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SPECIAL ISSUE: Linguistics

# A Cognitive Sociolinguistic Approach to Lexical Polysemy, a Case Study: Persian Adjective /šax/

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**Abstract**

The present paper aims to investigate the polysemy of the Persian word /šax/ from the perspective of cognitive sociolinguistics. The study begins with introducing the tenets of cognitive sociolinguistics, and then goes on to investigate the polysemy of the Persian adjective /šax/ within this framework. In cognitive sociolinguistics, it is believed that polysemy cannot be reduced to a static state, one and the same for all speakers of a language. Rather, social variables like age and gender of speakers affect the way they perceive different senses of the polysemous words. This paper, in line with cognitive sociolinguistic, studies on polysemy, specifically those of Robinson (2010, 2012a, 2012b, and 2014), employed advanced statistical methods of Logistic Regression and Cross Tab to study the polysemy of Persian adjective /šax/ among 200 Persian speakers, both male and female, of different ages, selected from the Narmak neighborhood, Tehran, Iran, within the time span of spring and summer 2018. The results show that the cognitive sociolinguistic approach works desirably in lexical polysemy studies. In addition, the use of advanced statistical methods revealed a number of important facts about different senses of /šax/ in terms of age and gender, which provide a better description of polysemy in Persian language.

**Keywords:** Cognitive Sociolinguistics; Polysemy; Age; Gender; Social Variables.

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## 1. Introduction

The present study seeks to address *polysemy* in Persian from the perspective of Cognitive Sociolinguistics. It will be displayed that Cognitive Sociolinguistics proves more useful in explaining the flexibility of the semantic fields of a polysemous word, especially in showing the relationship of meaning variation with age and gender. In other words, the concept of polysemy cannot be reduced to a static concept, being same and fixed for all speakers; social variables such as age and gender affect the attitude of an individual towards the meanings and concept of a polysemous word and their prominence.

The main hypothesis of this paper is that the "traditional" cognitive approach cannot explain polysemy completely and properly. Therefore, in this paper, once the Cognitive Sociolinguistics model is introduced, the test questions will be evaluated on the polysemy of /šax/ and the adequacy of the model will be shown.

## 2. Research Methodology

This is a descriptive, analytical research and the data are collected via interview and questionnaire. First, using a library approach, an overview of Cognitive Sociolinguistic is provided. In the next section, different senses of /šax/ are extracted. In the end, the data are examined statistically to see whether, and to what extent, age and gender affect the polysemy of /šax/. The tools for data collection include Farhang-e Bozorg-e Sokhan and Farhang-e Moaser dictionaries to gather the dictionary meanings of the word, interviews to identify the common, popular senses of /šax/, and statistical questionnaires for a population-based study. The study is conducted in the Narmak neighborhood of Tehran, Iran, within the time span of spring and summer 2018 and the participants are Persian speakers, males and females of different ages. The random sampling is employed and the sample size is 200 persons (100 females and 100 males) falling equally under age groups: under 18, 18-30, 30-60, and over 60.

The first section lists the meanings of /šax/, extracted from the said dictionaries. Afterwards, the speaker meanings are examined using the primary questionnaire (See Appendix 1). Based on the extracted data, a secondary questionnaire (SEE Appendix 2) is developed using the variation in meanings obtained as the result of dictionary meanings and primary-questionnaire meanings. The secondary questionnaire is used for data collection and statistical analyses. Once the data are collected, they are analyzed and the results are presented in the form of tables, figures, percentages, and statistics. The present paper used the descriptive statistics indexes to analyze the data and describe the predictor variables; research hypotheses were analyzed using the logistic regression via SPSS software. The logistic regression can be described as a mathematical modeling approach which can be used to test hypotheses about the relationship of several independent variables to dichotomous dependent variables. The logistic regression also provides information on variation (the percentage to which an independent variable is explained by the dependent ones) and is used to determine the importance of the independent variables (Robinson, 2010:94). In this paper, logistic regression is employed to assess the overall effect of socio-demographic factors of age and gender on the use of the individual senses of the adjective /šax/.

## 3. Theoretical Framework and Review of Literature

### *3.1. Cognitive Sociolinguistics*

Cognitive sociolinguistics is a nascent field in linguistics, which addresses the socio- cognitive dimensions of language in use (Geeraerts, Kristiansen, & Peirsman, 2010: 1). This name was first proposed in *Language Variation, Cultural Models, Social Systems* (Kristiansen, & Dirven, 2008). Providing numerous examples, this book introduces the area which served as the interface between cognitive and social linguistics, opening a novel, broad outlook for

language practitioners; this is where sociolinguistics meets cognitive linguistics. Cognitive sociolinguistics endeavors to bring cognitive linguistics closer to the social approach to language (Geeraerts, Kristiansen, & Peirsman, 2010: 2). Here, the concepts of cognitive linguistics are scrutinized mainly by using huge corpora and advanced statistics.

Once cognitive linguistics reached maturity, cognitive sociolinguistics stepped up to investigate language use in connection to social variables. This new framework, examining the constituents of the identity of a linguistic community such as age, gender, education, etc., seeks to perform statistical analyses using the tools of variable-based sociolinguistics and cognitive linguistics and provide a deeper understanding of polysemy.

### *3.2. Study of Polysemy within Framework of Cognitive Sociolinguistics, Robinson (2012a)*

Few researchers have addressed the differences between polysemy models of different speakers of a language. For instance, is the pivotal concept of polysemy the same for all speakers of a language community? Theoretically speaking, cognitive linguistics confirms the social fundaments of linguistic variation, since it considers meaning as experiential and perspectival. There is, however, little literature showing the relationship between the language use models of encyclopedic categories directly and explaining the sociocultural tenets of categorization (The major exceptions are Geeraerts et al. (1994, 2010); Kristiansen & Dirven (2008); Pütz et al. (2012); Reif et al. (2013); and Robinson (2012a)).

Polysemy has recently attracted widespread interest among cognitive sociolinguists as much as it has been the pivotal topic of hot-debated studies in the "traditional" cognitive linguistics. A major example in this regard is the doctoral thesis of Justina Robinson which yielded a number of cutting-edge papers. She studied the following words in her studies: awesome (2010); skinny (2012a); gay (2012b); and gay, wicked, and awesome (2014). The authors of the present paper here elaborate on Robinson's analysis of 'skinny' and set her methodology as the model for the present paper. They also prepared the questionnaires and carried out their statistical analyses according to her model.

Seventy-two males and females, aged 11-94, belonging to different socioeconomic classes, from South Yorkshire, participated in Robinson's study. All the participants were called for one-on-one interviews where they were asked a number of questions by the researcher, who wished to obtain the most prominent uses of the adjective in question. The questions dealt with the adjective's referents; then the participants were asked to explain their reasons for using a particular adjective for a particular referent. For example, the following questions were put regarding the adjective 'skinny':

Q: Who or what is skinny?
A: My dog.
Q: Why is your dog skinny?
A: Because it's very thin.

Robinson argued that this method was better than the direct method where participants are actually asked about the meaning of an adjective, as it yields real and sensible answers. Allied to the numerous cognitive semantics studies (see Geeraerts and Cuyckens, 2007), a speaker retrieves faster the more prominent senses of a word than its peripheral ones. Therefore, even if it is likely that all senses of an adjective are not extracted from a single speaker, nevertheless those that are actually extracted are the most prominent senses for that speaker. The explanations the participants gave about why they used a particular adjective enabled the researcher to obtain the senses of the adjective. Afterwards, the researcher looked up the meanings of that adjective, in this case 'skinny', in different dictionaries and extracted various senses of the word. As some dictionaries like Oxford English Dictionary provide the first special use of a word, the researcher was able to distinguish the older and newer senses of the word.

The researcher examined the way different senses of 'skinny' are distributed in British English corpora in order to complete the data collected from the senses of 'skinny' in the dictionaries, which focused more on its meaning development over time. British National Corpus (BNC) and Oxford English Corpus (OEC) were examined.

The analysis of usage of 'skinny' by the participants revealed that there was not an equal distribution of different senses among different age groups. Robinson employed Kruskal-Wallis non-parametric test in order to determine if there was a significant difference between the age groups in using various senses of 'skinny'. She found out that there were significant differences in the use of the following senses:

| | |
|---|---|
| skinny: showing skin | p = .036 |
| skinny: mean | p < .001 |
| skinny: low fat | p = .04 |

Considering that a significant difference is a sign of a language change in progress in variationist studies, it is presumable that the meaning of 'skinny' is currently shifting. Her studies showed that the most frequent, prototypical sense of 'skinny', viz. 'thin', was the most prominent sense in the four age groups. However, there are differences regarding the peripheral senses. For instance, only 4 senses of 'skinny' were popular among the participants over 60.

Older speakers used 'skinny' more with the sense of 'mean'. As a result, we can say 'skinny' is undergoing a semantic change, so that the sense 'mean' is becoming obsolete. The following 2 senses are rarely used in younger age groups. The average age of those participants who used 'skinny' to mean 'showing skin' was 70 years of age.

skinny: low fat
skinny: showing skin

These three senses were slightly observed in the corpus; thus, dictionary data were incorporated for them. In the end, it was revealed that the use of senses of 'skinny' by different age groups was not random, and the major differences between the number and type of senses for every group reflected the language they learned in their youth. Statistical analyses showed that the university-educated women who live in the best parts of a city are more likely to use certain linguistic forms. The author provided the following remarks on every sense of 'skinny' using such analyses:

- 'Skinny' meaning 'low fat' is nascent.
- 'Skinny' meaning 'thin' is undergoing a cultural shift.

Although 'skinny' meaning 'thin' was the most prominent among the participants, there were differences in the values assigned to it by the participants. Young and female speakers were more inclined to express more positive and neutral senses, e.g. in answer to 'Who or what is skinny?', they would say, 'My friend; My daughter; One who runs a lot.' A 52-year-old female answered, 'That's what I wish to be.' On the contrary, older and male participants expressed negative answers: sick and old people. A 63-year-old participant said he didn't like this sense as it was not polite.

In sum, the study showed that this sense of 'skinny' was undergoing a change. For the elderly, 'skinny' was associated with sickness, malnutrition and probably poverty. Contrarily, the youth used it as a compliment. This change can be attributed to a change in the interpretation of 'beauty', advertised via the mass media, fashion industry, and the arts in the West. The results of the paper showed that the use of different senses of 'skinny' was not random, and reflected the speakers' social characteristics. Out of all factors, the participants chose age as having the highest effect on changes. Historically, older senses were more used by the elderly, and the newer senses by the younger speakers. However, the participants' gender did not have a significant effect on the explanation of semantic variations. Nevertheless, it did have some effect on the peripheral senses of 'skinny'. In the end, the author argued that the social analysis of

semantic changes methods would not yield satisfactory results without using quantitative statistical. The statistical analysis, in fact, showed that a combination of different factors could better explain the semantic uses.

## 4. Description and Data Analysis of the Study of Semantic Frequency Distribution Effect of Gender and Age on Senses of /šax/

This section deals with the effect of two social factors, i.e. age and gender, on the polysemy of the Persian word /šax/. Initially, the senses *outstanding* and *rude* were extracted for /šax/ from Farhang Moaser and Sokhan dictionaries. Afterwards, three important senses, namely *pretty girl, celebrity,* and *luxurious* were also obtained thorough Questionnaire 1, and several other peripheral meanings were subsumed under the category of *others*, but they were excluded due to their non-applicability. For quantitative purposes, Questionnaire 2 was prepared and distributed among the participants to show the frequency of the 5 senses of /šax/. The quantitative results then underwent analysis by an expert. The statistical report goes as below: first, the frequency pie chart foe the senses of /šax/, studied in the 200-participant population was presented, and then, the frequency distribution is presented in terms of gender in bar charts. Next section touches upon the each extracted senses, below which come two bra charts by the title of 0 and 1, obtained via SPSS. Figure 0 portrays a stock pile of the obtained percentages in terms of gender for participants who do not use /šax/ in that particular sense. On the other hand, Figure 1 demonstrates a stock pile of the obtained percentages in terms of gender for participants who use /šax/ in that particular sense. Later on, the cross tabulation is offered for each sense, which include 0, 1, 2, and total, where 0 shows the number and percentage of participants, in any age group or gender, who do not use /šax/ in that particular sense in a particular sense; 1 shows the participants who use /šax/ with a particular sense. In addition, the logistic regression was also employed for a better contradistinction of senses *outstanding* and *rude.*

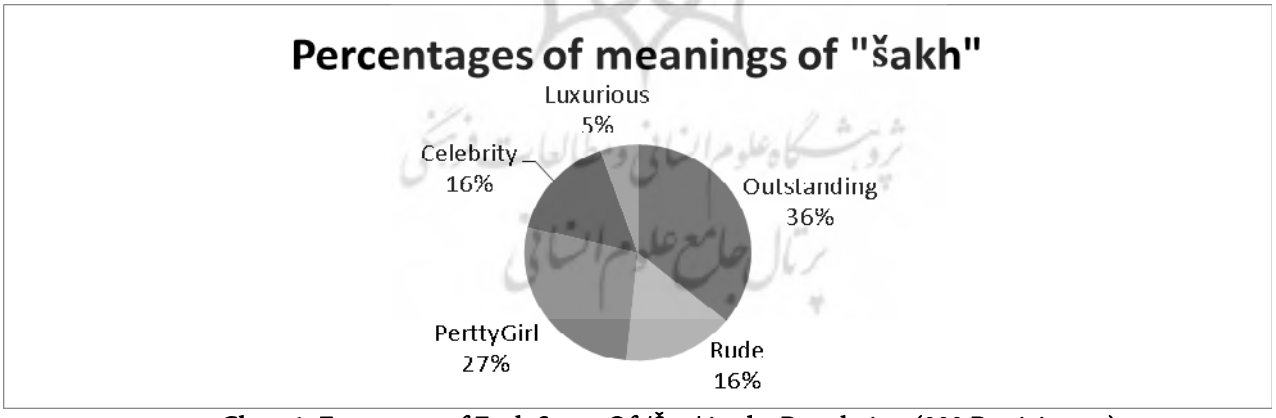


**Chart 1. Frequency of Each Sense Of /Šax/ in the Population (200 Participants)**

As observed in the above figure, /šax/ in senses *luxurious, celebrity,* and *pretty girl* is not used among males of over 60 years of age.

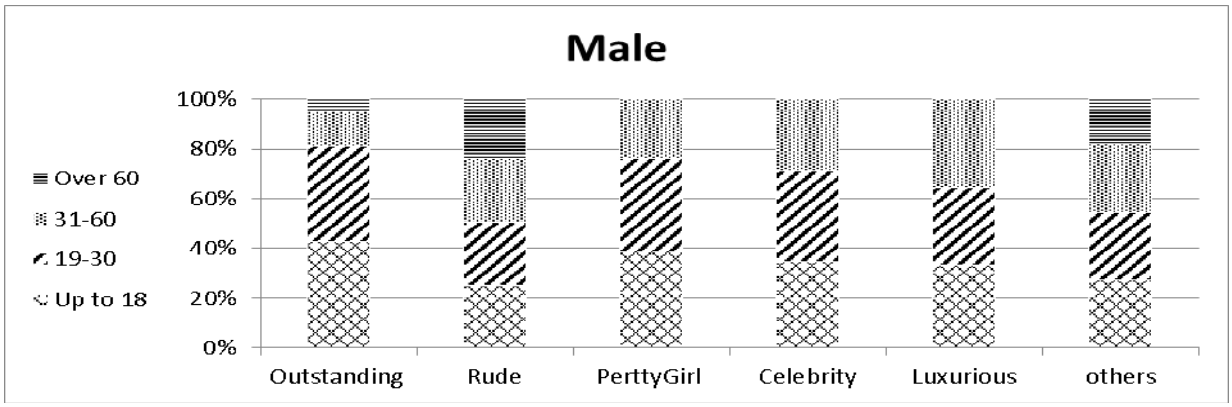


Fig 1. Frequency of Each Sense of /Šax/ among Males

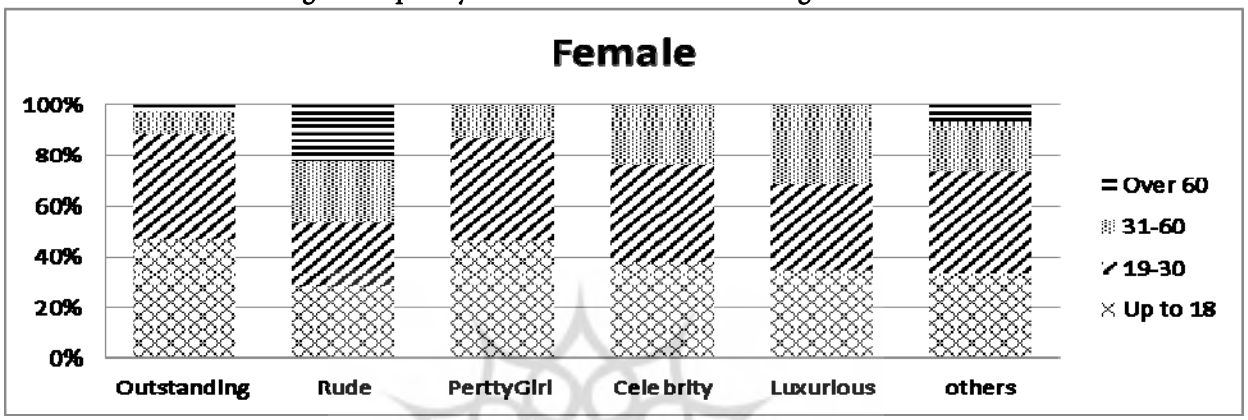


Fig 2. Frequency of each Sense of /šax/ among Females

These figures also show that /šax/ in senses *luxurious, celebrity,* and *pretty girl* is not used among males of over 60 years of age.

### 4.1. /šax/ in the sense *outstanding*


Fig. 3. Effects of Gender and Age Variables on the Sense *Outstanding of* /šax/

The above figure presents that the word /šax/ in the sense of *outstanding* is mostly used in the age groups of up to 18 and 19-30 years of age, and its application falls as age rises. This sense is used more among males than females. The following cross tabulation confirms this finding.

**Table 1. Gender and Age Cross Tabulation of "Outstanding"**

| Outstanding | | | | Age | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Up to 18 | 19-30 | 31-60 | Over 60 | |
| 0 | Gender | Female | Count | 9 | 11 | 22 | 24 | 66 |
| | | | % within Age | 56.3% | 55.0% | 53.7% | 51.1% | 53.2% |
| | | | % of Total | 7.3% | 8.9% | 17.7% | 19.4% | 53.2% |
| | | Male | Count | 7 | 9 | 19 | 23 | 58 |
| | | | % within Age | 43.8% | 45.0% | 46.3% | 48.9% | 46.8% |
| | | | % of Total | 5.6% | 7.3% | 15.3% | 18.5% | 46.8% |
| | Total | | Count | 16 | 20 | 41 | 47 | 124 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 12.9% | 16.1% | 33.1% | 37.9% | 100.0% |
| 1 | Gender | Female | Count | 16 | 14 | 3 | 1 | 34 |
| | | | % within Age | 47.1% | 46.7% | 33.3% | 33.3% | 44.7% |
| | | | % of Total | 21.1% | 18.4% | 3.9% | 1.3% | 44.7% |
| | | Male | Count | 18 | 16 | 6 | 2 | 42 |
| | | | % within Age | 52.9% | 53.3% | 66.7% | 66.7% | 55.3% |
| | | | % of Total | 23.7% | 21.1% | 7.9% | 2.6% | 55.3% |
| | Total | | Count | 34 | 30 | 9 | 3 | 76 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 44.7% | 39.5% | 11.8% | 3.9% | 100.0% |
| Total | Gender | Female | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | | Male | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | Total | | Count | 50 | 50 | 50 | 50 | 200 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 25.0% | 25.0% | 25.0% | 25.0% | 100.0% |

This sense is mostly used in the males of up to 18 years of age with 23.7% frequency, and those of 19-30 years of age with 21.1% frequency; these percentages are 21.1% for female up to 18 and 18.4% for female of 19-30 years of age. As seen in the cross tabulation, the rise in age decreases the use of /šax/ in the sense *outstanding*; in other words, this sense is in its early stages.

The fitting of the logistic regression as per the dependent variable of using /šax/ in the sense of *outstanding* and independent variables of age and gender yields the following results. The -2 Log likelihood is 197.882 and the Nagelkerke R Square and Cox & Snell R Square indices are 0.287 and 0.391, respectively. This proves that the modeling was desirable.

**Table 2. Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 1[a] | Age | | | 45.553 | 3 | .000 | |
| | Age(1) | 2.065 | .398 | 26.924 | 1 | .000 | 7.885 |
| | Age(2) | 2.568 | .458 | 31.502 | 1 | .000 | 13.038 |
| | Age(3) | 1.242 | .702 | 3.133 | 1 | .077 | 3.463 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Gender(1) | -.488 | .352 | 1.919 | 1 | .166 | .614 |
| | Constant | -.784 | .205 | 14.650 | 1 | .000 | .456 |
| a. Variable(s) entered on step 1: Age, Gender. | | | | | | | |

The age group variables are valid at the confidence level of 90%, but the gender variable is not valid at this level. As the age group variables are discrete in this model, it is essential to apply the categorical variable command for them in the logistic regression, through which they turn to continuous variables. Helmert Contrast method was applied for this purpose in the current paper, where the age differences of the immediate groups are contrasted. Age (1) show the comparison of the age group up to 18 and the age group 19-30; Age (2) show the comparison of the age group 18-30 and the age group 31-60; and Age (3) show the comparison of the age group 31-60 and the age group over 60.

Considering the EXP(B) which is 7.885 for Age (1), 13.038 for Age (2), and 3.463 for Age (3), viz. greater than 1, it is revealed that the increase in the age group results in the decrease in the use of the sense *outstanding*.

### 4.2. /šax/ in the sense *rude*

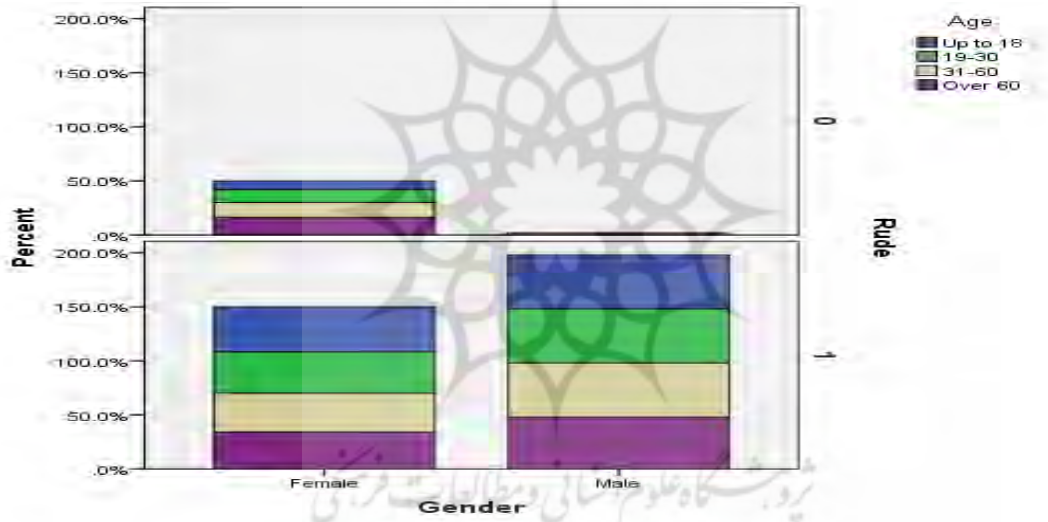


**Fig 4 .Effects of Gender and Age Variables on the Sense *rude of* /šax/**

As observed, this sense is used among all age groups, mostly among males, which is also confirmed by the following cross tabulation.

**Table 3. Gender and Age Cross Tabulation of "Rude"**

| Rude | | | | Age | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | Up to 18 | 19-30 | 31-60 | Over 60 | |
| 0 | Gender | Female | Count | 4 | 6 | 7 | 8 | 25 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 88.9% | 96.2 % |
| | | | % of Total | 15.4% | 23.1% | 26.9% | 30.8% | 96.2 % |
| | | Male | Count | 0 | 0 | 0 | 1 | 1 |
| | | | % within Age | 0.0% | 0.0% | 0.0% | 11.1% | 3.8% |
| | | | % of Total | 0.0% | 0.0% | 0.0% | 3.8% | 3.8% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total | | Count | 4 | 6 | 7 | 9 | 26 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0 % |
| | | | % of Total | 15.4% | 23.1% | 26.9% | 34.6% | 100.0 % |
| 1 | Gender | Female | Count | 21 | 19 | 18 | 17 | 75 |
| | | | % within Age | 45.7% | 43.2% | 41.9% | 41.5% | 43.1 % |
| | | | % of Total | 12.1% | 10.9% | 10.3% | 9.8% | 43.1 % |
| | | Male | Count | 25 | 25 | 25 | 24 | 99 |
| | | | % within Age | 54.3% | 56.8% | 58.1% | 58.5% | 56.9 % |
| | | | % of Total | 14.4% | 14.4% | 14.4% | 13.8% | 56.9 % |
| | Total | | Count | 46 | 44 | 43 | 41 | 174 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0 % |
| | | | % of Total | 26.4% | 25.3% | 24.7% | 23.6% | 100.0 % |
| Total | Gender | Female | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0 % |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0 % |
| | | Male | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0 % |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0 % |
| | Total | | Count | 50 | 50 | 50 | 50 | 200 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0 % |
| | | | % of Total | 25.0% | 25.0% | 25.0% | 25.0% | 100.0 % |

This sense is used in all male age groups equally with the percentage of 14.4 in the entire sample studied. This sense is used among females, but less than males; It is used in the female age group up to 18 with a frequency of 12.1%, more than other female age groups.

Regarding this sense, the use of the logistic regression is not significant; however, the results of this model will be provided later.

**Table 4. Variables in the Equation "outstanding"**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 1[a] | Age | | | 2.548 | 3 | .467 | |
| | Age(1) | .751 | .598 | 1.577 | 1 | .209 | 2.120 |
| | Age(2) | .381 | .552 | .477 | 1 | .490 | 1.464 |
| | Age(3) | .356 | .599 | .353 | 1 | .552 | 1.428 |
| | Gender(1) | -3.529 | 1.033 | 11.662 | 1 | .001 | .029 |
| | Constant | 2.899 | .520 | 31.052 | 1 | .000 | 18.161 |

a. Variable(s) entered on step 1: Age, Gender.

### 4.3. /šax/ in the sense *pretty girl*

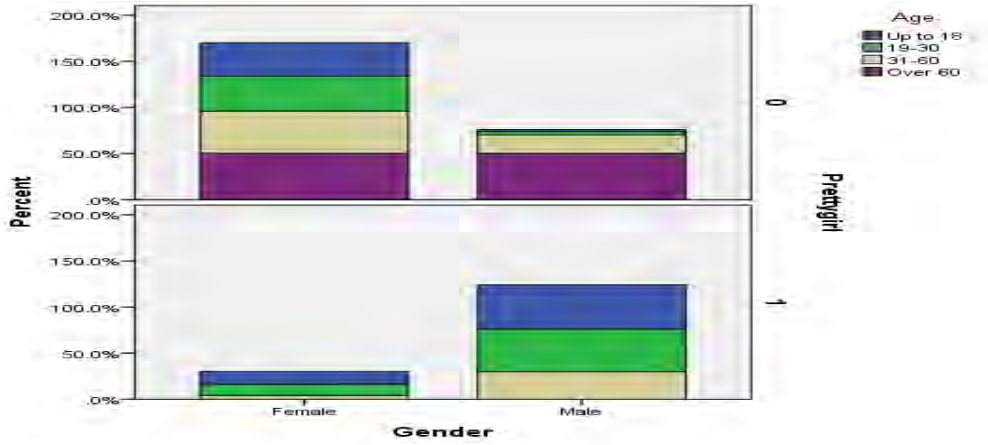


**Fig 5. Effects of Gender and Age Variables on the Sense *Pretty Girl of* /šax/**

As observed in the above figure, non-usage of this sense is higher than its usage. This sense is not used by males and females of over 60 years of age. The sense *pretty girl* has its highest usage among males in the age groups up to 18 and 19-30. This sense is also more popular among males than females, as confirmed by the following cross tabulation.

**Table 5. Gender and Age Cross Tabulation of "Pretty Girl"**

| Pretty girl | | | | Age | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | Up to 18 | 19-30 | 31-60 | Over 60 | |
| 0 | Gender | Female | Count | 18 | 19 | 23 | 25 | 85 |
| | | | % within Age | 94.7% | 90.5% | 69.7% | 50.0% | 69.1% |
| | | | % of Total | 14.6% | 15.4% | 18.7% | 20.3% | 69.1% |
| | | Male | Count | 1 | 2 | 10 | 25 | 38 |
| | | | % within Age | 5.3% | 9.5% | 30.3% | 50.0% | 30.9% |
| | | | % of Total | 0.8% | 1.6% | 8.1% | 20.3% | 30.9% |
| | Total | | Count | 19 | 21 | 33 | 50 | 123 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 15.4% | 17.1% | 26.8% | 40.7% | 100.0% |
| 1 | Gender | Female | Count | 7 | 6 | 2 | | 15 |
| | | | % within Age | 22.6% | 20.7% | 11.8% | | 19.5% |
| | | | % of Total | 9.1% | 7.8% | 2.6% | | 19.5% |
| | | Male | Count | 24 | 23 | 15 | | 62 |
| | | | % within Age | 77.4% | 79.3% | 88.2% | | 80.5% |
| | | | % of Total | 31.2% | 29.9% | 19.5% | | 80.5% |
| | Total | | Count | 31 | 29 | 17 | | 77 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | | 100.0% |
| | | | % of Total | 40.3% | 37.7% | 22.1% | | 100.0% |
| Total | Gender | Female | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | | Male | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | Count | 50 | 50 | 50 | 50 | 200 |
| | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 25.0% | 25.0% | 25.0% | 25.0% | 100.0% |

The males and females of over 60 years of age do not use /šax/ in the sense of *pretty girl.* The groups who use this sense are males of up to 18 (31.2%) and males of 19-30 (29.9%). As this sense is not used in a particular age group, the logistic regression model will not yield significant results.

### 4.4. /šax/ in the Sense *Celebrity* (esp. in Social Networks such as Instagram)

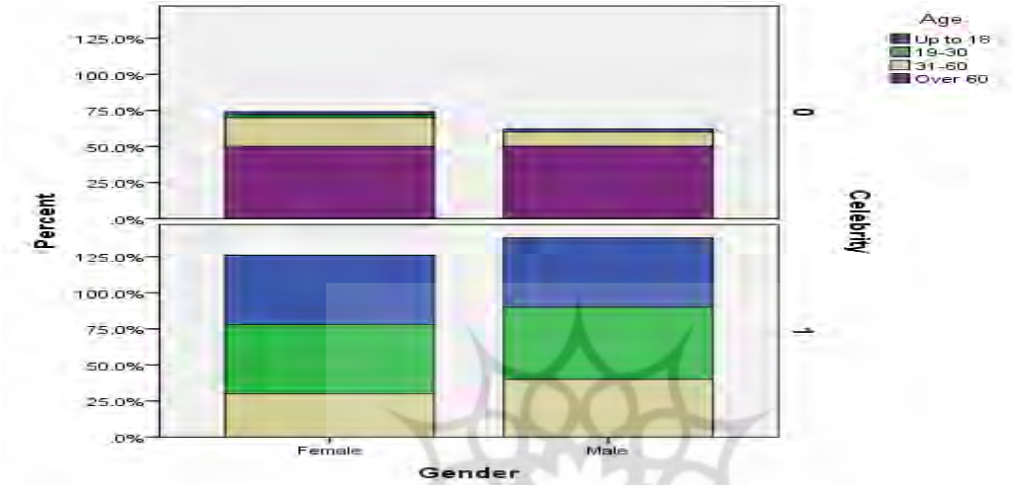


**Fig 6. Effects of gender and age variables on the sense *celebrity of* /šax/**

The above figure shows that the sense *celebrity* is used among males of up to 18, 19-30, 31-60, more than females. However, it is not used by males and females of over 60 years of age. This can be observed in this cross tabulation.

**Table 6. Gender and Age of Cross Tabulation "Celebrity"**

| Celebrity | | | | Age | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Up to 18 | 19-30 | 31-60 | Over 60 | |
| 0 | Gender | Female | Count | 1 | 1 | 10 | 25 | 37 |
| | | | % within Age | 50.0% | 100.0% | 66.7% | 50.0% | 54.4% |
| | | | % of Total | 1.5% | 1.5% | 14.7% | 36.8% | 54.4% |
| | | Male | Count | 1 | 0 | 5 | 25 | 31 |
| | | | % within Age | 50.0% | 0.0% | 33.3% | 50.0% | 45.6% |
| | | | % of Total | 1.5% | 0.0% | 7.4% | 36.8% | 45.6% |
| | Total | | Count | 2 | 1 | 15 | 50 | 68 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 2.9% | 1.5% | 22.1% | 73.5% | 100.0% |
| 1 | Gender | Female | Count | 24 | 24 | 15 | | 63 |
| | | | % within Age | 50.0% | 49.0% | 42.9% | | 47.7% |
| | | | % of Total | 18.2% | 18.2% | 11.4% | | 47.7% |
| | | Male | Count | 24 | 25 | 20 | | 69 |
| | | | % within Age | 50.0% | 51.0% | 57.1% | | 52.3% |
| | | | % of Total | 18.2% | 18.9% | 15.2% | | 52.3% |
| | Total | | Count | 48 | 49 | 35 | | 132 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | | 100.0% |
| | | | % of Total | 36.4% | 37.1% | 26.5% | | 100.0% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total | Gender | Female | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | | Male | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | Total | | Count | 50 | 50 | 50 | 50 | 200 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 25.0% | 25.0% | 25.0% | 25.0% | 100.0% |

As seen, the highest usage of this sense belongs to males of 18-30 with 18.9% frequency. This frequency is 18.2% for males and females of up to 18 and females of 18-30. This sense has no use among males and females of over 60. The logistic model is not significant for the age group of over 60 due to its non-usage.

### 4.5. /šax/ in the Sense *luxurious*

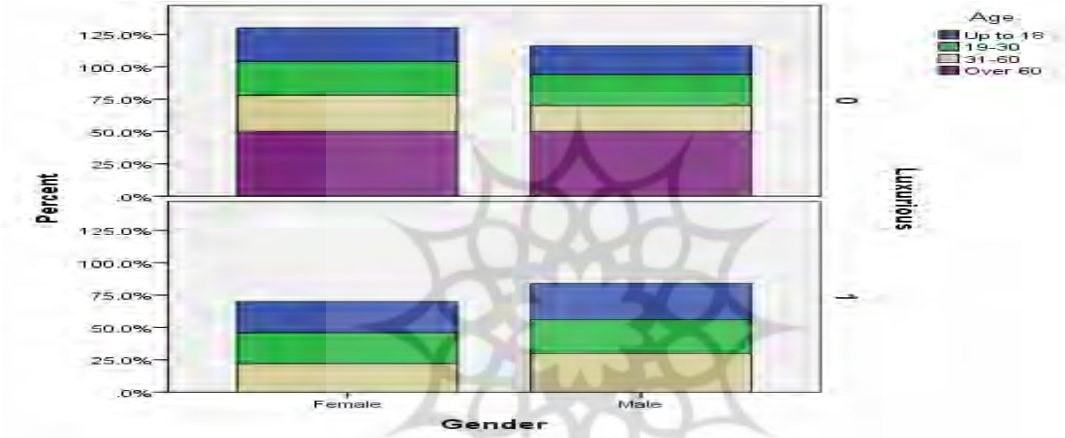


**Fig 7** Effects of gender and age variables on the sense *luxurious of* /šax/

The above figure shows that the use of /šax/ in the sense of luxurious was more popular among males, used by three age groups of up to 18, 19-30, 31-60, but it is not used among males and females of over 60.

**Table 7. Gender and Age Cross Tabulation of "Luxurious"**

| Luxurious | | | | Age | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | Up to 18 | 19-30 | 31-60 | Over 60 | |
| 0 | Gender | Female | Count | 13 | 13 | 14 | 25 | 65 |
| | | | % within Age | 54.2% | 52.0% | 58.3% | 50.0% | 52.8% |
| | | | % of Total | 10.6% | 10.6% | 11.4% | 20.3% | 52.8% |
| | | Male | Count | 11 | 12 | 10 | 25 | 58 |
| | | | % within Age | 45.8% | 48.0% | 41.7% | 50.0% | 47.2% |
| | | | % of Total | 8.9% | 9.8% | 8.1% | 20.3% | 47.2% |
| | Total | | Count | 24 | 25 | 24 | 50 | 123 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 19.5% | 20.3% | 19.5% | 40.7% | 100.0% |
| 1 | Gender | Female | Count | 12 | 12 | 11 | | 35 |
| | | | % within Age | 46.2% | 48.0% | 42.3% | | 45.5% |
| | | | % of Total | 15.6% | 15.6% | 14.3% | | 45.5% |
| | | Male | Count | 14 | 13 | 15 | | 42 |
| | | | % within Age | 53.8% | 52.0% | 57.7% | | 54.5% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | % of Total | 18.2% | 16.9% | 19.5% | | 54.5% |
| | Total | | Count | 26 | 25 | 26 | | 77 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | | 100.0% |
| | | | % of Total | 33.8% | 32.5% | 33.8% | | 100.0% |
| Total | Gender | Female | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | | Male | Count | 25 | 25 | 25 | 25 | 100 |
| | | | % within Age | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | | | % of Total | 12.5% | 12.5% | 12.5% | 12.5% | 50.0% |
| | Total | | Count | 50 | 50 | 50 | 50 | 200 |
| | | | % within Age | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | % of Total | 25.0% | 25.0% | 25.0% | 25.0% | 100.0% |

As seen in the cross tabulation, the highest frequency belongs to males of 31-60 years of age with 19.5%, and males of up to 18 with 18.2%. Due to its non-usage by males and females of over 60, the logistic regression modeling will not be significant.

## 5. Discussion

The authors tried to study polysemy within the framework of the modern approach of cognitive sociolinguistics using advance statistical analyses. Section 4 revealed that the authors did not restrict only to dictionary meanings, and collected a plethora of other senses via field research. The results of this study on 5 senses of /šax/ were classified into 4 age groups (males and females), and yielded valuable findings, which prove the desirability of the cognitive sociolinguistic approach.

The statistical analyses proved that age played a major role in the frequency of the sense *outstanding,* in a manner that it was mostly used by participants of up to 18 and 19-31 years of age. Age increase decreases its use considerably. This sense is more popular among males, and the gender distinction is relatively blurred, rendering the logistic regression insignificant. These analyses demonstrate while this sense has gender application, it is fading. This is confirmed by social linguistic studies on Persian language (Parmoon et al., 2013).

Regarding *rude*, the results showed that it is of relatively equal use in all age groups, but it is more used by males than females, showing the gender application of this sense. Figure 4 shows this sense is more popular among males in all age groups. The word /šax/ in the sense of *rude* is used among males with the equal percentage of 14.4% in the entire population. Among females, it is used less than males, mostly by females of up to 18 years of age with the frequency of 12.1%.

Regarding the sense *pretty girl*, most participants did not use it; therefore, it is considered a peripheral meaning. This sense is not used by males and females of over 60, and has its highest use among males of up to 18 and 19-30 years of age. /šax/ in the sense of *pretty girl* is mostly used by males, confirmed by the relevant cross tabulations. If we want to delineate the diachronic evolution of this sense, we should say it will gain more prominence in the future.

Regarding the sense *celebrity* on social networks, esp. Instagram, the following results are delivered: the expression /šax-e Insta/ was more observed in the questionnaires filled by younger participants. This sense is more used by males of up to 18, 19-30, and 31-60 more than females, but it is not used by males and females of over 60. The results from the cross tabulation show that the highest frequency of this sense belongs to the males of 19-30 years of age

(18.9%), males and females of up to 18 and females of 18-30 (18.2%). This is not used by males and females of over 60. Therefore, to provide a diachronic evolution of this sense in the future, it will be likely to experience more prominence.

In relation to the sense *luxurious*, it should be pointed out that this is the most peripheral sense of /šax/ with the lowest frequency. The participants who do not use this sense outnumber those who use it (SEE Fig. 7). This sense is more used by males of up to 18, 19-30, and 31-60 years of age. It is not used by males and females of over 60. As the cross tabulation shows, the highest frequency of this sense belongs to the males of 31-60 which is 19.5%, and it is 18.2% for males of up to 18. It is concluded that this sense is more used by males and has, to some extent, gender applications.

Generally, our results indicated that the effect of gender on the senses of /šax/ is less significant compared with that of age. This conclusion also verifies those of Robinson's (2010), (2012a), (2012b), and (2014). To sum up, the picture of polysemy in the mirror of cognitive sociolinguistics is much more colorful and fruitful than what we had already known in the perspective of cognitive linguistics. The analysis also proves cognitive sociolinguistics to have more explanatory power and more grounded in the social context of language use. Hence, it proves that cognitive sociolinguistics is a more powerful and more fruitful framework for the study of lexical polysemy. The authors believe employing this method will open a new horizon into the better understanding of language, specifically in understanding the meaning of words which can yield benefits to some practical fields of linguistics like lexicography, language teaching, NLP, discourse analysis, and literal criticism to name a few.

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## Appendix 1:
## Descriptive questionnaire:

Please fill out the following questionnaire carefully:
Gender:
Age:
Job:
Education:

Consider the word /šax/
To what extent do you use this word in your daily, routine conversations?
Often Seldom Never

Who or what constitutes the referent of this word? Please write down any sentence that occurs to you, and explain the senses you perceive of this word.
Are there any familiar senses you don't use? Please jot them down and clarify why you don't use those senses.

## Appendix 2:
## Statistical questionnaire:

Appreciating your time and cooperation, please answer the following question with utmost precision and honesty. Please select an answer from the choices provided for each item.
You do not need to state your full name, and the information will be collected in an unspecified, random fashion.
Thank you in advance for your cooperation and notice.
Mr. /Ms. …… Tel. /Cell: Email:
Age: under 18☐ 19-30☐ 31-60☐ over 60☐
Gender: male☐ female☐ Education: GCSE and under☐ Associate's☐ Bachelor's☐ Master's☐ PhD☐
Please express your agreement or disagreement to the following senses by checking yes or no.

| Word | Senses | Yes | No |
|---|---|---|---|
| /šax/ | outstanding | | |
| | rude | | |
| | celebrity | | |
| | Pretty girl | | |
| | others | | |

ویژه‌نامهٔ زبان‌شناسی

# رویکرد شناختی زبان‌شناسی اجتماعی به تکثر واژگانی، مطالعه موردی: صفت فارسی / Šax /

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**چکیده**

مقالهٔ حاضر به دنبال بررسی چندمعنایی واژهٔ «شاخ» از چشم‌انداز زبان‌شناسی شناختی اجتماعی در زبان فارسی است. این مقاله در ابتدا به معرفی ابعاد زبان‌شناسی شناختی اجتماعی پرداخته و سپس می‌کوشد چندمعنایی واژهٔ شاخ را در این چارچوب تبیین نماید. در زبان‌شناسی شناختی اجتماعی این باور وجود دارد که پدیدهٔ چندمعنایی را نمی‌توان به یک موضوع ایستا که نزد تمامی گویشوران یک زبان ثابت است تقلیل داد. بلکه متغیرهای اجتماعی مانند سن و جنس گویشوران بر نحوهٔ درک ایشان از معانی متفاوت واژه چندمعنا تأثیر می‌گذارد. این مقاله هم‌سو با مطالعات اخیر انجام شده بر چندمعنایی، به‌ویژه مطالعات رابینسون (2010)، (2012a)، (2012b) و (2014)، برای مطالعهٔ چندمعنایی واژهٔ شاخ از روش‌های پیشرفتهٔ آماری رگرسیون لجستیگ و جدول توافقی بهره جسته و به بررسی این امر در میان ۲۰۰ گویشور ایرانی، اعم از زن و مرد در گروه‌های سنی متفاوت در منطقهٔ نارمک تهران در بهار و تابستان ۱۳۹۷ می‌پردازد. نتایج این پژوهش نتایج می‌دهد که رویکرد زبان‌شناسی شناختی اجتماعی بهتر می‌تواند از تبیین پدیدهٔ چندمعنایی واژگانی در این درست مطالعات برآید. همچنین، بهره بردن از روش‌های پیشرفتهٔ آماری حقایق مهمی را در مورد تفاوت معانی مختلف واژهٔ شاخ در دو جنس و گروه‌های سنی متفاوت آشکار می‌سازد که می‌تواند شرح بهتری بر پدیدهٔ چندمعنایی در زبان فارسی باشد. نتایج همچنین نشان داد که تاثیر متغیر جنسیت بر معانی واژه مورد نظر کمتر از تاثیر متغیر سن است.

**واژه‌های کلیدی:** زبان‌شناسی شناختی اجتماعی، چندمعنایی، سن، جنس، متغیرهای اجتماعی

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