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A Study of Grammatical Relation Hierarchy in the Contemporary Written Persian Language*

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Typology is one of the sub-branches of linguistics. "It is the study of linguistic patterns that are found cross-linguistically, in particular, patterns that can be discovered solely by cross-linguistic comparison" (Croft, 1990, p. 1). The purpose of typology is to determine the dominant tendencies of the languages. Some of these tendencies are reflected in the form of different hierarchies on word order in the languages. In this paper, we will study one of these hierarchies which is called "grammatical relation hierarchy" and can be shown as follows: subject < direct object < indirect object < oblique in the Persian language. Our purpose was to see if word order of the grammatical relations in the Persian sentences obeys from this hierarchy. Our corpus included 1,000 transitive and intransitive indicative simple independent sentences. Our findings show that there can be seen some disorders in the attested word order of the grammatical constituents in Persian and they do not totally obey this hierarchy but it seems it is mostly the oblique constituent which causes these disorders. Thus, either it should be eliminated from our study on this hierarchy or we have to accept that Persian language, does not follow the grammatical relation hierarchy which is considered as a "typological universal".

Keywords: typology, hierarchy, markedness, basic order, implicational universals

Introduction

Typology is a kind of studying language which is based on objective data of different languages and comparison of these data. In spite of having a relative long history of cross linguistic surveying, elapsing slightly more than a century, since the term “typology” was employed in studying languages first time (First time, typology was applied in 1909) (Sharifi, 2004, p. 1).

Typology has different applications in linguistics. It is simply used as “classification” or “taxonomy”. It was possible to divide every phenomenon into classes or categories. Later this general meaning turned into specialized meaning and applied as “classification of cross linguistic structural types”. Afterwards, typology term became more specialized and limited to study of language patterns achieved only by cross linguistic comparison. Having provided the works of Greenberg in 60s, typology was introduced as subcategory of linguistics which explains a particular area of language facts which are cross linguistic patterns. In this period, typology concerns more to find syntactic and morphological implicational universals. Ultimately, typology was applied as a language approach

*In this paper, the following notations and abbreviations are used: DO: direct object marker; EZ: erect (genitive) marker.
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beside other approaches like generative approach after 70s. Due to its closeness to functional approach in emphasizing functional meaning of language analysis, it is introduced as “functional-typological approach”. This approach is recognized by Talmy Givó, Paul Happer and Sandra Thompson (Croft, 1990, pp. 1-2).

In 20th century, typology does not focus on just two areas of morphology and syntax; it is acceded to the other branches of language. Because of this, we have observed phonetic typology, prosodic features typology, lexical typology, semantic typology, and semiotic typology. But development in syntactic area was more than the other areas. Many works of typologist have done from 70s onwards in this area. The main focus is on word orders of different languages in the scope of syntactic (Sharifi, 2004, p. 8). That is, many efforts have been accomplished to study massive language corpus which had been collected from various languages around the world; word orders universals have been identified and after presentation it will be excluded for more languages to prove their being universals. Introducing typological universals, some illustrations will be presented. Considering typological universals, such as word order universals, are naturally different from mentioned universals, because they are based on objective different languages data and mostly implicational universals are not absolute universals. While the mentioned universals in generative grammar might be achieved by studying a language as well. In addition, a principle which is introduced in this grammar is considered as an absolute universals.

Some proposed key words in typological word orders is “hierarchy”. This meaning connects with the word “markedness” and retrieves its meaning thereof. Indeed hierarchy and markedness play an important role in constituting language typology.

The meaning “markedness” was introduced by Prauge school first time; marked and unmarked values of a category about phonological language system were proposed by Nicholas Trubetzkoj. It was Roman Jakobson who applied it for the first time on the morphosyntactic and semantic fields. Later, this meaning was accepted from two generative and typological approaches but in different ways. The important base of markedness in typology is existence of asymmetric or unequal grammatical features such as asymmetric inflectional features, asymmetric distribution of words in lexical classes and asymmetric syntactic structures. These asymmetries result in markedness and implicational universals relation, typological hierarchy and remarkable samples (Croft, 1990, p. 64).

Two important points should be considered in typological hierarchy. First, typological hierarchy indicates or predicts cross-linguistic variations patterns, that is, they predict which linguistic types are possible and observable and which ones are not. For instance, number category which is shown in this order: singular < plural < dual < trial < paucal, implicitly indicates that the following linguistic types could exist:

1. Languages which include only single noun form. This form is used for either singular or other noun forms. In other words, there is no number category in languages.
2. Languages which include singular, dual and plural form with respect to their set.
3. Languages which involve singular, dual and plural form in case of their set.
4. Languages having singular, dual, trial, paucal and plural in case of their set. As shown in the following hierarchies, other linguistic type should not exist with respect to number. (Croft, 1990, pp. 96-97)

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1 Implicational universals: Implicational universals which are also called statistical universals often indicate dominant tendency. Therefore, they may not exist in all language.
2 Absolute universals: Absolute universals exist in all language. These universals are few.
GRAMMATICAL RELATION HIERARCHY

Second, hierarchies of typology could be presented as collections of implicational universals. For example, it could be explained in the following way in case of number hierarchy: If a language includes more than dual or paucal form for its set, it will definitely include plural form. Also, if a language includes a plural form in its set, it will certainly include a singular form. The direction of prediction is definitely from down to up and unilateral in the hierarchy. That is, if a language involves a singular form in its set, it could not be predicted whether it includes plural or dual form as well.

This paper discusses with one of the above-mentioned hierarchy which is known as grammatical relation hierarchy in the written contemporary Persian language. It is shown by the following order: oblique > indirect object > direct object > subject.

This hierarchy shows the order of constituents based on their grammatical relation in a sentence. The corpus collection for this research is 1,000 sentences which are taken randomly from different parts of the Khorasan newspaper. Two points regarding this corpus should be considered. First, as pointed out, the corpus includes the whole parts of Khorasan paper and subjectively is unlimited. Second, authors somehow tend to idealization which is accepted inevitably and traditionally in typology in this research. That is, only basic order of the study has been considered and the other orders have been ignored consciously in our surveys. This is accomplished to restrict the research area as it is not possible to concern about the whole of orders practically. Furthermore, as it is explained, this meaning is accepted among typologists; however, there is no some definition for that. Some researchers define basic order as the same as dominant order and some introduce it equal to unmarked order. Some of them distinct both equal or three of them from each other. According to Slavirská’s (1988, p. 8) definition, basic order could be considered as a transitive indicative independent neutral simple sentence order which its participants are full noun phrases; its subject is definite, agentive and human, its object is definite semantic patient and its verb represents an action, not a state or an event. As explained, the definition restricts word orders considerably in a sentence. Authors suppose that there is no need to limit basic order in the contemporary Persian language in such a way. So we accept part of this definition and consider the basic order as transitive and intransitive indicative independent sentence order.

Literature Review

This part deals with the background researches done on word order typology in Persian. Samare (1990) believed the word order of the main clause in Persian is OV (object-verb), however, it should be said that Persian language is not very rigid in this case and we can say the language has the free word order, since SOV (subject-object-verb) and the other order of words are grammatical or accepted regarding condition. Therefore, the parameter of word order in the main clause is not very critical in this language. Samare divides language to the following classes based on the general typological specifications: (1) family: from Iranian language family, of Indo-Iranian branch, belonged to Indo-European languages; (2) morphology: agglutinative and a partial sense of synthetic languages; and (3) sentence word order: action-agent.

The other research is Dabir-Moghaddam’s (1997) study. He has a diachronic view to Persian language in different periods of the middle Persian, Old Persian and Contemporary Persian, and his attempt to demonstrate their adaptation to proposed implicational in typology field and based on this issue makes decision on status of Persian word orders. He employs Dryer’s criteria to achieve his aim. Dabir-Moghaddam (1997) concluded in his
study that language behavior of the contemporary Persian language is much more similar to verb medial languages than the middle and Old Persian. Although, objective and statistical research show that at least simple sentences in the contemporary Persian keep having a strong tendency to be verb final. His justification in contemporary language behavior is standardization and language planning issue on the other hand; he believes that lack of change in verb-final form to verb medial of simple sentences in Persian language is due to being under pressure by an outside language factor that is standardization.

Golafam (2004) surveyed the effect of animality factor on Persian word order. He believes it is crucial in the constituent structuring of Persian language, but he surrenders no statistical data for his claim.

Dabir-Moqhaddam and Sharifi (2005) sought the effect of some typological hierarchies, such as typological hierarchies of acquaintance, topic < comment and given < new, hierarchies of the universal sequencing conventions, definiteness and referentiality and personal, social status and semantic role hierarchies on word order in Persian language. They use the Allan’s (1987) framework on word order in Persian, especially on the order of constituents in co-ordinate phrases. Their results show the main order of constituents in Persian language follows the above hierarchies. A very high flexibility of Persian word order, especially in clauses, leads to many exceptions and frailties among word order hierarchies.

Monshi Zade and Naseh (2007) research the syntax of the Pahlavi middle Persian and specified the various constituent orders in that period. The constituents and syntactic structures they studied are sentence structure, preposition, AP (adjective phrase), comparative structure, relative clause, auxiliary verb, negative particle, copula verb, affixes, prepositional structure, number and wh-question. The findings show the Pahlavi language has a free word order, remarkably among noun and adjective in AP. So we can place Persian language not on a special language typology, but on a spectrum. But, generally speaking, it is claimed that Pahlavi is an agglutinative language with a partial sense of synthetic languages. Also, the word order of main clause is OV, while most of the constituents follow the VO (verb-object) pattern.

Sharifi (2008) verified Hawkins’ ideas of the word order typology on the Persian language. Her findings show that Persian word order is such a special case, not in contemporary period, but in its whole era, that hardly matches the typological principles and predictions. In other word, some of Hawkins’ predictions, principles or explanations regarding the Persian language (sometimes regarding Contemporary Persian, Old or Middle Persian, and sometimes neither on the first two, nor on the three of them) do not come true. She thinks the reason is that although the Persian language has had a no rigid word order in all its history and the word order of the constituents inside the phrases has changed during this long time but the word order of the constituents inside the clause has not had a remarkable change. So, either we have to eliminate the OV and VO word order from our studies or have to accept that the Persian language, in spite of the typological predictions, follows no change in its VP (verb phrase) and at least regarding this variable, it is a consistent language not an inconsistent one, as the persons like Hawkins predicted.

Data Analysis

In this part, we will focus on 1,000 language corpus sentences based on the grammatical relation hierarchy subject < direct object < indirect object < oblique to find out what kind of linear order\(^3\) results in. Which one does

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\(^3\) In this research, the phrase “linear order” sometimes has used in the meaning of “word order” and sometimes in the meaning of “the linear order of the words linguistic constituents”.
follow the mentioned hierarchy and which one does not? The aim at following of the hierarchy is as an example based on a hierarchy in a linear order, the direct object should sit on after the subject. If a linear order does not include a subject, the direct object should lie on the first position. Considering another hierarchy with this regard in a linear order, the indirect object should stand on after the direct object. However, if the direct object does not exist in this linear order, the indirect object ought to stand on after the subject. We will discuss language corpus in the following. In Table 1, there are different observed orders of various grammatical relation in data study and also frequency of each.

Table 1

<table>
<thead>
<tr>
<th>Frequency Rank</th>
<th>Linear Order</th>
<th>Frequency</th>
<th>Frequency Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Subject &lt; oblique</td>
<td>212</td>
<td>21.2</td>
</tr>
<tr>
<td>2</td>
<td>Subject &lt; oblique &lt; direct object</td>
<td>162</td>
<td>16.2</td>
</tr>
<tr>
<td>3</td>
<td>Subject &lt; direct object &lt; oblique</td>
<td>96</td>
<td>9.6</td>
</tr>
<tr>
<td>4</td>
<td>Oblique &lt; subject</td>
<td>88</td>
<td>8.8</td>
</tr>
<tr>
<td>5</td>
<td>Subject &lt; direct object</td>
<td>83</td>
<td>8.3</td>
</tr>
<tr>
<td>6</td>
<td>Oblique &lt; subject &lt; oblique</td>
<td>63</td>
<td>6.3</td>
</tr>
<tr>
<td>7</td>
<td>Oblique &lt; subject &lt; direct object</td>
<td>53</td>
<td>5.3</td>
</tr>
<tr>
<td>8</td>
<td>Subject &lt; oblique &lt; indirect object</td>
<td>38</td>
<td>3.8</td>
</tr>
<tr>
<td>9</td>
<td>Subject &lt; oblique &lt; direct object &lt; oblique</td>
<td>34</td>
<td>3.4</td>
</tr>
<tr>
<td>10</td>
<td>Oblique &lt; subject &lt; oblique &lt; direct object</td>
<td>31</td>
<td>3.1</td>
</tr>
<tr>
<td>11</td>
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</tr>
<tr>
<td>13</td>
<td>Subject &lt; indirect object</td>
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<td>1.5</td>
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<td>14</td>
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<td>1.2</td>
</tr>
<tr>
<td>15</td>
<td>Direct object &lt; oblique</td>
<td>11</td>
<td>1.1</td>
</tr>
<tr>
<td>16</td>
<td>Subject &lt; direct object &lt; indirect object</td>
<td>9</td>
<td>0.9</td>
</tr>
<tr>
<td>16a</td>
<td>Subject &lt; indirect object &lt; oblique</td>
<td>9</td>
<td>0.9</td>
</tr>
<tr>
<td>17</td>
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<td>6</td>
<td>0.6</td>
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<tr>
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<tr>
<td>18a</td>
<td>Direct object &lt; subject</td>
<td>5</td>
<td>0.5</td>
</tr>
<tr>
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<td>Oblique &lt; subject &lt; direct object &lt; indirect object</td>
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<tr>
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<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>19b</td>
<td>Oblique &lt; subject &lt; indirect object &lt; oblique</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>19c</td>
<td>Oblique &lt; indirect object &lt; direct object</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>19d</td>
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<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>20</td>
<td>Oblique &lt; indirect object</td>
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<td>0.2</td>
</tr>
<tr>
<td>20a</td>
<td>Direct object &lt; indirect object</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>20b</td>
<td>Subject &lt; direct object &lt; oblique &lt; indirect object</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>20c</td>
<td>Subject &lt; indirect object &lt; direct object</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>20d</td>
<td>Oblique &lt; direct object &lt; subject</td>
<td>1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

In the following we discuss every single linear order with an example. types of appeared prepositions in this structure, their frequency and consider lack or lack of subordination in linear order of grammatical relation hierarchy (see Types 1-32 and the related examples).
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Type 1 subject < oblique
Example: dalili baraye ta7liq-e futb7-e Iran voj7-d v7 crystals
reason for postpone-EZ soccer-EZ Iran exist does not have
"There is no reason to postpone Iran soccer match."

This linear order subordinates to our considered hierarchy linear order.

Type 2 subject < oblique < direct object
Example: vazef-e gard-o7-qohdar dar Xuzestan 105 nafar-r7 rahi-y-e bimarst7-kard
blow-EZ dust in Khozestan 105 person-DO going-EZ hospital did
"Having blown dust in Khozestan made 105 people go to hospital."

The above-mentioned linear order does not follow with our considered linear order since the oblique stands on the after the subject while it should stand on after the object.

Type 3 subject < direct object < oblique
Example: ta7li-y-e razha-y-e a7xar-e haft-e moesk7-l7-e besyad-ziyadi-r7 baraye
holiday-EZ day-EZ last-EZ week problem-EZ so much-DO for
ahali-y-e sahrak-e Bust7n-o-Golest7n bevoj7d astr
residents-EZ estate-EZ bustan-and-golestan make brought is
"Weekends have made so many problems for residents of Bestan and Golestan estate."

The linear order follows the discussed linear order.

Type 4 oblique < subject
Example: dar aksare bimarst7nh7-hatt7 emk7n-e ta7xia-e marg-e maqzi
in many hospitals even possibility-EZ diagnosing-EZ death-EZ brain
voj7-d v7 crystals
exist does not have
"There is no even possibility to diagnose brain death in many hospitals."

Since in the proposed linear order, the oblique stand on before the subject, it does not follow the concerned linear order, while it should appear after the subject.

Type 5 subject < direct object
Example: mas?ul?n-e fedras7y7n-e futb7l7 sayo7-e-y-e berkneri-y-e ra7is-e
Official-EZ federation-EZ football rumor-EZ head-EZ
komite-y-e enezba7t-y-e fedras7y7n-e futb7l7-r7 tak7zib kardand
committee-EZ discipline-EZ federation-EZ football-DO deny did
"Officials of football association denied the rumor of the head of disciplinary committee
dismissal."

The linear order follows the dominant tendency.

Type 6 oblique < subject < oblique
Example: darbreye in mowzu7 kajfahmih8-y-e ziyadi dar tam5m-e jah7n
about this subject misunderstanding-EZ many in all-EZ world

4 In Persian language, linker "va" is sounded "a" in some contexts.
vojúd dárâd
exist has

“There are many understandings about this issue around the world.”

The oblique moves from after the subject position to before the subject position. Thus it does not correspond with our considered linear order.

Type 7 oblique < subject < direct object

Example: bâ e?teráfât-e motiação hârâkâhân senâsâyí-y-e mâlbâxtegân-râ with confession-EZ accused detectives identification-EZ bankruptcies-DO

âqâz kârdand
begin did

“By the accused person’s confessions, detectives began identifying bankruptcies.”

This linear order also does not follow the linear order of our referred hierarchy, because the oblique stands in the first position rather than the third position.

Type 8 subject < oblique < indirect object

Example: varzéz-e kârgâri dar ostân bâyâd be ye kâj jârîân-e zende omumî sport-EZ laboring in province should to one process-EZ current general va fa?all ta?bilî šavâd and active change becomes

“Laboring sport should be changed to a current, general and active process in the province.”

As the oblique stands on after the subject, following of the grammatical relation hierarchy does not occurred.

Type 9 subject < oblique < direct object < oblique

Example: ânâm bârâyé manzûr tunel-e bozorgi šabih-e ye kâr dâxel-e they for this purpose tunnel-EZ big like-EZ one cave into-EZ

kuh hâfr kârdând mountain delve did

“For this purpose, they delved a big cave like tunnel into a mountain.”

The above-mentioned linear order does not accompany with the concerned linear order as oblique stands on after the subject while, as the second oblique, it should sit on after the direct object.

Type 10 oblique < subject < oblique < direct object

Example: har sâl dar fasîl-e tâbêstan mardom bârâyé tahâyi-y-e nân moštâlè every year in season-EZ summer people for supply-EZ bread problem dârân have

“People have trouble with supplying bread every summer.”

In two cases, the linear order outrages our referred linear order: The first oblique stands in the first, before the subject position and the second oblique after the subject while both should stand on after the direct object.

Type 11 oblique < direct object

Example: dar mosábqât-e robôkâp-e 2008 čin hozûr-e qodratmandi in championships-EZ Robocorp-EZ 2008 China presence-EZ powerful
xāhīmdāšt
will have

“We will have a powerful presence in 2008 China Robocop championship.”

The linear order does not follow the considered dominant tendency as the oblique should stand on before the
direct object.

Type 12 oblique < subject < direct object < oblique
Example: dar ast-e konuni bime naqīš-e mohemmi dar zendegi-y-e ensān in age-EZ current insurance role-EZ importa in life-EZ human
ifā mikonad
play does

“In current age, insurance plays a pivotal role in human’s life.”

As the oblique should stand on after the direct object and go with the final oblique, there is no following in
this linear order.

Type 13 subject < indirect object
Example: sobh-e ruz-e sešāne emdādgrān be jost-e-ju-y-e bāzmāndegān-e morning-EZ day-EZ Tuesday rescuers to searching-EZ survivors-EZ hādese pardāxând
crash occurred with searching survivors of the accident on Tuesday morning.”

The linear order follows the linear order of the considered hierarchy.

Type 14 oblique < subject < indirect object
Example: be gozāres-e xabarānegār-e mā yāzdah šerkat konande be regābar pardāxand
to report-EZ journalists-EZ our eleven participant to competition dealt with

“We are one of eleven participants.”

The oblique stands on the first position rather than indirect object. It also does not follow the considered
hierarchy linear order.

Type 15 direct object < oblique
Example: jalāsei ezerārī bā rojāš-y-e heyāthā-y-e varzešī dāstam
amel emergency with heads-EZ commission-EZ sportive had

“We had an emergency meeting with the head of sport commission.”

Type 16 subject < direct object < indirect object
Example: Mahmud-e Hakimi se ketab-e tāze va nojavānān-y-e xod-rā
Mahmud-EZ Hakimi three book-EZ new and juvenile-EZ himself-DO
be naš-e Qalam sepor
ed to publication-EZ Ghalam devolved

“Mahmud Hakimi gave his three new teen books to Ghalam publication.”

Type 17 subject < indirect object < oblique
Example: in ruznāme be harras-y-e vazīyyat-e maft dar bażarhā-y-e jahānī
this newspaper to study-EZ condition-EZ oil in market-EZ world
GRAMMATICAL RELATION HIERARCHY

paráfrase

dealt with

“This newspaper dealt with the study of oil condition in the world market.”

The three above-mentioned linear orders (see Types 13-17) follow the concerned linear order.

Type 18 oblique < subject < oblique < indirect object

Example: dar sâl-e jârî tarmin-e dândâne udâkân-e 6 ta’l 12 sâle bâ in year-EZ upcoming restoration-EZ th-EZ children-EZ 6 to 12 old with hemâyat-e sâzmân-hâ-y-e binegar dar dastur-e kâr qârâh gereftâ ast support-EZ organizations-PL-EZ insurer in program-EZ lied is “In upcoming year, dental restoration has been under program with support of insurer organization in 6-12 years old children.”

The linear order outrages our concerned hierarchy linear order because either the first oblique stands on before the subject or the second oblique stands on after the subject while both should sit after the indirect object.

Type 19 subject < oblique < direct object < indirect object

Example: gugel bâ dâstân-e taqribân 285.4 mîlîard safhe in record-râ be xod google with have-EZ about 285.4 billion page this record-DO to itself exêstas dâde ast dedicate gave is “Having about 285.4 billion pages, Google has dedicated this record to itself.”

The oblique should sit on the final position. Thus it does not follow the considered hierarchy linear order.

Type 20 oblique < direct object < oblique

Example: bâ anjâm-e bânbâne rizihâ-y-e daqiq tebqe amâr-hâ-y-e elâre with do-EZ planings-EZ precise according to statistics-EZ point sode saraye-y-e zendegi-y-e behârâ elâre mitavân bâlâyê mardom became conditions-EZ life-EZ better-DO can for people farâh ham card provide did “By precise planning according to pointed out statistics, a better life condition could be provided for people.”

This linear order does not follow the considered dominant tendency.

Type 21 direct object < subject

Example: bâstân-e madajuyân-e tahte pâse-y-e sâzmân-hâ-y-e behzisti-y-e most-EZ help seekers-EZ under-EZ organization-EZ welfare-EZ kesvar-râ ma?lân taqkil midahand country-DO disabled people constitute give “Most of the clients who are under state welfare organization of country constitute disabled people.”

Since the subject should stand on before the direct object, following of the considered hierarchy linear order does not occur.
Type 22 oblique < subject < direct object < indirect object

Example: dar in tabaqe bandi šetāb dahande-y-e zarrāl-e Lhc rote-y-e
in this category accelerator-EZ participles-EZ Lhc rank-EZ
avval-rā be xod exetās dāde ast
first-DO to itself devote gave is

"In this category 'Lhc' participles accelerator won the first place."

The oblique should stand on the final position in this linear order. Therefore, it does not follow the concerned hierarchy linear order.

Type 23 oblique < subject < indirect object < oblique

Example: dar jašnāvār nafarāt-e burtar be qarāfāt-e sonudhā-y-e xod
in festival members-EZ top to reading-EZ anthems-EZ themselves
dar vasf-e Imām Rezāh pardīxtand
in description-EZ Imam Rezā dealt with

"Top members read some anthem describing Imam Reza in festival."

The first oblique should sit on after the indirect object and accompany with the final oblique. Thus it is outraged of the hierarchy linear order.

Type 24 subject < oblique < indirect object < oblique

Example: Afghānestān dar in sālāhā be kešvari bi raqīb dar towlīd-d-e mawād-d-e
Afghanistan in this years to a country unrivaled in produce-EZ substances-EZ
afyuri tabdīl sode ast
opium change became is

"Afghanistan has turned into an unrivaled country in producing opium in preceding years."

Since the medial oblique has moved from its position which is the final linear order, it does not follow the concerned linear order.

Type 25 subject < oblique < indirect object < direct object

Example: kešvarhā-y-e sanžātī dar moqābel az Kābol mobāreze hā fesād-e máli
countries-EZ industrial in return from Kabul struggle with corruption-EZ
va qāčār-e mawādde mukaddar-rā xāstand
and smuggling-EZ narcotics-DO demanded

"Industrial countries demanded struggling against corruption and drug trafficking in Kabul in return."

In these linear orders, two grammatical relations do not stand in the right position according to the dominant tendency. First, the oblique should stand on the final position. Second, the direct object should sit on the second position. As it is obvious the two constituents replace the position with one another. In the oblique grammatical relation, the preposition dar “in/to/at/unto” including two frequencies appears.

Type 26 oblique < direct object < indirect object

Example: be bahānā-y-e edālat xāhī nabāyad sure be dast-e došmanān dād
to excuse-EZ justice should not issue to harm-EZ enemies gave

"For justice excuse, it should not be an issue to enemies."
The oblique position which should be in the final linear order, stands on the first position in this example. So, it does not follow the grammatical relation hierarchy.

Type 27 oblique < indirect object
Example: az hamin nokte mitāvā be moxtassār-e bāzigāri-y-e Mahnāz-e Afshār pey bord discovered
"By this point, one could discover the acting features of Mahnāz Afshār."

Since the oblique should stand on after the indirect object, this linear order does not follow the dominant tendency.

Type 28 direct object < indirect object
Example: faṭṭāhī-yāth-y-e sāzmān-e tarbiyat badani-rā be qezāvat-e activities-EZ organization-EZ training physical-DO to judgement-of mardom misēpārīm people devolve
"I devolve training physical organization to citizen s judge."

This linear order follows the dominant tendency.

Type 29 subject < direct object < oblique < indirect object
Example: narmafzār-e ruts magi yekī az āsāntar in ravišā-rā bāry-e ijād-e software-EZ roots magic one of easiest ways-DO for creation-EZ šajerendār-e dar estiyyār-e somā qarār midahad pedigree in access-EZ you put
"‘Roots magic’ software provides one of the easiest ways to creation the pedigree for you."

Since the oblique should be transferred to after the indirect object position, this linear order does not follow the dominant tendency.

Type 30 subject < indirect object < direct object
Example: eṭṭāḥādiyāh-y-e marbut be tarīnhāt va xadamār-e xoḍro be unions-EZ relation to repairs and services-EZ automobile to afrīd-e fāqad-e mahārāt tabqeh zavāhīt-e mowjah people-EZ lack-EZ skill according to regulations-EZ existing ʿāmuzesh-y-e tāzem-rā bedahand trainings-EZ necessary-DO give
"Unions in relation to repairing and automotive services teach some necessary training to unskilled people according to the existing regulations."

Two objects replace their position. Therefore, it outrages our concerned hierarchy linear order.

Type 31 oblique < direct object < subject
Example: az in mizān bi az 8,050 ton-rā barg-e sabz-e daraje yek va from this rate more than 8,050 ton-DO leaf-EZ green-EZ class first and 33,865 ton-rā barg-e sabz-e daraje do tāskil midahad
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33,865 ton-DO leaf-EZ green-EZ class second constitute gives
"More than 8,050 tons of first class leaf and 33,865 tons of second class leaf constitute of this rate."

At this time the oblique and the subject replace their position with one another. Considering the dominant tendency, this linear order does not follow the dominant tendency.

Type 32 direct object < indirect object < oblique

Example: tartandā va šārāyeti ke došman be vojud miāvarad-rā bāyad be forsati tricks and situations that enemy to exist brings-DO should to a chance barāye sāxtan-e kešvarenmān tabdīl konim for constructing-EZ our country convert do

"Tricks and situations caused by enemies should be a chance in constructing our country."

This linear order subordinates to our considered hierarchy linear order.

According to Table 1, by studying 1,000 transitive and intransitive indicative independent simple sentences concerning the grammatical relation hierarchy subject < direct object < indirect object < oblique which is a dominant tendency among languages. 32 linear orders are achieved. Due to a low frequency, we eliminate some linear orders from our language corpus. The reason in eliminating these linear orders is that the high frequency linear order, i.e., subject < oblique, is considered our basis and examine the other linear orders according the above linear order. We ignore the linear order with lower than one percent frequency. Therefore, the linear orders including 19 and 20 frequency rank in the given Table 1 have been eliminated from the analysis. Consequently, 21 linear orders would emerge that 33% of them follow the linear order of dominant tendency and 67% do not.

Based on these illustrations, on the contrary the grammatical relation hierarchy subject < direct object < indirect object < oblique is a dominant tendency, which does not stand as a dominant tendency in the Persian language and it does not follow this linear order.

Now we should consider what grammatical relation(s) result in not accompanying Persian language with our grammatical relation hierarchy and why. From 14 linear orders which do not follow the mentioned hierarchy linear order, 13 linear orders dedicating 93% oblique grammatical relation move from their original place in which dominant tendency is in the final hierarchy position with the frequency of 7% in a linear order, the direct object whose original place is after the subject stirs away standing on before the subject and results in inconformity with the dominant tendency.

According to presented in Table 1, the linear orders that their frequency rank is 2, 4, 6, 7, 8, 9, 10, 11, 12, 14, 17, 18 (only the first linear order that has this frequency rank) indicate that the oblique moves from its own original position in the dominant tendency. In four linear orders (that their frequency is 31%) with the frequency rank of 2, 8, 9, and 17 (only the 2nd linear order includes this frequency rank), the oblique grammatical relation stands on after the subject i.e., on the medial place. Seven linear orders (with frequency 54%) that include frequency ranks of 4, 6, 7, 11, 12, 14, 18 (only the first linear order that has this frequency rank), the oblique stand on the 1st place.

Concerning this fact, five linear orders sit on before the object and two linear orders stand on before the direct object. In two linear orders (that their frequency is 15%), the oblique occupies initial (before the subject) and medial places (after the subject). The linear orders with 10 and 17 frequency rank, (only the 1st linear order that has this frequency rank), would be considered the same. Based on the illustrations it seems that the oblique
grammatical relation tends to be stood on the initial place in a linear order in the written Persian language.

**Findings**

The grammatical relation hierarchy is one of the typological universals in syntactic typology area which is stated as: subject < direct object < indirect object < oblique. This hierarchy indicates the hierarchy of the dominant tendency of the grammatical relations in the sentence level. Studying 1,000 transitive and intransitive indicative simple independent Persian sentences concerning the above hierarchy, 32 linear orders are achieved. Due to a low frequency we eliminated some linear orders from our language corpus. Twenty one linear orders remained. Of 21 linear orders, the highest frequency of linear orders, according to Table 1 in analysis, are linear orders with frequency ranks 1, 2, 3, 4, and 5. The lowest frequencies of the linear orders have the frequency ranks 16, 17 and 18. The highest and the lowest linear orders represent a characteristic in the Persian language. They indicate that transitive and intransitive indicative simple independent sentences tend more or less to appear in these linear orders. By analyzing 21 linear orders, 33% follow the linear orders of the dominant tendency while 67% do not.

This consequence shows us in spite of being the dominant tendency of the grammatical relation hierarchy, subject < direct object < indirect object < oblique, which is not a dominant tendency in the Persian language and does not follow it. In 93% linear orders which do not accompany with the concerned hierarchy linear order, the oblique grammatical relation has moved from its original place in which the dominant tendency is in the final hierarchy position and in 7% of those linear orders, the direct object has moved from its original place and stands on before the subject. This results in mismatching with the dominant tendency. The linear orders which do not follow the linear order of the dominant tendency in 54% of cases, the oblique grammatical relation sit on after the subject, i.e., in 2nd (medial) position. In 31%, the obliques are placed in initial position, preceding subject and direct object grammatical relation. Fifteen percent of cases the obliques occupy the initial (before subject) and medial place (after subject). It can be concluded that in Persian language the oblique grammatical relation is marked; that is, it moves from its initial place more than the other grammatical relation and this is a significant feature in Persian language. Because of more latitude in the oblique, it occupies different places in the study and causes disorder, makes the numerous linear orders that do not accompany with the hierarchy. Moreover, it is assumed that the oblique grammatical relation tend to be employed more in the initial position of the linear orders in the written Persian language.

According to this, now we should determine how to deal with inconformity of Persian language with the grammatical relation hierarchy subject < direct object < indirect object < oblique. We have two options ahead: (1) Concerning the fact that the obliques constitute adverbs and do not involved in obligatory valency of the verbs and have more freedom, they could be removed from hierarchy; and (2) We have to accept that Persian language does not adapt to the concerned grammatical relation hierarchy.

Having survey on 1,000 language corpus about subject, direct object and indirect object grammatical relation, some points have been appeared that we will discuss. Eighty-six percent of linear orders include the subject grammatical relation while 14% does not have this grammatical relation. This explains that the dominant tendency in the transitive and intransitive indicative simple independent sentences should include the subject in Persian language. Of all the linear orders involving the subject, 56% of them began with the subject. In other
words, they were inchoative subject. In 44% of these linear orders, the subject stand on the 2nd place, such a way that in 87% of cases, it sits on after the oblique and after the direct object in 13% of cases. It could be concluded that firstly, the dominant tendency of Persian language is that the subject tends to be utilized at the beginning of sentences. According to typological studies, Persian language is an inchoative subject language and is in the word order of SOV. As mentioned, the high frequency linear orders approve this issue as four linear orders 1, 2, 3, and 5 out of five high frequency ones starts with the subject. Second, it seems that in the case of not placing the subject on the dominant position, i.e., initial position, it tends to be placed more in the second position after the oblique grammatical relation rather than after the other grammatical relation.

In 62% of the discussed linear orders, there is the direct object grammatical relation while it does not exist in 38%. In 46% of the linear orders including the direct object, this grammatical relation sits on its original place concerning the grammatical relation hierarchy. In 54% of cases this grammatical relation does not lie on its original position. Considering the linear orders in which the direct object is not placed in its original position, in 71% of cases the subject stands on the linear order but the direct object does not precede it. In this occasion, the direct object in 80% of cases are placed on the 3rd position after the oblique and in 20% of cases, it is sat on the initial linear order before the subject. 29% of the linear orders frequencies are among those which does not include subject and the position of the direct object, naturally should stand on the initial linear order, that is placed after the oblique in second place. Statistically, the direct object grammatical relation tends to sit on after the oblique in case of not being placed in the original position i.e., after the subject. This matter confirms our precedent finding based on this fact that the oblique grammatical relation results in some disorders in the grammatical relation hierarchy and multiplicity of the linear orders does not adapt to this hierarchy.

In 33% out of the whole analyzed linear orders, there is the indirect object grammatical relation and in 67% of the linear orders it is not included this grammatical relation. In 71% of cases, the grammatical relation has placed in its original position. That is, if there was the direct object in the linear order, the indirect object has placed after that. This occurred in 40% of cases. As there was no direct object in the linear order, the indirect object is put after the subject. This happened in 60% cases. The mentioned statistics explain us that the position of the indirect object complied with the position of the followed grammatical relation hierarchy. Frequency of the linear orders in which the indirect object is not placed in its original position is 29%.

Conclusions

First of all, we found that the most frequent word orders of the grammatical relations are those which include subject and oblique, and the least frequent word orders are those which have indirect object. We also found that in majority of the analyzed linear orders, subject has situated on the 1st position and it is in concordance with the previous typological findings which say; “the Persian language is the inchoative subject language” but the direct object constituent in the considerable word order types (21 cases) is not in the position which was predicted by the typological conventions, that is the post-subject position. The dominant position of the indirect object also is not the post-direct object position, in contrast with the grammatical relation hierarchy. But the more important point is that it is mostly the oblique constituent which makes the disorders. This constituent comparing to the other constituents, has more freedom and can be moved to different positions in the sentence. Thus either it should not be considered in our studies on this hierarchy in Persian or in case of involving it in the analysis of
Persian language, we have to accept that the Persian language does not follow the grammatical relation hierarchy which is considered a "typological universal".

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