is that despite the plethora of thematic relations, there is nevertheless a fundamental opposition between what have been called the two cardinal arguments of a transitive predication, an agent like role and a patient like role. These generalizations are not language specific; they are found in all languages. Actor and undergoer are quite different from subject and object, because either the actor or the undergoer may be subject in English and in Farsi as well. The difference between macroroles and grammatical relations can be illustrated by the following Farsi sentences.

(3.26) a. Rostam Sohrâb râ košt.

Rostam Sohrab OBJ kill-PAST-3sg

‘Rostam killed Sohrab.’

b. Sohrâb be daste Rostam košte šod.

Sohrab with hand Rostam killed became.

‘Sohrab was killed by Rostam.’

In (3.26a) *Rostam* is subject and actor, but *Sohrâb* is direct object and undergoer, while in (3.26b) the undergoer *Sohrâb* appears as subject. Thus, it is clear from (3.26) that actor is not equivalent to

syntactic subject, nor is undergoer equivalent to syntactic direct object. These non-equivalences are reinforced when we look at single argument predicates, some of which have actors and some of which have undergoers as their single argument, an argument which is always syntactically the subject. Whether the argument of the verb is an actor or an undergoer is determined by the type of predicate.

(3.27) a. Parviz raft

Parviz go-PAST-3sg

‘Parviz went.’

b. Parviz mord

Parviz die-PAST-3sg

‘Parviz died.’

The verb in (3.27a) involves action affected by willful, intending participant, and accordingly the single argument is an actor. In (3.27b), on the other hand, the predicate denotes change of state which the participant undergoes; consequently this single argument is an undergoer. Therefore, syntactic subject cannot be equated with actor, since there are intransitive predicates which have undergoer subjects.

Semantic roles have been discussed at three distinct levels of generality. The first is what may be called ‘verb-specific’ semantic roles, e.g. runner, killer, hearer, etc. The second are thematic

relations, which are generalizations across the verb-specific roles, e.g. agent, instrument, theme, experiencer, patient. The third are semantic macroroles, actor and undergoer.⁶

The relationships among verb specific semantic roles, thematic relations and generalized semantic roles are summarized as Figure (3.2) borrowed from VanValin (2002b).

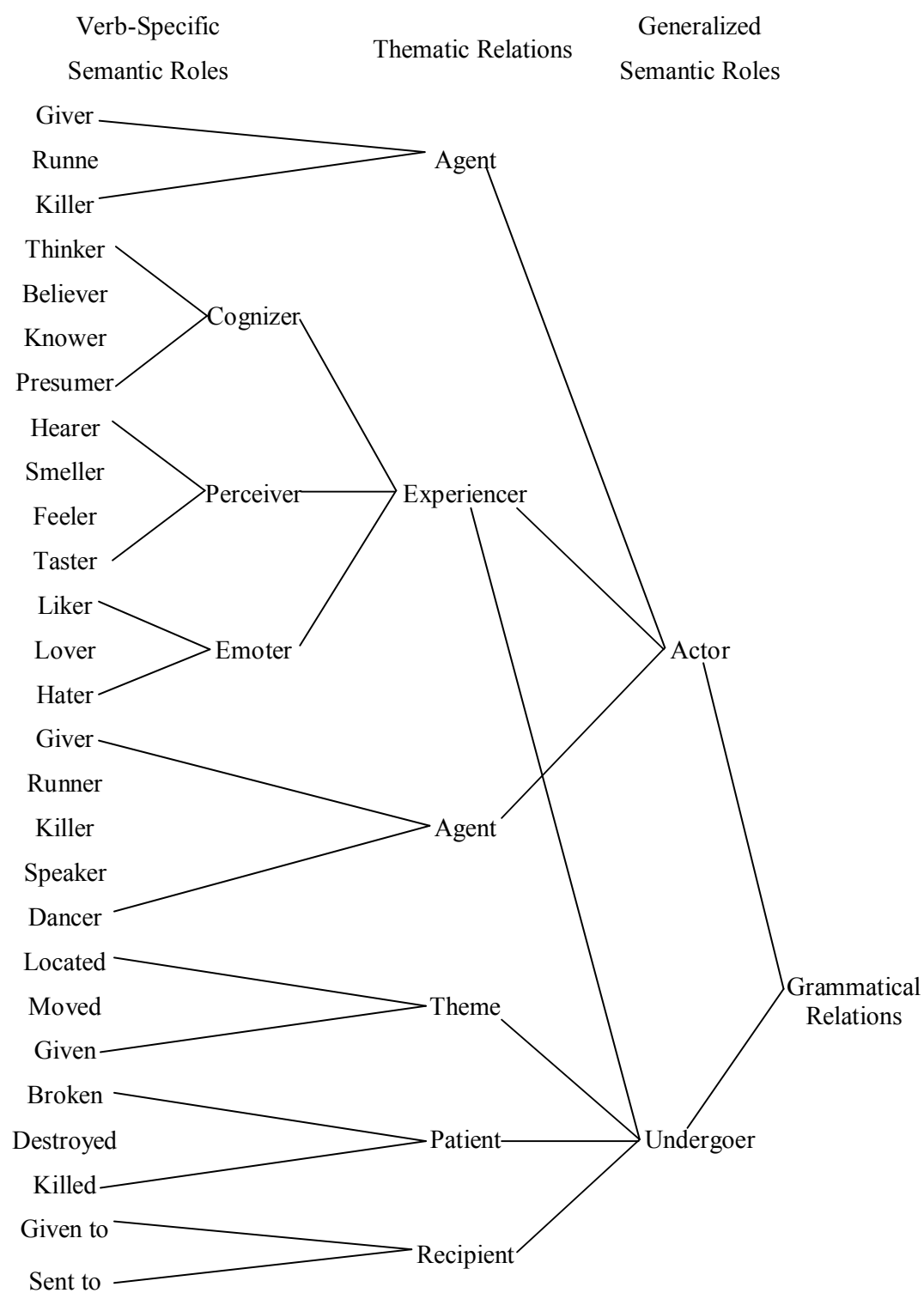


Figure 3.2 Relation of macroroles to thematic relations

3.5.1. Actor-undergoer hierarchy

As stated above, actor and undergoer are generalized semantic roles whose prototypes are the thematic relations AGENT and PATIENT, respectively.⁷ Generally speaking, the actor is the most agent-like argument, while the undergoer is the most patient-like. Macroroles are motivated by the fact that in grammatical constructions, groups of thematic relations are treated alike. Agent, effector, experiencer, perceiver, possessor, etc. can be the subject of an active verb, while patient, theme stimulus, possessed, etc. can be direct object.

Actor and undergoer are generalizations across specific semantic argument types, as defined by LS positions. This is illustrated in VanValin (1999b) as follows.

- (3.28) *kill* [**do'** (x, \emptyset)] CAUSE [BECOME **dead'**(y)]
 see **see'** (x, y)
 put [**do'** (x, \emptyset)] CAUSE [BECOME be-LOC' (y, z)]
 present [**do'** (x, \emptyset)] CAUSE [BECOME **have'** (y, z)]

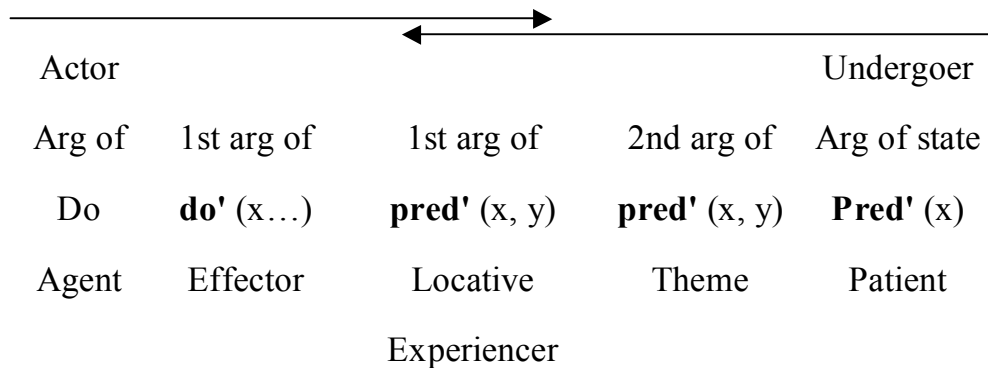
Actor

Undergoer

The x argument of all of these verbs functions as the actor, regardless of whether it is the first argument of the generalized activity verb **do'** as with *kill*, *put* and *present*, or the first argument of a two-place state predicate, as with *see*. With two-place transitive verbs like *kill* and *see*, the y argument is the undergoer. With three-

place verbs like *put* and *present*, the situation is potentially more complex. *Put* allows only the z argument to be undergoer, with locational predicates the first argument is the location and the second argument is the located entity.

The relationship between LS argument positions and macroroles is captured in the Actor-Undergoer Hierarchy proposed by VanValin and LaPolla (1991:146).



[→=increasing markedness of realization of argument as macrorole]

Figure 3.3 The Actor-Undergoer hierarchy

The basic idea of this hierarchy is that in a logical structure the leftmost argument in terms of the hierarchy will be the actor and the rightmost will be the undergoer. The above hierarchy shows that the prototypical actor is an agent, whereas the prototypical undergoer is a patient. This hierarchy is primarily based on English verb argument structure. A question that arises here is whether Farsi argument structure follows this hierarchy. To answer this question I will apply this hierarchy to the argument structure of Farsi verbs.

(3.29) a. Minâ amdan livân râ šekast.

Mina on purpose vase OBJ broke.

‘Mina broke the vase on purpose.’

Do (Minâ, [[**do'** (Minâ, ø)] CAUSE [BECOME
broken' (livân)]])

b. Minâ mâdar-aš râ dust dârad.

Mina mother-poss OBJ like have-3sg

‘Mina likes her mother.’

c. Minâ tasâdofan livân râ šekast.

Mina accidentally vas OBJ broke-3sg

‘Mina broke the vase accidentally.’

d. Minâ yek dočarxe dârad.

Mina one bicycle have-3sg

‘Mina has a bicycle.’

The above sentences show that agents, effectors, experiencers and locatives can serve as actor in Farsi. *Minâ* is the actor in all of these sentences, but it has different thematic roles in each sentence.

(3.30) a. Rezâ šîše râ šekast.

Reza glass OBJ broke.

‘Reza broke the glass.’

d. Rezâ xâhar-aš râ asabâni kard.

Reza sister-poss OBJ angry did

‘Reza angered his sister.’

c. Rezâ kif-aš râ por az ketâb kard.

Reza bag-Poss OBJ full from book did.

‘Reza filled his bag with books.’

d. Rezâ ketâb râ az Ali gereft.

Reza book OBJ from Ali take

‘Reza took the book from Ali.’

Sentences in (3.30) show that patients, experiencers, locatives and themes can function as undergoer. All noun phrases followed by the postposition *râ* are undergoers. In (3.30a) *šise* ‘glass’ is a patient, in (3.30b) *xâhar* ‘sister’ is an experiencer, in (3.30c) *kif* ‘bag’ is a locative, and in (3.30d) *ketâb* ‘book’ is a theme.

It can be seen in (3.29-3.30) that locatives and experiencers can act as either actor or undergoer. They can also occur as non-macrorole as the following examples illustrate:

(3.31) a. Rezâ ketâb râ be Ahmad dâd.

Reza book OBJ to Ahmad gave.

‘Reza gave the book to Ahmad.’

b. Zohre majala râ dar qafase gozâšt.

Zohre magazine OBJ in shelf put.

‘Zohre put the magazine in the shelf.’

In these two sentences *Ahmad* and *qafasa* ‘shelf’ are locatives but they are not macroroles. From the examples in (3.29-30) it can be seen that agents, effectors, experiencers and locatives can function as actor. On

the other hand, patients, locatives and themes can function as undergoer.

Having presented different thematic relations functioning as actor or undergoer in Farsi, I am, now, in a position to address the question of actor-undergoer hierarchy in this language. In any given clause, there may be arguments bearing more than one of these thematic relations. The choice of the argument which will be actor or undergoer is not random. As the following sentences show, if both agent-effector and instrument are present, only the agent-effector can serve as actor.⁸

(3.32) a. Farid dar râ bâ kelid bâz kard.

Farid door OBJ with key open did.

‘Farid opened the door with a key.’

b. kelid dar râ bâz kard.

key door OBJ open did.

‘The key opened the door.’

c. *kelid dar râ bâ Farid bâz kard

key door OBJ with Farid open did.

‘*The key opened the door with Farid.’

In (3.32a) *Farid* is an agent and *kelid* ‘key’ an instrument. In such a clause only agent may be the actor. The ungrammaticality of (3.32c) shows that in the presence of the agent-effector argument, the instrument can not function as actor. Indeed, there is an absolute

priority of agent-effector over instrument for actor. The actor may be an instrument only if there is no agent argument in the logical structure of the verb. These data establish the hierarchy **agent-effector**> **instrument** for the interpretation of the actor.

Verbs like *daryâft kardan* ‘to receive’ have locative actors. This can be illustrated by the following example.

(3.33) *Farid nâme râ daryâft kard.*

Farid letter OBJ receive did

‘Farid received the letter.’

In this sentence *Farid* is a locative (recipient) and *nâme* ‘letter’ a theme. As seen, only the locative *Farid* may be the actor. If a verb has both effector and locative arguments, the effector outranks the locative for actorhood.

(3.34) *Ali bâ divâr barxord kard.*

Ali with wall clash did

‘Ali hit the wall.’

Ali here is both the effector and theme, and *divâr* ‘wall’ locative; only the effector theme may be the actor.

(3.35) **divâr bâ Ali barxord kard.*

wall with Ali clash did

‘The wall hit Ali.’

Thus, the hierarchy of accessibility to actorhood is **agent-effector**> **instrument**> **locative**, when more than one of the relations occur in

a clause. Now let's look at the situation regarding undergoerhood. As it was mentioned earlier, patient is the prototypical undergoer. Thus, patient never alternates with any other argument type. As with actor, there is a ranking hierarchy for undergoerhood, with the prototype patient [...**pred'** (x)] at the top, then the second argument of two-place state predicates (i.e....**pred'** (... , y)), and then the first argument of two-place state predicates (i.e....**pred'** (x, ...)). The following sentences show that if both theme and locative are present in a logical structure, only the theme may occur as undergoer.

(3.36) a. Farid ketâb râ be Ahmad dâd.

Farid book OBJ to Ahmad gave.

‘Farid gave the book to Ahmad.’

[Do (Farid, [**do'** (Farid)]) CAUSE [BECOME **have'** (Ahmad, ketâb)]

b. *Farid Ahmad râ ketâb dâd.

Farid Ahmad OBJ book gave.

‘Farid gave Ahmad the book.’

In (3.36) *ketâb* is a theme and *Ahmad* a locative. In logical terms, *Ahmad* is the first argument of **have'** (x, y) and *ketâb* its second argument. Here only the second argument of **have'** can function as undergoer. Thus the hierarchy of accessibility to undergoerhood is **patient**> **theme**> **locative**.

From the above observations, I conclude that Farsi follows the Actor-Undergoer hierarchy presented in Figure (3.3).⁹

3.5.2. Transitivity

Transitivity is traditionally defined in terms of the number of arguments a verb takes overtly in the syntax, but RRG makes a distinction between syntactic and semantic transitivity (VanValin and LaPolla 1997). The syntactic valence of a verb is the number of overt morphosyntactically coded arguments it takes, while the semantic valence refers to the number of semantic arguments that it can take. These two notions of transitivity are not coincident. VanValin and LaPolla (1997:147) present the non-identity of semantic and syntactic valence in English verbs as the following table shows:

Semantic valence		Syntactic valence
rain	0	1
die	1	1
eat	2	1 or 2
put	3	3 or 2

Table 3.6 Non-identity of semantic and syntactic valence

Rain has no argument semantically, but because all simple English clauses must have subject, it has a syntactic valence of 1. *Eat* can have one argument as, *Mary ate*, or two as in *Mary ate an apple*.

Put can have three core arguments, as in *Dana put the files on the table*, or it can have only two, as in *Dana put the files away*.

Because of the non-identity of semantic and syntactic valence, transitivity cannot be characterized in terms of the number of syntactic arguments a verb takes, but must be defined in terms of the number of macroroles that it takes.

3.5.3. Transitivity in Farsi

Traditional grammarians have distinguished three cases of transitivity as intransitive ‘*lazem*’ transitive ‘*mota’adi*’ and ‘*dovajhi*’ (Khanlari 1994, Shari’at 1989, Shafa’i 1983). According to these scholars intransitive verbs need only a subject, while transitive ones require both subject and object. There are some verbs that can act as intransitive or transitive. If they take one argument they are considered as intransitive and if they take two arguments they are considered as transitive.¹⁰ These three classes of verbs can be illustrated by the following sentences.

(3.37) a. Ali âmad ‘Ali came’

b. Minâ yek sib xord.

Mina one apple ate.

‘Mina ate an apple.’

c. šise šekast.

glass broke

‘The glass broke.’

d. sang šišē rā šekast.

stone glass OBJ broke.

‘The stone broke the glass.’

In (3.37a), the verb *âmad* ‘came’ takes only one agent argument serving as actor. But in (3.37b), the verb *xord* ‘ate’ has two arguments, an actor ‘Minâ’ and an undergoer ‘yek sib’. Sentences (c-d) above, show that a verb like *šekastan* ‘to break’ has variable transitivity: it can occur with only one argument, in which case it is intransitive, or it can appear with two, in which case it is transitive. The logical structure for the verb *šekast* in (3.37c) would be BECOME **broken'** (x), on the other hand, the logical structure in (d) would be [**do'** (x, ø)] CAUSE [BECOME **broken'** (y)]. Thus, the difference between (c) and (d) in (3.37), results from the number of macroroles. Indeed, there is a systematic relationship between the number of arguments in logical structure and the transitivity of a verb. Given the logical structure of a verb, its transitivity can be predicted by the Default Macrorole Principles proposed by VanValin and LaPolla (1997:150).

(3.38) Default macrorole assignment principles

- a. Number: the number of macroroles a verb takes is less than or equal to the number of arguments in its logical structure.

1. If a verb has two or more arguments in its logical structure, it will take two macroroles.
 2. If a verb has one argument in its logical structure, it will take one macrorole.
- b. Nature: for verbs which take one macrorole
1. If the verb has an activity predicate in its logical structure, the macrorole is actor.
 2. If the verb has no activity predicate in its logical structure, the macrorole is undergoer.

According to these principles the number of macroroles which a verb receives corresponds closely to the characterization of a verb in terms of the traditional notion of transitivity: single macrorole verbs are intransitive, two macrorole verbs are transitive. The traditional notion refers to a number of arguments that appear in the syntax. As VanValin (1999b) points out, it is necessary to distinguish semantic transitivity, which refers to the number of macroroles, from syntactic transitivity, which refers to the number of core arguments. This distinction is termed ‘M-transitivity and S-transitivity’ in RRG following Narasimhan (1998). As a good example of the non-correspondence between semantic transitivity and syntactic transitivity, VanValin and LaPolla (1997) refer to the problem of two-place activity predicates. Their claim is that two-

place activity verbs such as *eat*, *drink* and *run* involve the following macrorole assignment:

"The second argument of a two-place activity predicate is necessarily non-referential and therefore takes a non-macrorole value in violation of macrorole principles assignment, according to which a verb with two LS arguments normally gets two macroroles, actor and undergoer."

Now, let's devote some space to the analysis of two-place activity predicates in Farsi to see whether it supports the special treatment of VanValin and LaPolla or not.

3.5.4. Two-place activity predicates in Farsi

As it was mentioned in Section (3.3), the logical structure of activity predicates is represented in RRG as follows:

(3.39) **do'** (x, [**predicate'** (x) or (x, y)])

This logical structure tells us that activity predicates may have one or two core arguments. In Farsi, some activity predicates such as verbs of creation (*neveštan* 'to write', *sâxtan* 'to make'), verbs of consumption (*xordan* 'to eat' *nušidan* 'to drink' *kešidan* 'to smoke') and verbs of performance (*xândan* 'to read/to recite' *kardan* 'to do') may take a second syntactic argument. If these predicates have a non-referential second argument, they behave like

activity predicates. On the other hand, if the second argument takes a marker of specificity or quantity, these predicates behave as accomplishments. A contrast between sentences in (3.40) and (3.41) illustrates this:

(3.40) a. *pesar-hâ še'r mi-xân-and.*

boy-pl poem IMP-read-3sg

‘The boys read poetry.’

b. *Ali nâme nevešt.*

Ali letter write-PAST-3sg

‘Ali did letter writing.’

c. *bačče-hâ qazâ xordand.*

child-pl food eat-3pl

‘The children did food-eating.’

All of the sentences in (3.40) have a non-referential second argument. *še'r* ‘poem’, *nâme* ‘letter’ and *qazâ* ‘food’ have no markers of referentiality or quantity.

Now, let's compare these sentences with (3.41) in which the second arguments have a marker of referentiality or quantity.

(3.41) a. *pesar-hâ še'r râ mi-xân-and.*

boy-pl poem OBJ IMP-read-3pl.

‘The boys read the poem.’

b. *Ali yek nâme nevešt.*

Ali one letter write-PAST-3sg

‘Ali wrote a letter.’

c. bačče-hâ qazâ râ xord-and.

child-pl food OBJ ate-3pl

‘The children ate the food.’

The sentences in (3.40) show different properties comparing with those of (3.41). Sentences (3.40) having a non-referential second argument are compatible with Test 4 (for an hour) but those of (3.41) are not.

(3.42) a. pesar-hâ barâye yek sâ’at še’r mi-xân-and.

‘The boys read poetry for an hour.’

b. Ali barâye yek sâ’at nâme nevešt.

‘Ali did letter writing for an hour.’

c. bačče-hâ barâye yek sâ’at qazâ xord-and.

‘The children did food-eating for an hour.’

d. *pesar-hâ barâye yek sâ’at še’r râ mi-xân-and.

‘The boys read the poem for an hour.’

e. *Ali barâye yek sâ’at yek nâme nevešt.

‘Ali wrote a letter for an hour.’

f.* bačče-hâ barâye yek sâ’at qazâ râ xord-and.

‘The children ate the food for an hour.’

The ungrammaticality of (3.42 e-f) shows that when the second arguments of activity predicates take a specificity marker such as the postposition *râ*, the quantity maker *yek* ‘a’ etc. their Aktionsart

will be changed. As Zucchi and White (2001) have stated, the domain of application of *for*-adverbs is restricted to non-quantized event predicates. Jackendoff (1990) points out that the lack of referentiality of the nominal bearing the internal theta role ensures an unbounded or non-delimited reading of the event. It is noteworthy that sentences in (3.42 e-f) are compatible with adverbs denoting accomplishment. Ghomeshi and Massam (1994:191) argue that the direct object arguments can delimit an event and give rise to bounded events or accomplishments while the non-referential objects denote processes and are canonically intransitive. Ghomeshi and Massam (1994:191) give the following examples:

(3.43) a. man sib rā dar do daqīq xordam.

I apple OBJ in two minute ate-1sg

‘I ate the apple in two minutes.’

b.* man dar do daqīq sib xordam.

I in two minute apple ate-1sg.

‘I ate apples in two minutes.’

Thus, as the following test shows, activity predicates having a referential argument are compatible with Test 5. It can be seen that (3.42)' is the converse of (3.42) presented above.

(3.42)' a.* pesar-hā dar yek sâ'at še'r mi-xân-and.

‘The boys read poetry in an hour.’

b.* Ali dar yek sâ'at nāme nevešt.

‘Ali did letter-writing in an hour.’

c. * bačče-hâ dar yek sâ’at qazâ xord-and.

‘The children did food-eating in an hour.’

d. pesar-hâ dar yek sâ’at še’r râ mi-xan-and.

‘The boys read the poem in an hour.’

e. Ali dar yek sâ’at yek nâme nevešt.

‘Ali wrote a letter in an hour.’

f. bačče-hâ dar yek sâ’at qazâ râ xord-and.

‘The children ate the food in an hour.’

Another difference between predicates having non-referential arguments¹¹ and those with referential ones is that the former can not be separated from the verb, but the latter can (Dabir-Moghaddam 1998, Ghomeshi and Massam 1994, Karimi 2001b, Megerdooonian 2002). For example, in sentences (3.44 c-d), a noun phrase such as a benefactive, a recipient, or an adverbial can be appeared between the argument and the verb. On the contrary, this is not possible for (3.44 a-b).

(3.44) a. * pesar-hâ še’r sari’ mi-xând-and.

boy-pl poem quickly IMP-read-PAST-3pl.

‘The boys read poetry quickly.’

b. * bačče-hâ qazâ dir xord-and.

child-pl food late eat-PAST-3pl.

‘The children did food-eating late.’

c. *pesar-hâ še'r râ sari' mi-xând-and*

'The boys read the poem quickly.'

d. *bačče-hâ qazâ râ dir xord-and.*

'The children ate the food late.'

The oddness of (3.44 a-b) shows that these non-referential arguments are part of the predicate. Further evidence supporting this, is presented in Megerdooian (2002: ch5) which investigates non-specific direct objects of verbs like *xândan* 'to read', *xordan* 'to eat' etc. She argues that these arguments are internal argument of the verb.

The other difference between activity predicates having non-referential second arguments and those with referential ones is the fact that they can not appear together in a coordination construction. (Dabir-Moghaddam 1998, Karimi 2001a). This can be illustrated by the following examples in (3.45):

(3.45) a. *man yek nâme va in maqâle râ neveštam.*

I one letter and this paper OBJ write-PAST-1sg.

'I wrote a letter and this paper.'

b. *man nâme va maqâle neveštam.*

I letter and paper write-PAST-1sg.

'I wrote letters and papers.'

c. **man nâme râ va maqâle neveštam.*

I letter OBJ and paper write-PAST-1sg.

‘I wrote the letter and paper.’

In (3.45a) both *nâme* ‘letter’ and *maqâle* ‘paper’ are referential, while in (b) both are non-referential. These two sentences are grammatical. But in (c) a referential argument with a non-referential one are appeared together and the resulting sentence is ungrammatical. This shows that these two types of arguments don’t have identical semantic structure.

Another piece of evidence indicating that non-referential arguments are not objects but inherent arguments of activity verbs, can be deduced from the information structure of transitive and intransitive sentences.¹² Farsi has an unmarked SOV word order. However, in transitive sentences, the direct object may occur clause initially and function as a topic (Mahootian 1997, Karimi 2001a, among others). Of course, the object in this initial position may be stressed to indicate narrow focus. As the following sentences show, this variability in word order is possible in sentences with referential objects but not with those including non-referential ones.

(3.46) a. *pesar-hâ âvâz râ xândand.*

boy-pl song OBJ sing-PAST-3pl

‘The boys sang the song.’

b. *âvâz râ pesar-hâ xând-and.*

song OBJ boy-pl sing-PAST-3pl.

c. *pesar-hâ âvâz xând-and.*

boy-pl song sing-PAST-3pl.

‘The boys sang.’

d. *âvâz pesar-hâ xând-and.

song boy-pl sing-PAST-3pl.

In (3.46a) *âvâz* ‘song’ is a referential argument taking the postposition-*râ*. This can be uttered as (b) in which the object is separated from the verb and topicalized. On the other hand, in (3.46c) the same NP, *âvâz*, is non-referential and as (3.46d) shows this kind of variation of word order is not possible. In my view, it can be concluded that non-referential second arguments of activity verbs are not objects because they can not be separated from the verbs as in transitive sentences.

From the above observations, I conclude that the second argument in activity verbs of consumption, creation, performance, etc. is part of the predicate, rather than the participant in the event. Moreover, I have shown that if these second arguments, take a referentiality maker, the Aktionsart of the verb is changed to accomplishment. Thus, Farsi supports the special treatment for two-place activity predicates proposed by VanValin and LaPolla (1997). It also supports the contrast made between syntactic and semantic transitivity in RRG. Indeed, activity predicates with non-referential or non-specific second arguments are regarded as intransitive predicates.

Interestingly enough, my claim is supported by Dabir-Moghaddam's observations about the complex predicate constructions. According to Dabir-Moghaddam (1998), a direct object in Farsi may lose its grammatical endings and incorporate to the verb to create an intransitive compound verb. Presenting some examples like (3.47), he concludes that in (b) the object *qazâ* 'food' has lost the referentiality marker-*râ* and is incorporated to the verb *xordan*.

(3.47) a. *bačče-hâ qazâ râ xord-and*.

child-pl food OBJ eat-3pl.

'The children ate the food.'

b. *bačče-hâ qazâ xord-and*.

child-pl food eat-3pl.

'The children did food eating.'

It should be noted that his findings concerning incorporation substantiate the special treatment of RRG that claims that in many languages the inherent arguments may or even must be realized as an incorporated noun (VanValin and LaPolla 1997:150).

3.6 Summary

This chapter was devoted to the semantic structure of simple sentences. First of all, I presented the system of lexical decomposition and aspectual verb classification used in RRG.

Having applied the semantic and syntactic tests to Farsi verbs, I have shown that Farsi follows the RRG's system of aspectual verb classification and proposed an aspectual classification of verbs, in this language. The logical structures and thematic relations have also been studied. I have presented the logical structure for a selection of each verb class. Afterwards, in Section (3.5) I have introduced the notions of generalized semantic roles, actor and undergoer in this theory of grammar, and shown that Farsi follows the actor-undergoer hierarchy presented by VanValin and LaPolla.

Finally, I have analyzed the problem of transitivity in Farsi in terms of macroroles. Throughout the analysis of two-place activity predicates, I have shown that Farsi supports the distinction between syntactic transitivity and semantic transitivity that is proposed by Narasimhan (1998) and adopted by VanValin and LaPolla (1997). The findings of this chapter support the notion of universality of the semantic structure theory in RRG and the importance of notions like lexical representation, logical structure, thematic relation and generalized semantic macroroles.

Notes to Chapter 3

1 While VanValin and LaPolla are first to propose to term this class active accomplishment, Dowty (1979) pointed out that there is a variant class of Aktionsart in activity verbs considering the following examples:

John walked in the park for/*in ten minutes.

John walked to the park in/*for ten minutes

2 It should be noted that in addition to these expressions, there is an auxiliary verb *dāštan* ‘to have’ preceding the main action verb to express the progressive aspect. However, in some situations, this construction expresses near future rather than progressive aspect. Thus, I don’t use this to test predicate classes.

3 For more information on local cooccurrence effect see VanValin and LaPolla (1997:95-100).

4 The system of lexical representation presented here, despite similar terminology, differs in crucial ways from the ones used in earlier works (Foley and VanValin 1984, VanValin 1993b) and other works in RRG prior to the publication of VanValin and LaPolla (1997). The following table compares the verb class taxonomy presented in this section with that assumed in works prior to VanValin and LaPolla (1997).

VVLP lable	Pre-VVLP lable
State	State
Activity	Activity
Achievement	Achievement (punctual)
Accomplishment	Achievement (durative)
Active accomplishment	Accomplishment
Causative state	_____
Causative activity	_____
Causative achievement	Accomplishment
Causative accomplishment	Accomplishment
Causative active accomplishment	_____

5 For a survey of other theories of semantic macroroles and a critical comparison of them with the RRG approach see VanValin (1999a).

6 See VanValin (2002b) for arguments as to why there are only two macroroles.

7 Dowty (1991) proposed a different version of macroroles, which he called ‘proto-roles’. He argued that, unlike the notions of actor and undergoer in RRG, proto-roles are not discrete but rather gradient categories with fuzzy boundaries. Yet, subsequent research has shown this idea of non-discrete generalized semantic roles to be untenable.

8 See Foley and VanValin (1984: Section 2.6) and VanValin and LaPolla (1997: ch4) for more information on actor-undergoer hierarchy.

9 For further cross-linguistic evidence supporting the actor-undergoer hierarchy the reader is referred to VanValin (1999a).

10 These verbs include *šekastan* ‘to break’, *poxtan* ‘to cook’, *rixtan* ‘to shed’, etc. In Farsi, the same form of these verbs can be used to denote an intransitive or transitive predicate. In the transitive use, the subject undergoes a change of state, hence in (3.37c) the glass becomes broken. The transitive counterpart in (3.37d) depicts the causation of the change of state that the object undergoes. In this sentence, the subject *sang* ‘stone’ has caused the glass to break. For more information on transitivity alternations in Farsi see Megerdooian (2002:ch3).

11 Megerdooian (2002 Section 5.4) argues that the nominals like those in (3.42'a-c) are referential. For her detailed analysis see the reference mentioned above.

12 See Chapter 5 for detailed analysis of transitive and intransitive sentences in terms of focus structure.