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A CONTRASTIVE ANALYSIS OF VERB CONSTRUCTIONS CONSIDERING VALENCY IN FARSI AND AZERBAIJANI TURKISH LANGUAGES ON THE BASIS OF DEPENDENCY GRAMMAR*

Abstract

Both Farsi and Azerbaijani Turkish languages have always been in close connection and have influenced each other in different ways. Interaction between these two intertwined languages has led to different models of language contact from language intervention to language loss. In order to become more familiar with the structure of sentences and contact-induced phenomena in these languages, this research examines syntactic valencies of verb as one of the essential linguistic elements of a sentence. The significance of the valency of verbs stem from their essential role in the formation of sentences. Verbs as the core constituents of the sentences which are the main structure of languages in linguistic approaches, especially the grammar and syntax studies, are the least affected units during the language contact process as words. However, the verb valency system reveals how the verbs' functions and meaning are affected by this contact. Farsi and Azerbaijani Turkish, the examined languages of this study, belong to the two different language families. Despite the typological differences, these languages bear considerable common features due to the long term linguistic and cultural interaction. The analysis of the examined verbs and their valences can facilitate the linguistic description of these differences and similarities. Thus, this study adopts the Dependency Grammar and Valency Theory as the main

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theoretical framework for analyzing these verbs. Accordingly, a text that has Azerbaijani Turkish and Farsi variants was chosen to collect the data for the study. For this purpose, 89 Farsi verbs and their Azerbaijani Turkish equivalents were chosen from G.H Saedi's Azadaran Bayal, a collection of short stories written in Farsi and translated into Azerbaijani Turkish. Then obligatory and optional complements of each verb (both Farsi and its Azerbaijani Turkish equivalent in the same sentence) were determined and compared. The study primarily aims to provide responses for four research questions: (i) To what extent the valency of equivalent Turkish and Farsi verbs is similar? (ii) Which processes can cause change in valency of verbs in Farsi and Turkish? (iii) How learning Farsi by Turk students (or inversely) can cause interference in positive or negative way? (iv) What causes are behind the similarities observed between valency structures of the two languages? The results of this study show that the majority of selected equivalent verbs (85%) behave similarly in terms of quality and quantity of required obligatory and optional dependents. Besides, 13 out of 89 Turkish and Farsi verbs have different dependents in terms of quantity and/or quality. Moreover, the findings of the study show that in Turkish, making verb causative increases the valency of verbs; however, there are significant differences between two languages in this regard: first of all, the majority of the analyzed Farsi verbs lack causative form and the use of other verbs with changes in sentence is needed to make them causative. Secondly, Turkish verbs have doubled or more causative degree while Farsi verbs lack this property. Finally, the results suggest that the syntactic similarities can decrease ambiguities when word by word translation takes place but cause negative interference in verbs with different valency in learning Farsi or Azerbaijani Turkish as a second language as well as computer-aided translation.

Keywords: Dependency Grammar, Valency Theory, Farsi, Azerbaijani Turkish, Dependent.

AZERBAYCAN TÜRKÇESİ VE FARŞANIN EYLEM YAPISINDAKİ BAĞDEĞER DİZGESİNİN BAĞIMSAL DİLBİLGİSİ KURAMINA GÖRE KARŞILAŞTIRILMASI

Öz

Farsça ve Azerbaycan Türkçesi her zaman yakın ilişkide olup birbirlerini çeşitli açılardan etkilemişlerdir. İç içe yaşayan bu iki dilin karşılıklı etkileşimi, dil karışmasından dil kaybına kadar çeşitli dil değinimi görünüşlerinin sergilenmesine yol açmıştır. Bu dillerde tümce yapısı ve değinim kaynaklı dilbilimsel olguları gözlemlemek adına, bu çalışmada, tümcenin temel öğelerinden olan eylemlerin sözdizimsel bağdeğer (valency) dizgesi incelenip karşılaştırıldı. Eylemlerin bağdeğer dizgesinin önemi, bir eylemin tümce oluşumundaki en temel birim olmasından kaynaklanmaktadır. Dilbilimsel yaklaşımların, özellikle de dilbilgisi ve sözdizim çalışmalarının, ana birimi olan tümcenin temel öğesi olarak eylem, dillerarası etkileşimde kendi başına bir

sözcük olarak en az etkilenen birimlerdenidir. Ancak eylemin bağdeğer dizgesi göz önünde bulundurulduğunda bu etkileşimin eylemin işlevini ve tümcedeki konumunu nasıl etkilediği ortaya çıkar. Farsça ve Azerbaycan Türkçesi tipolojik farklılıklarına rağmen uzun süreli etkileşim ve çok kapsamlı dilsel ve kültürel alış verişleri nedeniyle birçok ortak özellik barındırmaktadır. Bu farklılık ve/veya benzerliklerin dilbilimsel betimlemeyle açıklığa kavuşturulması için tümcenin dolayısıyla da dilin temel ögesi olan eylemlerin çözümlenmesi yararlı olacaktır. Bu çözümlene için bağımsal dilbilgisi ve bağdeğer dizgesi kuramlarının temel alınmasındaki başlıca neden bu kuramlar ve ondan doğan yaklaşımların dilbilimsel çalışmalarda eylemi temel almaları olmuştur. Bu nedenle de Farsça ve Azerbaycan Türkçesinde yazı dili örneğinin bulunduğu ortak bir metinden toplanan verinin incelenmesi uygun görülmüştür. Bu doğrultuda 89 Farsça eylem ve onların Azerbaycan Türkçesindeki karşılıkları Gholam Hossein Saedi'nin Farsça Azadaran-i Bayal romanı ve Azerbaycan Türkçesi çevirisinden (Beyel Ezalıları) seçildi. Farsça ve çeviri tümcelerde bulunan bu eylemlerin zorunlu ve zorunlu olmayan tamlayıcıları karşılaştırıldı. Farsça metindeki her bir eylem tamlayıcılarıyla birlikte Azerbaycan Türkçesine çevrilirken uğradığı değişiklikler ya da değişmeyen özellikleri açısından incelendi. Her eylemin (i) iki dil bağlamında gerek duyup duymadığı tamlayıcılar, (ii) bileşik ve basit eylemlerin iki dildeki farklı yapıları ve işlevi, (iii) dilde basit eylemlerin niceliği, (iv) eylem üretimindeki biçimbilimsel farklılıkların her eylemin bağdeğer niceliğini etkilemesi (vi) sonuç olarak bu iki dilin konuşurlarının diğer dili öğrenirken yaşayacakları zorluklar ve dikkate alınmaları gereken dilbilimsel özelliklerin belirlenmesi bu çalışmanın üzerinde durduğu temel konulardır. Bu konu çerçevesinde araştırmada başlıca şu dört soruya cevap aranmaktadır: (i) Türkçe ve Farsçanın eşdeğer eylemlerinin bağdeğer dizgeleri ne ölçüde benzerlik göstermektedir? (ii) Hangi süreçler Farsça ve Azerbaycan Türkçesi eylemlerinin bağdeğer dizgesinde değişime yol açar? (iii) Araştırmanın bulgularından yola çıkarak iki dilin bağdeğer dizgesi arasındaki farklılıklar ve benzerlikler her dilin konuşurunun diğer dili öğrenirken nasıl bir dil girişimi yaşamasına neden olmaktadır? (iv) İki dil arasında saptanan bağdeğer dizgesindeki benzerliklerin temelindeki sebepler nelerdir? Bu konulara dilbilimsel açıklık getirmek adına bağımsal dilbilgisi ve bağdeğer kuramının kuramsal çerçevelerinden yola çıkılarak yukarıdaki dört soru bu çalışmada cevaplanmaya çalışıldı. Araştırmanın sonuçlarına dayanarak seçilmiş eylemlerin %85'nin nicel ve nitel çözümlenmede benzer sözdizimsel davranış ve tutum sergilediği saptandı. Bu sözdizimsel benzerlik iki dil arasındaki kelimesi kelimesine çeviri işleminde kolaylık sağlarken her dili diğer dil konuşurlarına öğretirken dil girişimine yol açarak öğretimi zorlaştıracak niteliktedir. Karşılaştırılan 89 Azerbaycan Türkçesi ve Farsça eylemden 13'ü nicelik ve/veya nitelik açısından farklı bağımlı ögelere sahiptir. Çalışmanın bulguları Azerbaycan Türkçesinde nedensel eylem üretiminin bağdeğerleri artırdığını göstermektedir; ancak, bu bakımdan iki dil arasında önemli farklılıklar vardır: Her şeyden önce, incelenen Farsça eylemlerin çoğunluğu biçimbilimsel

nedensel yapıdan yoksundur ve başka eylemlerden tümce içinde yardım almak onları nedensel kılmak için gereklidir. İkinci olarak, Türkçe eylemler iki veya daha fazla nedensellik derecesine sahipken Farsça eylemler bu özellikten yoksundur.

Anahtar sözcükler: Bağımsal Dilbilgisi, Bağdeğer Kuramı, Farsça, Azerbaycan Türkçesi, Bağımlı Öge.

Introduction

The cultural and linguistic contacts between Turks and Iranian people date back at least to the fifth century A.D. (Johanson 2006). Documents at hand show that the first interaction between Turkic-speaking people and Iranian nomads took place in Eurasian and Central Asian Steppes in daily life, trade, religious and state affairs as well as war and contestation. The existence of reliable documents makes it possible to trace back these mutual relations to Sakas, Tokharians and Soghdian people involving monks, translators, merchants and state figures along the silk rout and Eastern Turkistan (Golden 2006). These extant relations were not restricted to the inner Asia and continued to exist in the Iran Plateau and other parts of Asia. Iranian plateau has witnessed the presence of different Turkic languages/dialects, among which Azerbaijani, Kashkay, Khorasan, Turkmen and Khalaj Turkic languages/dialects, is well known (Johanson 2001). A number of scholars have studied the contact between these Turkic languages and Farsi from both sociolinguistic and linguistic points of view. Adopting Dependency Grammar and Valency theories this contrastive study aims to examine syntax structure of sentences and the ways that verbs in Farsi and Azerbaijani Turkish function. In the First part, literature on the Turkic and Iranian language contact is reviewed. In the second part, outlines of Dependency Grammar and Valency Theory are discussed. The next section is devoted to the analysis of methodological aspects and restrictions of the study. Having provided the results, the fourth part discusses four main questions of the research. Final part is devoted to the conclusion and outlines of study.

Turkic and Iranian Language Contact Literature

Although there are different studies which have examined different Turkic and Iranian languages' contact phenomena, none of them used Dependency Grammar and Valency theories as analytical framework. *Linguistic Convergence and Areal Diffusion* (2005) is a collection of studies devoted to the interaction of Turkic, Iranian and Arabic languages. In this book L. Johanson examines bilateral code copying in Eastern Farsi and South-Eastern Turkic languages, H. Boeschoten evaluates intra-Turkic copying models in West Oghuz mixed texts, C. Bulut studies the effect of Farsi and Kurdish on Sonqor dialect in west of Iran, É. Á. Csató analyzes contact-induced convergence and the influence of Farsi, Luri and Kurdish on Kashkay dialect and Filiz Kiral concentrates on code coping and modal constructions in different dialects of Turkic languages of Iran. Parisa Erfani (2012) studies the effect of Farsi language on Azerbaijani Turkish morphosyntax through a field study conducted by ten speakers in Tabriz. The results show that in relative clauses and noun compounds, head-final and head-initial structures are used almost equally. She concludes that these results attest to the Persification of Azerbaijani Turkish language; however, "older, monolingual speakers prefer head-final structures, while younger, educated, bilingual speakers

prefer head-initial structures.” Furthermore, Filiz Kırıl (2000) studies the syntax of Tabriz vernacular in her doctoral dissertation where she depicts the influence of Farsi on this Azerbaijani Turkish vernacular. The pioneering works of G. Doerfer (1988 & 1994) and S. Tezcan (1994 & 1999) show how archaic features of old Turkic language remained in Khalaj Turkic language while the strong influence of Farsi and Oghuz dialects is observable. Moreover, F. Kırıl (2000), S. Bosnalı (2008) and A. Jamrasi (2014) gathering different corpora of Khalaji, including female speakers’ dialects shed light on other aspects of Turkic-Iranian language contact in central Iran. Finally, *Turkic-Iranian Contact Areas: Historical and Linguistic Aspects* (2006) edited by L. Johanson and C. Bulut and *Turkic Language in Iran - Past and Present* (2014) edited by H. Stein involve studies devoted to Turkic-Iranian language and cultural contact. Most of the aforementioned studies exploit synchronic and rarely diachronic approaches to study written and spoken samples. This contrastive study, using Valency and Dependency Grammar theories, aims to presents new perspective on verb constructions of Farsi and Azerbaijani Turkish languages.

Farsi and Turkish Syntax: A Dependency Grammar Approach

Scholars accept F.L. Tesniere (1893-1954) as the founder and the first important contributor to the Dependency Grammar approach in Linguistics (Agel&Ficher, 2009). Tesniere (1959) describes a sentence as an organized whole composed of words, elements which are not isolated in sentences like in a dictionary. As a result, the mind does not consider words as isolated parts; rather it assumes a connection between them in a sentence. Due to these connected parts scaffolding of a sentence emerges. According to Tesniere all parts of sentences are not on the same level; some are superior or governor and other inferior or dependent. This definition paves the way for the graphical representation of a sentence.

Instead of dividing a sentence into subject (NP) and predicate (VP), Dependency Grammar description of sentence is based on *principle of endocentric verb centrality* (Agel &Ficher, 2009). According to Bloomfield (1933), every endocentric construction consists of a head which is obligatory and of one or more dependents. Dependent’s function is to define head more narrowly or exactly. For instance, to give a better idea of endocentric constructions, three phrases in English, Farsi and Az.Turkish are given below:

- Beautiful *flower* (En); *gözəl gül* (Az); *gol-e ziba* (Far) (NP)
- *Melted* in mountain (En); *dağda əridi* (Az); *dər kuh zob shod*(Far) (VP)
- Very *fast* (En); *çox yeyin* (Az); *xeylî səri*’(Far) (AP)

In the above-mentioned examples *flower* (*çiçək/göl*), *melted* (*əridi/ zob shod*) and *fast* (*yeyin/səri*’) are heads of phrases and other parts of phrases are dependents.

An important property of Dependency Grammar is the central role of the verb in sentences which result from *principle of endocentric verb centrality*. The important central role of the verb and existence of head/governor and dependents implies a hierarchical relation between different parts of a sentence. This property is one of the important differences between Dependency Grammar Theory and other rival theories like Generative Grammar. According to the Generative Grammar all phrases and words are equally important in forming a sentence and must be studied independently still in relation with each other. However, according to dependency grammar, the

verb is the most important part of a sentence, has an essential function in forming the sentence and the other part of sentence are the obligatory or optional dependents of a verb. Treebank diagram can illustrate this sentence structure more clearly. If we suppose a sentence (S) consists of different words ($W_1...W_n$) where W_i stands for dependent and W_j for governor, we can show this dependency relation by $i \rightarrow j$. The direction of this connection in a sentence is always from governor to dependent (Debusmann and Kuhlmann 2010). For example the treebank diagram of “books teach very valuable lesson” can be shown as bellow:

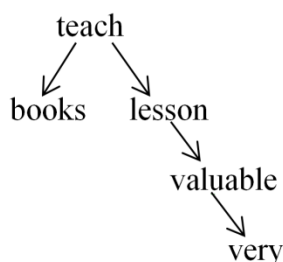


Diagram 1: Treebank of a Sentence Based on Dependency Theory

Diagram1 shows the verb centricity and hierarchical structure of a sentence in Dependency Grammar theory. The important role of the verb in a sentence is more obvious in Valency Theory which bears close relation to Dependency Grammar. Tesnier (1959) explains valency by comparing verbs with atoms that have only certain bonds. As atoms can only exercise attraction on a certain range of electrons, verbs also can accept a specific number of arguments (dependents). There are two kinds of arguments/dependents: core and oblique (optional or non-core) arguments. For example, in “Aydin ate dinner in a restaurant last night” the verb ‘ate’ entails two dependents: a person (or any living creature that can eat) and something to be eaten. These two dependents are obligatory and without them the sentence will be vague. On the contrary, despite the fact that the verb ‘ate’ implies a place and a date at which eating took place, ‘last night’ and ‘restaurant’ are optional non-core arguments because they provide more precise details without which the sentences are more or less clear (Dixon and Aikhenvald 1997). Valency of verb can decrease by moving a dependent from obligatory to optional status and increase when the inverse operation takes place. Accordingly, the passive and antipassive voices are among valency reducing devices whereas applicatives and causitives are among valency increasing devices (Martin and Bardey 2001).

Debusmann and Kuhlmann (2010) introduce the structural constrains that every illustration of sentence based on dependency relation obey. These constraints are:

- (1) no word can depend on itself (if $A \rightarrow B$ then $A \neq B$).
- (2) transitivity is impossible, or each word can have at most two governors (if $A \rightarrow B$ and $B \rightarrow C$ \neq $A \rightarrow C$).
- (3) dependency analysis should involve all of the words on the sentence.
- (4) symmetry is impossible (if $A \rightarrow B$ \neq $B \rightarrow A$).
- (5) dependency analysis is based on formal properties of words and sentences.

Methodology

This study aims to analyze the verb valency in Azerbaijani Turkish (hereafter Az.Turkish) and Farsi languages. To this end, 89 verbs were chosen from *G.H Saedi's Azadaran Bayal/عزاداران بیل*, a collection of short stories written in Farsi and translated into Az.Turkish by N.Xiyavi (2009). In the examined sample, 42 out of 89 Farsi verbs are simple, 32 verbs are compound, 11 verbs are linking, and 3 verbs are modal verbs. There are important differences between Az.Turkish and Farsi in terms of behavior of verbs in sentences:

a) All simple and compound Farsi verbs have Az.Turkish equivalents while four of the compound Farsi verbs have both simple and compound equivalents. For instance, 'sohbat kərdən' (to talk to somebody) is a compound verb in Farsi while its equivalent in Az.Turkish, 'danışmaq', is a simple verb. Actually, it is a reciprocal verb in both languages but since Farsi doesn't have any grammatical structure for forming this kind of verbs in simple form, the Farsi speakers use the verb 'kardan' as an auxiliary verb beside the nouns which have the reciprocal acts to construct verb phrases. These verbs generally are formed by the Arabic words in mufa'ala structure which is the structure of reciprocal verbs in Arabic. For instance, the word mokâleme, an Arabic reciprocal synonym of 'sohbat kardan' in Farsi, needs to have an auxiliary verb like 'kardan' to be used as a verb. 'Mokatebe kardan', that has a simple equivalent in Az. Turkish (yazışmaq), is formed of two parts: the Arabic 'mukataba' and a Farsi auxiliary verb 'kardan'.

b) Another problem is related to phrases like 'payin amadan' (to come down) which is not a compound verb in Farsi (adverb+simple verb) but 'yenmək', a simple verb, is its equivalent in Turkish. In this example, 'payin' (down) is dependent of 'amadan' (to come) in Farsi as well as 'gəlmək' (to come) in Turkish but is not dependent of Turkish verb 'yenmək'. (The opposite of 'payin amadan' is 'bala raftan' (to climb up) which has the 'çixmaq' as its simple equivalent verb in Az.Turkish. Yenmək and çixmaq bear the meaning of down and up inside but since there are not any equivalent for them in Farsi, Persians have to use these two adverbs as dependent for the verbs that they use in sentence. Actually, one of the most important problems in translating these Farsi phrases into Az. Turkish or vice versa is the inequality of the number of simple verbs between these two languages. The number of simple verbs for different concepts in Az.Turkish language is significantly higher than Farsi. So, it leads learners, teachers or translators to use word by word translation while comparing these languages. For instance, a Turkophone can use both 'aşağı gəlmək' and 'yenmək' when translates the Farsi phrase 'payin amadan' whereas both 'yuxarı getmək' and 'çixmaq' are valid for the Farsi phrase 'bala raftan'. This phenomenon also can affect the Az.Turkish language in long term of interaction.

c) Another important problem is related to the different functions of the Farsi verb 'shodan' (to became) as an auxiliary verb, a linking verb, a simple verb, a part of compound verbs or passive voice (Tabibzadeh 2012). These different perplexing functions may lead to problem in Az.Turkish sentences because of interference from Farsi. The equivalent of 'shodan' is 'olmaq' in Az.Turkish. The word 'shodan' (to go) is a simple word in the old Persian and is still alive in some collocation like 'âmad o shod' which means 'to come and to go'. But except to this case the word 'shodan' is not a generic form of a verb in Farsi anymore. Nevertheless, in contemporary Farsi it functions as an auxiliary verb in various content:

- Ali xoşhal şod = Ali sevindi (Ali became happy.)
 Aftab şod = Gün çıxdı (The weather became sunny.)
 Lazem şod beravam = getmeli oldum (I have to go.)
 Peydayaş şod = tapıldı (S/he was found.)
 Ğaza xorde şod = yemek yeyildi (The meal was eaten.)
 Mişavad raft = gedilebilir (Can go)

The equivalent of the verb 'shodan' in Az.Turkish is 'olmaq' which is not used in passive aspect that makes it easier to recognize the passive verbs from attributive or predicative forms in Az. Turkish than Farsi.

- Oxumaq (to read) – oxunmaq (to be read)
 Yemek (to eat) – yeyilmek (to be eaten)

Verb	Obligatory complement	Optional complement	total	Example
Uzaklaşmaq Dur şoden	Fa- mos Fa	Maf əzi	2oblig 1oblig, 1opt	Sedây-e moztareb dūr mişod. Dalğın ses uzaklaşdı.
Yaxınlaşmaq Nazdik şodan	Fa-mos Fa	Maf əzi	2oblig 1oblig-1opt	Sedây-e xafe nazdik mişod. Boğuntulu ses yaxınlaşdı.
Eyilmek Xem şodan	Fa-mos Fa		2oblig 1oblig	Mard-e avval xam şod. Birinci kişi əyildi.
Sönmeq Xamuş şodan	Fa-mos Fa		2oblig 1oblig	Şam`e qandil xâmûş şod. qəndilin şəmi söndü.
Böyümek Bozorg şodan	Fa-mos Fa		2oblig 1opy	Mâh bozorg şod. Ay böyüdü.
Işıqlanmaq Roşan şodan	Fa-mos Fa		2oblig 1opt	Havâ roşan şod. Hava işıqlandı.
Yenmek Piyade şodan	Fa-mos Fa-mafh əzi		2oblig 2oblig	Eslam az doroske piyâde şod. İslam daşqadan yendi.

Table1: Examples for the Complements of the Farsi verb 'shodan' and its Az.Turkish equivalent

Research Results

In this section, each Farsi verb in a sentence and its Turkish equivalent in a translated sentence are analyzed and a table is formed for each pair of Turkish and Farsi verbs. Results of analysis of each 89 verb pair are summarized in the separated tables. Each table has different columns for quantity and quality of core and non-core/optional dependents.

The results of the study show that different sentence structures, semantic contents and contextual conditions may affect the number and kind of required obligatory and optional dependents. For example, Turkish 'demək' (to say/to tell) requires different dependents in these examples ([] used to mark obligatory dependents and () for optional dependents and the verb are depicted in bold):

- [O] **dedi** [ki evdə kim vardı].
He said that home-in who was.
- [O] [evdə] [kimin olduğunu] **dedi**.
He home-in who being said

- [O] [bir şey] **dedi**.

He a thing said.

‘demək’ in the first sentence requires a subject and clause, in the second sentence a subject, an accusative and a locative and in the third one requires a subject and a nominative. These examples reveal not only that the quantity/number of dependents of a certain verb can change in different sentences but also that the quality of them can change as well. As a result, these findings challenge the assumption that implies dependency analyze is based on the formal properties sentences and is free from contextual and semantic conditions (e.g., see: Debusmann and Kuhlmann 2010).

Below are samples of the tables that compare verb valences and dependents in Az. Turkish and Farsi. In the table2 obligatory and optional dependents of Farsi verb ‘Gereftan’ and its two Turkish equivalents are summarized in columns and an example sentence which can show contextual and semantic details is provided.

	Verb	obligatory	optional	Example
Far	Gereftan/گرفتَن (to hold & capture & get)	Subject accusative	Locative	[Ramazan] [dast-e Madarash ra] (dar dasthayash) gerefte bud. Ramazan hand-of mother-her in hands-his held
Tr₁	Tutmaq	Subject accusative	Locative	[Rəməzan] [anasının əllərini] (əllərində) tutmuşdu.
Tr₂	Almaq	Subject Accusative dative	–	[Rəməzan] [anasının] [əllərini] [əllərinə] almıştı

Tabel2: Obligatory and Optional Dependents of the Farsi verb ‘Gereftan’ and Its Two Turkish Equivalents

The verb ‘gereftan’ (to hold) has different equivalents in Turkish. In our sample the translator has preferred to use ‘tutmaq’ which, like its Farsi equivalent, requires a subject to hold and an accusative to be held as core or obligatory dependent but it’s obvious a capacity to accept a locative as an optional dependent exists in verb nature. The translator potentially could use the Turkish word ‘almaq’ instead of ‘tutmaq’ for the Farsi ‘gereftan’ in this example. In that case, despite the meaning of a sentence would not change, a different valency of this verb would require different sentence structure, which would be different from ‘gereftan’ and ‘tutmaq’. This potential alternative illustrated at the third row of the table reveals that ‘almaq’ requires a subject to hold, an accusative to be held and also a third core dependent as dative. Verb ‘almaq’ has also other meanings which require other valency structure. For example, ‘to receive’ is another meaning of ‘almaq’ and by this new meaning, this verb would require a subject, an accusative and an ablative:

- [Ali] [kitabı] [yoldaşından] [**aldı**].
- Ali book friend his from received/got.

Having discussed an example of a simple verb, table3 summarizes the obligatory and optional dependents of ‘zan gereftan’ (to marry) as a compound Farsi verb and its Turkish equivalent:

	Verb	obligatory	optional	Example
Far	zan gereftan زَن گرفتَن/ to marry (for male)	Subject Dative		[Barayash] [zan gereftand] to him get married
Tr	Evlənmək	Subject	comitative	[Onu] [evləndirdilər]

		accusative		
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Tabel3: Obligatory and Optional Dependents of the Farsi Verb 'Zan Gereftan' and Its Turkish Equivalents

'zan gereftan' (to marry) is a compound verb in Farsi but has both simple and compound equivalents in Turkish. In this example the translator preferred to use simple verb 'evlëndirmək' that contrary to 'zan gereftan' can be used for both men and women. Furthermore, here 'zan gereftan' is a causative verb but it also can be used as non-causative verb:

- [Ali] **zan gereft** (non-causative): This sentence indicates that Ali got married
- [Madər-e Ali] [bərash] **zan gerft** (causative): This sentence implies that Ali's mother got Ali to marry.

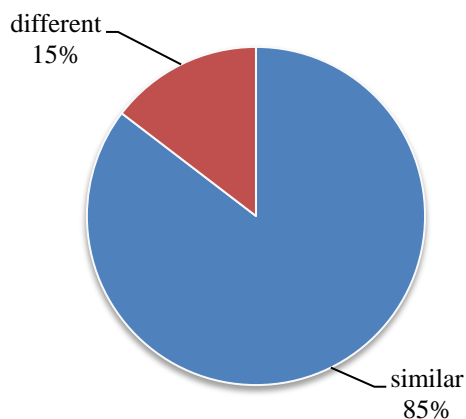
As it is obvious, the causative verb in the second sentence requires someone who facilitate marriage and as a result has one more obligatory dependent compared to the non-causative version. Non-causative Turkish equivalent of 'zan gerftan' is 'evlänmək' which is different from 'evlëndirmək' as the causative form. The causative form of 'zan gerftan' requires obligatory subject and dative, but Turkish equivalent 'evlëndirmək' requires obligatory subject and accusative alongside an optional comitative.

As mentioned above all explained processes have been carried out for all 89 pairs of Turkish and Farsi verbs. The results are used to response the questions posed by this research. Four questions are at the center of this study. Each question and provided answers based on the results of research are summarized as below:

a) *To what extent the valency of equivalent Turkish and Farsi verbs is similar?*

The results of the research indicate that 13 out of 89 Turkish and Farsi verbs have different dependents in terms of quantity and/or quality; 7 out of 13 verbs with different valency are related to the Farsi verb 'shodan' (to become) and its Turkish equivalent, 'olmaq'. Other examples are as follow: 'zadan (Far)/vurmaq(Tr)' (to hit), 'gereftan(Far)/almaq(Tr)' (to hold) , 'zan gereftan(Far)/evlëndirmək (Tr)' (to marry), 'gush dadan(Far)/dinlëmək(Tr)' (to listen), 'tamasha kardan(Far)/bakmak(Tr)' (to look) and Farsi modal verb 'bayestan' (should) and its Turkish equivalent '-malı/-məli'.

Diagram2: The Difference and Similarity Between Farsi and Turkish Verb Valency



b) Which processes can cause change in valency of verbs in Farsi and Turkish?

The findings of this research show that in Turkish, making verb causative increases the valency of verbs; however, there are significant differences between two languages in this regard: first of all, the majority of the analyzed Farsi verbs lack causative form and the use of other verbs with changes in sentence is needed to make them causative. Secondly, Turkish verbs have doubled or more causative degree (e.g. *gülmək, güldürmək, güldürtmək, or even güldürtürmək*) while Farsi verbs lack this property. The capacity of Turkish language to make double and more causative verbs is related to the causative potential of verbs. By increasing the degree of causative verbs, the need for causative dependents increases. On the other hand, making verbs passive is valency-decreasing operation in both languages (For example *alındı, gerefte shod*).

c) Third question: considering the results of the research, how learning Farsi by Turk students (or inversely) can cause interference in positive or negative way?

As mentioned in the answer of the first question, only 15 percent of valency of verbs differs between the two languages and these verbs can cause interference. But the findings of the study reveal other important differences as below:

c-1) Only 4 out of 89 analyzed Turkish verbs were compound verb while all have simple equivalent too; however, the compound verbs of Farsi were 32.

c-2) There were some differences between modal verbs of the two languages. For example, "Başarmaq" which is a simple verb in (Azerbaijani) Turkish, is used as a modal verb too, but its Farsi equivalent is not used as a modal.

c-3) There are six auxiliary verbs in Farsi whereas there are only two auxiliary verbs in Az. Turkish.

c-4) Causative and especially doubled causative verbs of Turkish can cause problems when one tries to translate them into Farsi.

All these differences in verb structure and valency can cause language interference while learning either Turkish or Farsi as a second language or in a translator software.

d) Fourth question: what causes are behind the similarities observed between valency structures of the two languages?

Long time interaction and language interference can be effective but it may not be the only factor or even the most important one; because, the valency of languages like Turkish and English, which have not been in contact, are strikingly similar. It seems that similarity between verb valency of two languages is not only due to interaction but also originated from semantic valency which is a universal phenomenon.

Conclusion

Iranian and Turkic languages have been in contact for at least 1.500 years. There are different contrastive studies which examine written and spoken samples of these languages, both synchronically and chronically. Despite the existence of mentioned studies there is not any

contrastive research that analyzes dependency structure and verb valency of these languages. This study is the first contribution to this unexplored research area. Having discussed different contrastive studies in the Turkic-Iranian language contact literature, this study introduces the general outlines of Dependency Grammar and Valency Theories. Subsequently, the differences between these theories and other rival theories, especially Generative Grammar, are introduced. According to Generative Grammar all of phrases and words are equally important in forming a sentence and must be studied independently but in relation with each other. However, according to Dependency Grammar, the verb is the most important part of a sentence; it has an essential function in forming the sentence and the other parts of the sentence are the obligatory or optional dependents of a verb. This research adopted Dependency Grammar and Valency theories as the theoretical framework to analyze verbs of Farsi and Turkish language in a comparative way. To do so, 89 pairs of equivalent Turkish and Farsi verbs were chosen from Saidi's *Azadaran-e Bayal*, a collection of short stories written in Farsi and translated into Turkish. Subsequently the property of these verbs and their valency structure were examined. Each verb pair's obligatory and optional dependents were determined in equivalent sentences. The results show that 13 out of 89 verbs require different kind and/or number of dependents. Seven of 13 distinguished different verbs stem from special functions of 'shodan' (to become) a Farsi verb. Another important difference stems from causative verbs because most of Farsi verbs lack a causative form while many Turkish verbs have doubled and more causative degrees. Causative operation is a valency increasing and passive operation is a valency decreasing process. These different verb structures and dependents potentially can cause problems in learning each of these languages as second languages or in translation software.

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