



## Schema-based Analysis of English Textbooks Designed within a Foreign Language Context

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### Abstract

The present study aims to linguistically and cognitively analyze all the words comprising three English textbooks taught at advanced levels in a foreign language context. The textual analysis of the books was conducted on the basis of the microstructural approach to schema theory. To this end, eighteen reading passages comprising the textbooks were chosen to be schematically analyzed. The schemata were parsed, codified and assigned to the semantic, syntactic and parasyntactic domains, which were further subsumed under the genus and species categories. The study was limited to analyzing the semantic, syntactic and parasyntactic domain and genus tokens and types. Descriptive statistics and Chi-square tests were carried out to analyze the data. Results indicated that there were significant differences between semantic domain tokens and types and also syntactic and parasyntactic domain and genus types and tokens. The findings also demonstrated that the semantic schemata were comparatively higher than the syntactic and parasyntactic ones, especially the genus nouns. Additionally, the findings confirmed the empirical and psychological validity of applying schema theory to reading comprehension texts. The implications of the findings are discussed.

**Keywords:** schema theory, reading comprehension, textbooks, semantic, syntactic, parasyntactic

### INTRODUCTION

In this new age of technology, textbooks are still considered to be one of the most essential components of a classroom. Most of the input that learners receive in the classroom is through textbooks and as Richards (2001) stated, textbooks may provide the main source of contact that learners may have with a language. Textbooks provide a number of advantages for the teaching-learning context which make them the most useful components in the classroom. According to Brown (2001, p. 136), "The most obvious and most common form of material support for language instruction comes through textbooks." None of the other materials used in the classroom such as board

work and role plays can substitute the textbooks since textbooks are unified instructional materials which play a very important role in the classroom.

Even though textbooks are considered by some to be inflexible or biased (Allwright, 1982), one cannot deny the advantages that using textbooks in the classrooms can provide. Considering the view that textbooks are a core part of the teaching/learning process and due to growing need of many Iranians to learn a foreign language especially English, textbooks used in the classrooms should be put to scrutiny to help teachers select suitable textbooks, which could facilitate the teaching/learning process.

Considering the fact that reading and listening activities form major parts of the textbooks, and that reading and listening comprehension depends on the readers' background knowledge or schema (Khodadady, 1997, 2008), and that the acquisition of new information depends on the previously stored schemata (Carrell, 1983, 1984; Khodadady & Elahi, 2012; Khodadady & Hesarzadeh, 2014), this study has attempted to evaluate and textually analyze the reading texts by employing schema theory. It can be applied to reading comprehension ability either macro-structurally or micro-structurally (Khodadady, 1997, 1999; Khodadady & Herriman, 2000).

The macrostructural approach adopts texts as units of reference and considers schema to be as scripted or rhetorical knowledge (McNeil, 1987; Poplin, 1988; Yekovich and Walker, 1988) which requires "special knowledge" (Klein-Braley, 1997, p.65) or in Yule's words (2006, p. 132) a "conventional knowledge structure that exists in memory." In this approach, when the readers encounter the title of the text, they invoke whatever background knowledge they have and subsequently process and integrate the information presented in the entire text relying on their background knowledge. However, this approach has been questioned as to its validity for considering schema as being fixed and its subjective nature (Khodadady & Hesarzadeh, 2014). Khodadady and Gholamian (2014), for example, argued that a schema is not just conventional but also personal and it, therefore, shouldn't be considered as a fixed entity as Yule (2006) or as a fixed map as Carrell (1983) did.

On the other hand, the microstructural approach focuses on all words constituting the texts (Khodadady & Gholamian, 2014) and considers schema as personally acquired conventional knowledge represented by each and all these words whose juxtapositioning and combination with each other expresses whatever message the author of the text intends to convey (Khodadady, 1997, 1999, 2008). Not only words but also linguistic phrases can be considered as schemata and the linguistic classification of schemata into linguistic domains occurs when the readers decide what each schema represents by itself and also in combination with other schemata comprising the statements (Khodadady & Moosavi, 2015). This approach regards a text under comprehension as an entity which comprises specific schemata (Khodadady & Hesarzadeh, 2014). For the comprehension of a specific schema within the text is necessary but not enough. The contextual meaning of the schemata needs to be determined by relating it to other schemata comprising the text. These two abilities i.e., activating background knowledge related to each and all words and relating it to other

schemata make the text comprehensible to the reader. Following this approach, Khodadady (2008) classified schemata into three domains: semantic, syntactic and parasyntactic.

Semantic schemata are traditionally referred to as "open-class items" (Quirk, Greenbaum, Leech & Svartvik, 1985, p. 73) which represent the main concepts the authors have stored in their minds as their background knowledge (Khodadady & Hesarzadeh, 2014). They are many in type but few in tokens because they express actions, attitudes, emotions and states their possessors wish to convey (Khodadady, 2008). As a cognitive domain, semantic schemata consist of genera which, in turn, are comprised of a number of species. For instance, the semantic domain of schemata includes four genera: adjectives, adverbs, nouns and verbs, each of which consist of a number of species. The adjective genus, for example, is subcategorized into agentive, complex, comparative, dative, derivational, nominal, simple, and superlative species.

In contrast to semantic schemata, syntactic ones which are traditionally referred to as "closed-class items" (Quirk et al, 1985, p. 71) are few in type but many in tokens or frequency. They are few in type because of their dependence on and attachment to the semantic schemata in order to confine them within the variables of time and place (Khodadady, 2008). The third domain of schemata known as parasyntactic is similar to semantic one in that its constituting schemata can be open in type. A large number of names do, for example, exist and are created or borrowed from other languages continuously. They are, however, dependent on semantic schemata, hence parasyntactic, in order to represent a specific and independent concept, e.g., a specific person. This domain comprises abbreviations, names, numerals, interjections, particles, para-adverbs and symbols (Khodadady, 1999; Khodadady, 2008; Khodadady & JavadiMehr, 2012).

The schemata comprising the three semantic, syntactic and parasyntactic domains of a specific text need to be activated in isolation and in combination with each other by listeners or readers so that they can fully comprehend the text (Khodadady & Elahi, 2012). In order to determine and evaluate their comprehension a thorough analysis of these schemata is, therefore, necessary. This holds equally true for researchers who embark on any type of textual analysis.

Schema theory was, for example, applied by Semino (1995) to study the text worlds in poetry. The study showed the possibility of combining linguistic description and schema theory in analyzing texts by describing the relationship between the worlds portrayed by texts and the readers' models of reality. Semino also claimed that by being sensitive both to the linguistic features of texts and to the role of background knowledge in comprehension, the schema theory approach would provide a useful alternative to other models. The study also showed the effectiveness of schema reinforcement and schema refreshment to be able to account for different worlds reflected by different texts in identifying research based insights. Similarly, Ghani (2012) investigated schematic coherence in poetry and the effect of not only different schematic background but also difference among readers on schematic change and interpretation of meaning.

Schematic analysis can also be extended to the genre of films as done by Hale (2009). The research showed 'that schema theory was powerful in identifying research based insights into film of value to film researchers and professionals (p. 2).' A textual analysis of letters written by male and female participants was conducted by Khodadady and JavadiMehri (2012). Schema theory was used to determine the possible gendered differences between male and female self-disclosure letters. Schema theory was also applied in the comparative analysis of two English translations of a religious text (Khodadady & Eslami, 2013).

Some studies on schema theory have focused on the reading skill. Xiaohui, Jun and Weihua (2007) analyzed schema theory and its influence on reading by considering schema to be the basis for cognition and information processing. In a similar vein, Shen (2008) explored the use of schema theory in intensive reading classroom and claimed that familiarity with the subject matter in terms of schema theory can affect L2 understanding of a text. It was concluded that texts become easier to understand when the students' prior knowledge is enhanced. Another study attempted to investigate the effect of cultural background or cultural schema on the performance of Iranian EFL learners' reading performance (Dehghan & Sadighi, 2011). Aloqalili (2012) applied schema theory as a rational premise for analyzing the interdependent relationship between reading comprehension, critical thinking and prior knowledge. Schema theory was considered to be one of the most effective theories having a considerable influence on reading instruction and reading comprehension. More recently, schema theory was used for the comparative analysis of micro-reading and traditional reading (Wang, 2014) and also to explore the reading strategies in micro-reading based on the effects which schema theory have on micro-reading.

Based on the microstructural approach to schema theory, Khodadady and Lagzian (2013) textually and statistically analyzed the schemata of an English dentistry textbook and its Persian equivalent, with the focus of the analysis being the semantic domain schemata. The results showed that the two texts differed significantly from each other on the level of domain, genus and species, confirming the schema theory as an objective tool of evaluation of the empirical validity of translated texts.

Taking into consideration the microstructural approach of schema theory, the present study intends to analyze textually and statistically the reading passages in the textbooks used as the main source of information in English classrooms at advanced levels. Considering the fact that the topics of the reading passages vary to a large extent in different levels, the study aims to explore where, if any, any significant difference between three textbooks used in three advanced levels lie with regards to the semantic, syntactic and parasyntactic schemata comprising the texts.

The following questions were raised and answered in this study:

1. To what extent do distinct and common semantic domain tokens used in the three advanced level books differ from each other?

2. To what extent do distinct and common semantic domain types used in the three advanced level books differ from each other?
3. To what extent do distinct and common semantic genera tokens used in the three advanced level books differ from each other?
4. To what extent do distinct and common semantic genera types used in the three advanced level books differ from each other?

## METHOD

### Materials

The English textbooks entitled "The ILI English Series, Advanced 1: Student's Book," "The ILI English Series, Advanced 2: Student's Book" and "The ILI English Series, Advanced 3: Student's Book" used at the Iran Language Institute for the advanced levels were chosen to be analyzed schematically. The three ILI advanced level books each contain six reading passages of varying lengths. The titles of the passages in Advanced 1 are as follows: *Hurry Sickness*, *The Education Gender Gap*, *The Global Product: The World as a Single Market*, *He Survived His Own Funeral*, *When is a Room not a Room* and *The Other Population Crisis*. The titles in Advanced 2 are: *The Stages of Adjustment*, *The Great Work Myth*, *Stolen Friendship*, *Fingerprints*, *Intuition*, and *Reading the Screen*. The passages in Advanced 3 are entitled: *Maintaining Their Identity*, *The Invisible Thread*, *Three Days to See*, *The Riddle of Intelligence*, *The Power of Nothing* and *Beyond Rivalry*.

The reason for choosing these books is that ILI is the only language institute that is affiliated with the Institute for the Intellectual Development of Children and Young Adults, which makes the ILI a reliable institute which, in turn, provides face validity to the learners. The ILI was first established in Tehran in 1956 and has expanded considerably into 200 branches in 73 cities in 27 provinces, making the ILI not only the oldest but also the biggest and probably the most popular language institute in Iran. Almost 240000 students are currently taking classes at the ILI and the number is steadily increasing.

### Procedure

The content of the 18 reading passages were typed on Microsoft office word (2007) which was then transferred to three separate office files, one for each advanced level. The content of each file was then parsed into either single word or phrasal schemata following Khodadady (2008) and Khodadady and Lagzian (2013). Subsequently, the parsed schemata were transferred to 3 Microsoft office excel documents (2007) and each schema was assigned to either one of the three domains (semantic, syntactic and parasyntactic). Following that, the genera and species of the domains were specified and codified. Then the different inflected forms of a particular schema were considered as its tokens. For example, *men* and *man* were counted as the tokens of the noun schema *man*. Moreover, the type of the schema was determined based on both its meaning and the syntactic role it played within the sentences comprising the text.

## Data Analysis

To find out whether the semantic, syntactic and parasyntactic domains of the three textbooks differed significantly from each other or not, Chi-Square test was used and the analysis was limited to domain and genus tokens and types. Since the genera and species of domains consisted of more than two categories, Crosstabulation statistics was employed and Khodadady and Khosravany (2014) was followed to find out whether the three textbooks differed in the number of common and different domain and genera tokens and types. To this end, IBM SPSS Statistics was used to carry out the statistical analyses.

## RESULTS

Table 1 below presents the semantic, syntactic and parasyntactic schemata comprising the three advanced level books. It can be seen that from the total of 18317 schema tokens, 8413 schemata (45.93%) belong to the semantic domain, 8243 (45%) to the syntactic domain and 1661 (9.07%) to the parasyntactic domain. As can also be seen, 5891 schema types comprise the three textbooks, of which 4723 schemata belong to the semantic domain, 601 to the syntactic domain and 567 to the parasyntactic domain. As the figures in the table below indicate, the majority of the schema types belong to the semantic domain comprising almost 80% of the total schema types.

**Table 1.** Descriptive statistics for domain tokens and types of three textbooks

| Domain/Books  | Tokens |      |       |       | Types |      |       |       |
|---------------|--------|------|-------|-------|-------|------|-------|-------|
|               | One    | Two  | Three | Total | One   | Two  | Three | Total |
| Semantic      | 2242   | 2931 | 3240  | 8413  | 1317  | 1657 | 1749  | 4723  |
| Syntactic     | 2129   | 2991 | 3123  | 8243  | 196   | 211  | 193   | 601   |
| Parasyntactic | 463    | 629  | 569   | 1661  | 162   | 180  | 225   | 567   |
| Total         | 4834   | 6551 | 6932  | 18317 | 1676  | 2048 | 2167  | 5891  |

To be able to determine the schemata distinct and common to all the three advanced books, another variable called common was added to the data analysis, the results of which are presented in Tables 2 and 3 below. Table 2 below presents schemata distinct and common to the three advanced textbooks. As can be seen from Table 2, the semantic schemata common to three books were 4215(50%), the common syntactic schemata comprised 98% and the common parasyntactic schemata comprised almost 64% of the respective domains. Furthermore, when the distinct schemata of each book are considered, the distinct semantic schemata of Advanced 1 comprised 84.85%, of Advanced 2 83.33% and of Advanced 3 86.3% of total schemata distinct to each book, indicating the importance of semantic schemata at all levels.

**Table 2.** Domain tokens for distinct and common schemata

| Domain tokens | Advanced books |      |       |        |       |
|---------------|----------------|------|-------|--------|-------|
|               | One            | Two  | Three | Common | Total |
| Semantic      | 1092           | 1460 | 1660  | 4215   | 8427  |
| Syntactic     | 56             | 44   | 51    | 8075   | 8226  |
| Parasyntactic | 139            | 248  | 213   | 1064   | 1664  |
| Total         | 1287           | 1752 | 1924  | 13355  | 18317 |

Table 3 below presents the schema domain types distinct and common to the three textbooks. As can be seen from Table 3 below, the semantic schemata common to three books comprised 32.65%, the common syntactic schemata comprised 59% and the common parasyntactic schemata comprised almost 32.8% of the respective domains. Moreover, when considering the distinct semantic schemata types in each book, it can be seen that the distinct semantic schemata of Advanced 1 comprised 81.6%, of Advanced 2 85.65% and of Advanced 3 84.56% of total schemata distinct to each book, again indicating the importance of semantic schemata, whether distinct or common, in the three textbooks.

**Table 3.** Domain types for distinct and common schemata

| Domain types  | Advanced books |      |       |        | Total |
|---------------|----------------|------|-------|--------|-------|
|               | One            | Two  | Three | Common |       |
| Semantic      | 870            | 1176 | 1282  | 1395   | 4273  |
| Syntactic     | 87             | 84   | 75    | 355    | 601   |
| Parasyntactic | 109            | 113  | 159   | 186    | 567   |
| Total         | 1066           | 1373 | 1516  | 1936   | 5891  |

As the results in Tables 1, 2 and 3 above indicate, the semantic schemata comprised majority of the schemata in the three books, whether distinct or common. Hence, further analyses focuses on the semantic schemata and the results and implications are discussed below. A Chi-Square test was carried out on semantic domain tokens and the results showed that the distinct and common tokens of three books, differed significantly from each other ( $X^2 = 2888.487$ ,  $df = 3$ ,  $p < .001$ ). Furthermore, the results indicated that the semantic schemata specific to the Advanced 1 book was 12.96%, to the Advanced 2 book was 17.33%, to the Advanced 3 book was 19.70% and the semantic schemata common to the 3 books represented 50% of the total semantic schemata. Based on these results, the first question can be answered that there is a significant difference between semantic domain tokens in the 3 advanced level books. The Chi-square test also showed that the semantic domain types of three books, whether different schemata or common, differed significantly from each other ( $X^2 = 129.397$ ,  $df = 3$ ,  $p < .001$ ), answering the second question.

To answer the third and fourth questions, crosstabulations were run and the results are shown in Tables 4 and 5 below for the semantic genus tokens and types, respectively. As can be seen in Table 4, the majority of schemata comprising the texts in the 3 books were nouns followed by verbs. However, the results also show that nouns were more commonly used than verbs in the books. The Chi-square test showed that the difference between different semantic genera tokens of the books is not significant ( $X^2 = 33.229$ ,  $df = 3$ ,  $p = .099$ ).

**Table 4.** Language by semantic genus tokens crosstabulation

| Schemata   | Genus      |         |       |       | Total |
|------------|------------|---------|-------|-------|-------|
|            | Adjectives | Adverbs | Nouns | Verbs |       |
| Advanced 1 | 201        | 36      | 580   | 276   | 1093  |
| Advanced 2 | 256        | 61      | 733   | 410   | 1460  |
| Advanced 3 | 361        | 46      | 875   | 381   | 1663  |
| Common     | 832        | 163     | 2109  | 1108  | 4212  |
| Total      | 1650       | 306     | 4297  | 2175  | 8428  |

Table 5 presents the semantic genus types in the 3 advanced books. Similar to semantic genera tokens, the semantic genera types comprised mostly of nouns followed by verbs. However, the Chi-square test showed the difference between semantic genera types of the books is highly significant ( $X^2 = 24.167$ ,  $df = 3$ ,  $p > .001$ ).

**Table 5.** Language by semantic genus type crosstabulation

| Schemata   | Genus      |         |       |       | Total |
|------------|------------|---------|-------|-------|-------|
|            | Adjectives | Adverbs | Nouns | Verbs |       |
| Advanced 1 | 176        | 38      | 392   | 264   | 870   |
| Advanced 2 | 234        | 61      | 508   | 373   | 1176  |
| Advanced 3 | 303        | 46      | 585   | 347   | 1281  |
| Common     | 321        | 69      | 603   | 402   | 1395  |
| Total      | 1034       | 214     | 2088  | 1386  | 4722  |

Based on the results in Tables 4 and 5, what can be confirmed is that as far as the semantic genus tokens are concerned, there is a significant difference between the common and different schemata used in the books but as the numbers indicate there isn't much difference between the different schemata in the books. With regards to the semantic genus types, there was also a significant difference between the common and different schemata used.

As can be seen from Tables 4 and 5 above, all the three textbooks comprised mostly nouns in both semantic genera tokens and types. Hence, further descriptive statistics were run and the results are presented in Tables 6 and 7 below. Table 6 below presents the descriptive statistics for noun tokens. The table clearly shows that the number of simple nouns were comparatively much higher than others nouns, both with regards to distinct and common schemata in the 3 textbooks. Next highest number of nouns belonged to derivational simple nouns, both distinct and common.

**Table 6.** Descriptive statistics for noun tokens

|                           | Advanced 1 | Advanced 2 | Advanced 3 | Common | Total |
|---------------------------|------------|------------|------------|--------|-------|
| Adjectival Noun           | 5          | 20         | 41         | 73     | 139   |
| Complex Noun              | 14         | 14         | 39         | 10     | 77    |
| Compound Noun             | 30         | 26         | 13         | 11     | 80    |
| Compound Complex Noun     | 4          | 7          | 1          | 0      | 12    |
| Conversion Noun           | 1          | 0          | 0          | 0      | 1     |
| Derivational Simple Noun  | 138        | 157        | 179        | 363    | 837   |
| Derivational Complex Noun | 12         | 19         | 25         | 12     | 68    |
| Gerund Noun               | 52         | 61         | 55         | 100    | 268   |
| Gerund Complex Noun       | 0          | 7          | 4          | 3      | 14    |
| Simple Noun               | 324        | 422        | 518        | 1534   | 2798  |
| Total                     | 580        | 733        | 875        | 2106   | 4294  |

Table 7 below shows the results of descriptive statistics carried out for noun types in the three textbooks. Similar to the noun tokens, the number of simple noun types were comparatively much higher than others nouns, both distinct and common schemata in the 3 textbooks. Next in the list of the highest number of nouns were derivational simple nouns, both distinct and common. Further analysis indicated that the simple nouns *boys*

was the most frequent in Advanced 1, *work* in Advanced 2, *sister* in Advanced 3 and the noun *people* was the most frequent in the three textbooks with a frequency of 55. With regards to derivational simple nouns, the nouns *installation* in Advanced 1, *traveler* in Advanced 2, *children* in Advanced 3 and the noun *product* were used commonly in all textbooks.

**Table 7.** Descriptive statistics for noun types

|                           | Advanced 1 | Advanced 2 | Advanced 3 | Common | Total |
|---------------------------|------------|------------|------------|--------|-------|
| Adjectival Noun           | 4          | 18         | 30         | 19     | 71    |
| Complex Noun              | 11         | 13         | 19         | 3      | 46    |
| Compound Noun             | 20         | 14         | 12         | 4      | 50    |
| Compound Complex Noun     | 4          | 5          | 1          | 0      | 10    |
| Conversion Noun           | 1          | 0          | 0          | 0      | 1     |
| Derivational Simple Noun  | 80         | 86         | 118        | 69     | 354   |
| Derivational Complex Noun | 9          | 17         | 20         | 3      | 49    |
| Gerund Noun               | 43         | 53         | 44         | 29     | 169   |
| Gerund Complex Noun       | 0          | 3          | 4          | 1      | 8     |
| Simple Noun               | 170        | 231        | 271        | 281    | 953   |
| Total                     | 342        | 440        | 519        | 409    | 1711  |

## DISCUSSION

The semantic schemata belonging to open set items (Quirk, et al. 1985) are joined to each other by syntactic and parasyntactic schemata in order to express the conveyor's message (Khodadady, Alavi & Khaghaninezhad, 2012). On the other hand, syntactic schemata are said to be closed set items by being limited in type. The results found in this study confirm the fact that syntactic schemata are closed as it was found that 98% of the syntactic domain tokens and 59 % of the syntactic domain types were common to the 3 books. Focusing on the semantic schemata, as was mentioned above, there were a number of semantic schemata that were distinctly as well commonly used in the three textbooks. It was also found that nouns formed the majority of schemata in all the three books, especially simple nouns and derivational simple nouns. Frequency analysis of the simple nouns and derivational simple nouns were, therefore, carried out. The simple nouns *boys*, *girls* and *gender* were the most frequent in Advanced 1, the nouns *stage*, *country* and *house* in Advanced 2, the nouns *sister*, *brother* and *siblings* in Advanced 3 and the most frequent common nouns were *people*, *life*, *time*, *work* and *friend*. Among the derivational simple nouns, the words *installation* and *technology* were the most frequent in Advanced 1, *traveler* and *setter* in Advanced 2, *friendship* and *population* in Advanced 3 and *children*, *women*, *product*, *psychologist* and *student* were the most frequent in the three books. The use of words such as *boys*, *girls*, *sister*, *brother*, *siblings*, *people*, *friend*, *friendship*, *children* and *women* were not only specific but also common in the three books indicating the importance given to people and their kinship relationships.

Khodadady and Bagheri (2014) state that when encountering a schema such as *religion* in different texts or even in day-to-day interactions can actually help readers refine their background knowledge represented by that particular schema continuously. "By

highlighting and focusing on this very natural process, schema theory accounts for the ever-evolving and dynamic nature of schemata they are encountered in various contexts in real life (p.38).” Extending Khodadady and Bagheri’s idea to this study, let’s consider the kinship terminology used in sentences in the analyzed texts. For instance, in Advanced 1, the sentence *Most young Chinese adults have no brothers or sisters and face the prospect of having to care for two parents and four grandparents on their own* has 4 kinship terminology. When these schemata are analyzed on a sentential level, they indicate social, emotional and psychological relationships when used in interaction with other schemata on a cognitive level. The young adults are tied emotionally to their parents and grandparents, whereas taking care of parents and grandparents on their own can affect them socially and psychologically.

Similarly, when analyzing the sentence in an Advanced 2 text *Work is a community, the place where we meet friends and form relationships, a provider of our social as well as our work life*, it can be seen that the use of schemata like community, friends, relationships, social and work life indicate intricate emotional and social connections among the participants. Considering the sentences in Advanced 3 such as *Friendship is as old as humanity and as important as love or justice; During childhood, sisters and brothers are a major part of each other’s lives, for better or for worse; ... parents and sometimes spouses gone, brothers and sisters often turn to each other for a special affinity and link to the past*, it can be further seen that the schemata such as friendship, humanity, important sisters, brothers, affinity among others indicate the underlying emotional, social and psychological relationships among these schemata on a sentential level.

According to Miller (2007), popular media such as television inculcates moral and idealized models of relationship indicating the intervention between the academic literature and the everyday life. Miller focuses here on television programs, mentioning that in many countries the classic sitcoms are part of the daily fare of television over the last few decades. The sitcoms such as *ascorbic Show*, *Rosanne*, *Malcolm in the Middle* or cartoons such as the *Simpsons* are set in family situations. This situation is not specific to a particular country like the US but also in other countries like India and Iran, where family relationships form the major theme of programs. This concept can also be applied to academic literature such as textbooks, in which family relationships and friendship form the core ideology. All of them share a basic message around a shared ideology based on the idealized normative roles expected of family relationships.

The kinship system has different complex relations with the other social institutions that together constitute the total social structure (Eggan, 1968). Due to the reason that kinship finds its way into economic, political, legal, and ritual relationships in different societies, its importance tends to be ignored or underestimated. The universal use of the concept of kinship suggests its importance in bringing together people in society and providing a basis for the building of more specific social structures. Hence, it can be said that the use of schemata relating to relationships, whether familial or based on friendship, in the three textbooks indicate that kinship is a dominant part of everyday

life including academic life in Iran as brought up by the three textbooks taught at advanced levels in the ILI.

## CONCLUSION

According to Khodadady (2008), schema theory provides a coherent basis to categorize all concepts expressed in texts into three categories: semantic, syntactic and parasyntactic. The findings of this study provide further empirical evidence to Khodadady's claim that the categorization of schemata into semantic, syntactic and parasyntactic domains is psychologically valid and real. The findings further support the rationale that the domains and their constituting genera and species can be used to study possible or hypothetical differences among texts written in different fields. Furthermore, the schema theory provides empirical rationale for determining the range of schema knowledge that is needed to acquire proficiency or at least accuracy in a given language. The present study indicates that, for instance, even though a learner of a new language needs to acquire all 3 kinds of schemata (semantic, syntactic and parasyntactic), one can never fully acquire the semantic schemata due to its openness, being wide in scope and range, and also its additive capacity i.e., new semantic words are added to languages to keep up with the current trends. Moreover, this study supports Khodadady and Bagheri's (2014) claim that once a word is looked up in a dictionary or even any text, it becomes a schema.

Hence, the findings of this study have invaluable implications for foreign language teaching. As mentioned by Khodadady and Lagzian (2013), teachers can regard schemata represented by words as the basic units of language, the combination and interaction of which with each other will create species represented by sentences, thereby making their teaching and instructions realizable. In particular, when dealing with reading comprehension, teachers can try to activate learners' schemata, especially the semantic ones, by employing different techniques and thus enable learners to associate the different schemata with each other in order to enhance comprehensibility.

The findings of this study have also indicated that even though semantic tokens (8428) are just slightly more than syntactic ones (8223), semantic types (4722) are comparatively much higher than the syntactic types (597). Moreover, in the semantic genus, the number of nouns (4297) is significantly higher than verbs (2175), followed by adjectives (1650) and finally the adverbs (306). Therefore, the focus of teachers need to be on the semantic schemata in general and on its noun genus followed by verbs in particular. For instance, consider the nouns 'general' and 'public' in English and their Persian equivalents UMUMI. Both the English nouns are usually understood by Iranian EFL learners to be interchangeable due to their similar Persian equivalents. Iranian learners tend to say 'general transportation' rather than 'public transportation', at least in the initial stages of learning. Such problems also tend to arise with verbs. Consider the English verbs 'understand' and 'realize' and their almost synonymous Persian equivalent FAHMIDAN. Learners tend to consider them to be interchangeable in all situations and could end up saying 'I realize Arabic,' rather than saying 'I understand Arabic.'

Hence, a teacher of language has to present semantic schemata such as “understanding” and “realizing” in such a way as to enable learners to differentiate them on the basis of their linguistic contexts, i.e., sentences, and what they represent conceptually in combination of other words comprising the sentences, i.e., species. In other words, while the schemata “realize” and “understand” might invoke the same concept in a reader’s mind in isolation, only “understand” can combine with the schema “Arabic” to express “I understand Arabic” as a species. Furthermore, it is the teachers’ responsibility to make sure that students comprehend a text by creating a cognitive structure or framework in which they can develop the broader cognitive concepts of genera and domains represented by paragraphs and passages, respectively. In other words, these are the writers’ words and their specific combinations with each other within sentences and paragraphs which generate a passage. The readers which grasp what the writers have said if they acquire the schemata, species, genera and domain represented by the words, sentences, paragraphs and passage, respectively.

The linguistic and cognitive structures explained by the microstructural approach of schema theory will help teachers present schemata such as those dealing with kinship relationships within an authentic context in which they convey certain concepts not only by themselves but also in combination with other schemata constituting the sentences, paragraphs and passage of which they form a part (Khodadady & Hesarzadeh, 2014). In other words, semantic, syntactic and parasyntactic schemata must be understood in terms of the broader cognitive concepts they produce when they form species, genera and a specific domain represented by the sentences and paragraph of a given text, respectively. Since the number of syntactic and parasyntactic schema types are far fewer than the semantic ones, the main focus of teaching must be semantic schemata and their combination with each other within species, genera and domain.

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