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Investigating the Correlative Verb Collocation in Persian Language based on Cognitive Semantics

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Abstract: The present article investigates the collocation of verb and noun in Persian language by reviewing different approaches to investigate collocation, from the cognitive viewpoint. On this basis, theories of Cowie (1998) and Howarth (1996) is the theoretical framework of the present research. The present research has been conducted based on data of standard Persian language (writing) and its data were selected from corpora of Intelligent Signal Processing Research Center and Dehkhoda Dictionary. The cognitive study of the data is based on the collocation of the word "zadan". For example, for the cognitive analysis of the collocation of "del be darya zadan", different readings of the words "del be darya "and "zadan" and their combination in two sensor motor and non-sensor motor domains have been investigated. It is generally concluded from the present research that in Persian language, it is possible to study the motivation of the speakers to use collocation of the words with cognitive tools such as form, schema, and prominence, and give a new classification of this linguistic phenomenon. On this basis, one can propose the classification of free and open collocation based on the degree of prominence and schema. The frequency of collocation can also be predicted based on these two cognitive criteria. The present thesis has been written in five chapters as introduction, review of literature, concepts and theoretical framework, data analysis and conclusion.

Keywords: Collocation, Cognitive Linguistics, Form, Schema, Prominence.

Introduction

In the current research, the aim is to study the collocation in Persian language from the cognitive viewpoint. Generally, we consider collocation as "the compatibility of grammatical categories with each other in the chain of speech and syntagmatism" (Bateni, 1969: p. 134). In the present research, collocation means "co-occurrence of words with the arbitrary and unique nature, which is influenced by the possible universals and mental spaces of the speakers" (Cowie & Howarth, 1996: p. 87). Common collocation means co-occurrence of words which are usually used. Familiarity with conditions of collocation creates an interaction between the mind and surrounding phenomena. It means that our previous experiences help us choose the collocated words, and on the other hand, phenomena guide our choice.

In language teaching, familiarity with collocation can be helpful, and unfamiliarity with the rules and how to combine words can create difficulties for the language learner who is at the early stage of his/her education. Collocation phenomenon is also widely used in the compilation of dictionaries. In this research, the attempt is made to do functional and cognitive explanation of this phenomenon while the traditional methods of classification are fundamentally studied, and to show that this method has higher descriptive efficiency.

Review of Literature

Crowden has investigated the repeated words in the Bible since more than 250 years ago. In the 1930s, Palmer, an English linguist who worked as a specialist in English language education in Japan, began his corpus-based study on repeated lexical sequences in the English language, resulting in more than

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6,000 collocations. Palmer concluded that the number of collocational structures is much more than the simple words that people use in their daily speech (Kennedy, 1998, p. 108). Since the late 1960s, computer-aided corpus analysis allowed progressing the opinions of people like Palmer and showed that it is not possible to simply search for the lexical patterns in traditional areas such as grammar and vocabulary, and thus the need to review the description of the word concept. On the other hand, Porzig (1934) showed that the "possibility of compatibility in the co-occurrence" of words, which was mainly analyzed from a syntactic viewpoint, is not limited to only grammatical features and the semantic aspects should be taken into account. By giving the examples, Porzig shows that the limitations in the co-occurrence of lexical elements can include co-occurrence of a verb with an adverb or a means of doing a verbal action, and other relations such as subject and verb ("horse" and "sighing") or object and verb. Generally, the semantic relationship between "co-occurring words" can be described as co-occurring lexical relationships, and in this regard, it can be compared with "lexical substitution relationships such as "synonymy", "semantic contrast" and "similarity in the semantic field".

Porzig applied the term" fundamental semantic relations "for the lexical syntagmatic relations (IBID). Lyons (1977, p.265) believes that the term" fundamental semantic relations "taken into account by Porzig are applied by Katz & Fodor as selective limitations during development of Post Bloomfield Linguistics. Escher (1994, p.4475) believes that the collocation intended by Firth and selective limitations are the different forms of the concept of fundamental semantic relations intended by Porzig.

Theoretical Considerations

In this section, the writer will try to provide an overview of the concepts and terms used in the present research, and the theoretical framework of cognitive linguistics will be introduced.

Research question:

How can we classify the correlative collocation in Persian language based on cognitive criteria?

Correlative and non-correlative collocation

In general, the correlative and non-correlative verbs are defined, classified and used in the English language, and they are introduced in such a way that non-correlative verbs (separable) mean verbs that can be broken by other words (direct object) while the correlative (inseparable) verbs will not experience such an event.

On this basis, multicomponent verbs can be classified in Persian language into two groups of correlative and non-correlative verbs.

Some examples of these verbs are as follows:

1. Correlative verbs

Hoseleh Sar Raftan, Delash Baz Shod, Del be Darya Zadan, Gom o Goor Shodan, Astin Bala Zadan, and *Az Pay Dar Amadan*

2. Noncorrelative verbs

Sor Khordan, Kar Kardan Ba, Paridan Az, Gharar Ghozashtan Ba and Tavagho Dashtan /Nadashtan Az.

On this basis, the related verbs are inseparable. *"az in ketab hoseam sar raft*" is common in Persian language, but based on the data collected from the speakers in this research, " *hoseam az in ketab sar raft* " or *" hoseam sar raft az in ketab*" is not common or correct.

Similarly, in noncorrelative verbs, it is possible to separate the verbal part from the nonverbal part. For example, "It is easy for me to work with the computer" and "with the computer, it is easy for me to work ", both sentences are common in Persian language.

Cognitive linguistics

Cognitive linguistics is one of the new schools of linguistics. Dabir Moghadam (2004) considers the three dominant attitudes in today's linguistics as form-based, function-based, and cognitive.

Principles and fundamentals of cognitive linguistics

In cognitive linguistics, Saussure's important attitude that language is a system of signs is accepted. Langacker has considered language as "an unlimited system of linguistic signs, each connecting a phonetic representation to a semantic symbol" (Langacker, 1987: p. 11). To study the collocation from the perspective of cognitive linguistics, the two words "*Del Be Darya*" and "*Zadan*" are considered and their readings are studied individually and in the combination of "*Del Be Darya Zadan*". The reason for selecting this collocation is that the verb"*zadan*" can be studied properly in Persian language in the sensor motor domain and non-sensor motor domain (intended by this research explained below) and its collocation is included in this framework. Another reason is that colocation of verb and noun is one of the most frequent collocations in Persian language (Modares Khiabani, 2007: p 262).

Another reason is that in the framework of this research, collocation of noun and verb manifests the relationship among schemas and the relationship between schemas of "*Del Be Darya*" and "*Zadan*" seems to be closer to the superior example. This combination shows the collocation of the verb and the noun, in which the noun has the function of the object for the verb. In fact, “Del *Be Darya* " is a nonverbal noun meaning that it is not derived from the root. Other examples of this category are "*Ham*", "*Sar*", "*Mehr"* and "*Shor*". Usually, such nouns can also indicate "action" as they include "product" or "result of action". "*Zadan*" has been selected from among the verbs that are used both in the sensor motor domain and non-sensor motor domain. The sensor motor domain in cognitive linguistics of phenomena means the events or actions which are sensible or perceived with five senses. In fact, this domain is the abstract and insensible domain (Paulsen, 2005, p. 57).

The collected data about the verb "*Zadan*" in the research database shows 1000 cases out of which 993 cases were considered as recorded data of this research, after excluding repeated or similar cases. A questionnaire was prepared and distributed among 100 Persian speakers to study 20 readings of the sensor motor domain and non-sensor motor domain. This group included 50 girls and 50 boys. Different readings were studied in this questionnaire.

1. The sensor motor and non-sensor motor domains of the verb" *Zadan*"

Data of the present research show that the verb "*Zadan*" can be used in sensor motor and non-sensor motor domains to express the tangible experiences (sensor motor) and intangible or abstract (non-sensor motor) (Lakoff & Janson, 1999, p.46).

These examples are classified based on the principle of proximity. This principle is one of the principles of adaptation, based on which examples are classified based on their proximity to the superior example. It aims to obtain the structure of the visual network of the verb schema. Such hypothesis may never achieve the goal, because it is largely based on intuitive and personal judgments and it should be evaluated based on the experiences of the language psychology to explain the truth of the speakers' intuitive judgment. Any sensor motor and non-sensor motor domain has its own structural complexity and cannot be specified based on features of their subset.

Instead, the internal structure of the verb is classified in comparison with the superior example of each level, and the subsets may overlap. Therefore, "*Zadan Shakheh*" falls under the domain called "artifacts and natural things", while "*Dast Zadan*" falls under the domain of "body organs", which itself includes natural things. Both domains can be considered a part of the domain of "physical environment". This field also includes experiences named "physical activity". These overlaps are predictable, because it is assumed that the semantic network of the verb " *Zadan*" is gradually created from the bottom up using the expansion and evaluation processes, which are provoked based on the the speakers' judgment based on the similarity in use.

In the sensor motor domain, the word “Zadan" is used to classify the moving experiences of the world. The body or sense is used, we deal with natural and unnatural (artificial) things and deal with the physical environment. In the non-sensory-motor domain, “Zadan" is metaphorically expanded, and classifies the experiences not directly related to our senses but seem to be acquired based on experience.

According to the author, the subdomain of "artifacts and natural things" in the sensor motor domain is more "fundamental" than other subdomains, because it can be considered as the base domain not only for non- sensor motor domain but also for sensor motor domains (such as the subdomains of "body organs", "physical activity", audiovisual experiences, etc.).
Table 1 shows examples of the verb " *Zadan*" in the subdomain of artifacts and natural things as "*Sadameh*":

Table (1): subdomain of natural artifacts and things "Sadameh" for verb "Zadan"

A. *Zadan"Choob, Shakheh, Sagheh",* etc.
B. *Zadan"Rabet, Mafsal*", etc.
C. *Zadan"Shisheh, Hobab*", etc.
D. *Zadan"Ajor, Sakhreh*", etc.
E. *Zadan"Dar, Darvazeh, Dastgireh*", etc.
F. *Zadan"Dar, Darvazeh, Dastgireh*", etc.
G. *Zadan" Pankeh, Jabeh Dandeh, Ajzaye Machines and Automobile",* etc.
H. *Zadan"Dandaneh, Bakhsh*", etc.

In the above examples, the expansion of the non- sensor motor domain can also be considered; In this way, with the metaphorical extension of example "B", one can expand "*Zadan Rabeteh*" in this sub-domain, because one can imagine a similarity between " *Rabeteh*" and things like "*Rabet*", "*Mafsal*" and such cases. However, it cannot be inferred that the subdomains which can be expanded metaphorically can be predicted and deduced. It is usually possible to mention possible alternatives to conceptualize similar situation. For example, as "*Ertebat*" can be "cut", "*Mozakereh*" can also be "cut". As we can cut end of a "branch", what is important is that image schema is applied in the domains to conceptualize and convey experience from one domain to another domain.

In the subdomain of "body organs", *'Zadan*' is used to classify a set of experiences based on which part is considered *'Ghabel Zadan'* or intended to be *'Zadeh'*. Therefore, "*Zadan Dast*" is conceptualized by knocking objects that can be knocked such as "*door*". All of us may have had the experience of touching (*dast zadan).* Table 2 shows the collocations of X related to the subdomain of body organs. This table was obtained by investigating the collected data and shows the subdomains of the lexical category "*Zadan*" in Persian language from the perspective of this research.

Table (2): Subdomain of body organs

A. Nakhon Zadam (nailing) or nail-shaped organs:
Arm, finger, jaw, knee, neck, etc.
B. Rupture due to internal pressure:
Blood vessels, capillaries
C. Surface cut
Skin
D. Disintegration
Body

The use of the verb "*Zadan*" in the subdomain of "body organs" is determined based on its application in the subdomain of "artifacts and natural things" and thus expands the conceptualization of the non-sensor motor domain in the subdomain of "human emotions and influence". In some experiences, the expansion from the subdomain of "body parts" is obvious, because the name of a part of the body directly involved in the adaptation of the destination and origin domain is used.

However, one cannot predict which will be the source area and the destination area. In addition, the data show that the experiences which are far from the center (superior example) in the sensor motor domain are placed in the subdomain of "physical activity". In addition, the evidence related to "physical environment" can be expressed with the verb "*Zadan"*. The question is if the metaphorical expansion from the sensor motor domain and return to the destination in the same domain are possible through the

non-sensor motor domain. Based on the following simultaneous evidence for the verb "*Zadan"*, this possibility is imaginable:

Table (3): Sensor motor domain as the destination domain: dar zadan

- This carpet has been stepped on a lot to turn into such form [sensor motor domain: artefacts and natural things].
- Scoring a goal to Australia (*zadan gol)* was the miracle of God in the World Cup. (non-sensor motor domain: emotions and impressions)
- He was disappointed by turning his back (*Posht Pa Zadan*) on his dreams, he [sensor motor domain: non sensor motor domain].
- Flapping (*bal zadan*) and passing through the window were intolerable for the bird. [Sensor motor domain: artifacts and natural things].

Internal Structure of name"*Del/Astin*"

In this section, we analyze the category of the word "*del*" to determine what changes are observed in the components of the compound after the combination of these two words (*Del + zadan*). By reviewing the database of this research (the investigated language corpus), 1500 cases of the word "*del*" were obtained. As mentioned before, there are more than 10000 samples of the verb "*zadan*" in the said corpus, out of which about 9.5% are related to the subject of the present research. There are 908 cases of the collocations of "*del*". 46% of these cases are transitive verbs with nouns (such as "*del be darya zadan*"); 2% are infinitives and nouns (such as: to love); 3% of nouns and nouns are objects (such as *"del bastan*"); 17% is a combination of noun and adjective (such as "*del nazok*"); 28% is a combination of a noun and a noun (possessor and possessive) (such as *"del sang*"); 4% is a combination of a preposition and a noun (such as "*az del*"). Figure 1 shows the data distribution:

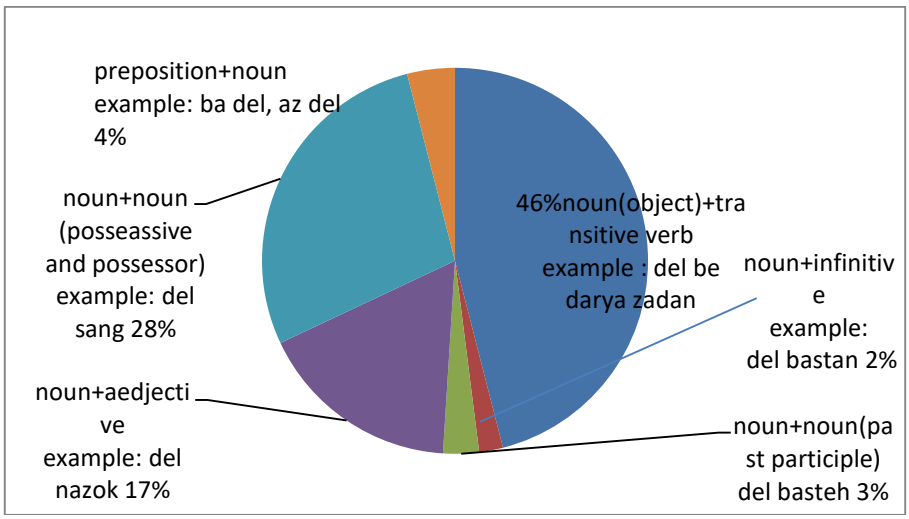

Figure (1): Data distribution in terms of compound type for the word "del"

The compound of "*del be darya zadan*" is a compound lexical category which includes special aspects of domains, the structure of the image schema, and the type of components of the compound. The number of readings of "*del*" as a linguistic unit depends on the number of forms which can be identified in the compound. Semantically, combination with the verb is considered as the basic compounding. The combination with the preposition is considered as the basis of the image schema structure. The word "*del*" as a noun can function as an object for the verb "*zadan*" in the sensor motor domain, and in the non- sensor motor domain, it is also metaphorically expanded with the same function.

Conclusion

Based on the data analysis, the researcher has generally concluded based on the theoretical framework of this research that the correlative verb"*del be darya zadan*" creates schematic structure based on a

sensor-motor framework (Cowie (1998) and Howarth (1996)) in which other structures many not be imbedded. For this reason, such verbs are named as correlative or inseparable verbs. The final question was: How can these verbs be explained from the perspective of cognitive semantics? In the readings of collocation of "*del be darya zadan*", it was found that the noun and verb combination had a low schema and a high prominence. If the combination of noun and noun has a high “schema” and "prominence", it will have more cohesion. Therefore, it can be predicted that the noun and noun cohesion may be high in Persian language.

Finally, the results of the present research can be summarized as follows:

A. An interaction between cognitive linguistics (or human cognition generally) and practical factors should be considered in the investigation of linguistic phenomena such as collocation.
B. The collocation can be studied based on different readings.
C. Possible universal and individual features are involved in the readings of each person.
D. Traditional classifications such as fixed and non-fixed idiomatic and non- idiomatic collocation seem not to be efficient for investigating collocation.
E. It seems that classification of collocation based on theory of Cowie (1998) is more efficient in Persian language and this phenomenon can be divided into free and open collocation (correlative/non-correlative) using cognitive criteria.
F. "Schema “and "prominence "are two cognitive tools in classification, recognition and investigation of the frequency of collocation. The high degree of these two criteria in a collocation will increase its high stability.

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