



**STRUCTURAL AMBIGUITY
IN ENGLISH AND ARABIC:
A Contrastive Study**

By

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Abstract

The main objective of this study is to provide a syntactic and semantic analysis of the phenomenon of structural ambiguity in English and Arabic within the framework of transformational syntax. More specifically, the study explains the sources and types of structural ambiguity in English and Arabic and characterizes the similarities and differences between the two languages regarding this phenomenon. It should be pointed out that this study examines structural ambiguity in writing because written expressions are not accompanied by the vocal signals such as stress, pitch and juncture which help to clarify the meaning. The findings of this study have shown that English and Arabic exhibit some similarities and differences with respect to the phenomenon of structural ambiguity. On the one hand, English seems to be generally more productive with respect to this phenomenon mainly because Arabic has case marking, while English doesn't. Another reason for this has to do with subject/verb agreement and adjective/noun agreement in Arabic. On the other hand, the two languages exhibit significant similarities with respect to the sources and types of structural ambiguity. The findings of this study can help in the area of Arabic/English translation, as well as the area of language teaching.

Keywords: Ambiguity, Structural ambiguity, Transformational Syntax

ملخص :

تهدف الدراسة الحالية إلى تحليل ظاهرة الغموض التركيبي من حيث البناء والمعنى في اللغتين الإنجليزية والعربية في إطار علم النحو التحويلي. وبشكل أكثر تحديداً، تقوم هذه الدراسة بشرح مصادر وأنواع الغموض التركيبي في اللغتين الإنجليزية والعربية، كما توضح نقاط التشابه والاختلاف بين اللغتين فيما يتعلق بتلك الظاهرة اللغوية. ومن الجدير بالذكر أن هذه الدراسة تهتم بتحليل الغموض التركيبي في الكتابة وذلك لأن التعبيرات اللغوية لا تكون مصحوبة بعلامات صوتية مثل نغمة ونبرة وتحول الصوت والتي تساعد في توضيح المعنى. وقد أظهرت النتائج وجود نقاط تشابه واختلاف بين اللغتين فيما يتعلق بظاهرة الغموض التركيبي. فمن ناحية، يبدو ان اللغة الإنجليزية أكثر انتاجاً لهذه الظاهرة من اللغة العربية وذلك لوجود التوافق بين الفعل والفاعل والصفة و الموصوف في اللغة العربية. ومن ناحية أخرى، تظهر اللغتان تشابهاً دالاً فيما يتعلق بمصادر وأنواع الغموض التركيبي. تساهم نتائج هذه الدراسة في مجال الترجمة من العربية للإنجليزية ومجال تدريس اللغة.

الكلمات الدالة: الغموض، الغموض التركيبي، علم النحو التحويلي.

1.0. Objectives of the Study

The main objective of this study is to provide a contrastive syntactic and semantic analysis of structural ambiguity in English and Arabic.

This study is an attempt to answer these questions:

1. What is meant by structural ambiguity?
2. What are the syntactic sources of structural ambiguity in English?
3. What are the syntactic sources of structural ambiguity in Arabic?
4. What are the main similarities and differences between English and Arabic with respect to the phenomenon of structural ambiguity?
5. What are the main implications of the findings of this study?

1.1. What is meant by ambiguity?

Ambiguity is a basic phenomenon of natural language. It occurs when a word or sequence of words has more than one meaning (Awwad, 2017; Gleich, Creighton & Kolf, 2010; Stageberg, 1958, 1968a, 1968b, 1970, 1971; Taha, 1983; Tjong & berry, 2008). There are two types of ambiguity: Lexical ambiguity and structural ambiguity. Lexical ambiguity occurs when a word has more than one meaning. Structural ambiguity, on the other hand, occurs when a phrase or a sentence has more than one syntactic interpretation (Cairns, Waltzman & Schlisselberg,

2004; Gleich, Creighton & Kolf, 2010; Kay, 2008; MacDonald, Pearlmutter & Seidnberg, 1994; Prideaux & Baker, 1980; Stageberg, 1968a, 1968b, 1971; Taha, 1983). An example of lexical ambiguity is 'He bought a bat'. In this sentence, the word 'bat' can be 'a flying animal' or 'a racket'. An example of structural ambiguity is 'college demands change' (Oaks, 2010, p.70). This sentence is structurally ambiguous. It has two syntactic interpretations; one in which the word 'demands' is a noun and the other in which the word 'demands' is a verb.

"Ambiguity is when a word, phrase or sentence has two different meanings" (Hudson, 2000, p. 97). According to Hudson (2000), linguistic ambiguity has three types: lexical ambiguity, grouping ambiguity and function ambiguity. He states that lexical ambiguity occurs when a word has different meanings. For example '*I met my friend at the bank*' (p. 107). The word 'bank' is ambiguous. It has two meanings: 'the land at the side of a river' and 'a financial institution'. Grouping ambiguity occurs when words have two meanings depending on different grouping of the words. For example '*medical books and articles*'. We have two different meanings or grouping of words:

- a- Medical (books and articles) which means that both the books and articles are medical.
- b- (Medical books) and articles, which means that the books only are medical.

Function ambiguity occurs when a word or phrase has different meanings depending on different grammatical functions of the word or the phrase. For example '*I like the cat more than my sister*' (adapted from Patel, 1980, p.49). This sentence has two meanings depending on the grammatical function of the word 'sister'. These meanings are:

- c- 'I like the cat more than I like my sister' in which 'my sister' is an object.
- d- 'I like the cat more than my sister likes the cat' in which 'my sister' is a subject.

Ambiguity, according to Crystal (2008), occurs when a word or sentence expresses more than one meaning. He states that there are two types of ambiguity: structural ambiguity and lexical ambiguity. Structural ambiguity which is widely discussed means that a sentence has two structural interpretations. For example, '*visiting professors can be boring*'. This sentence is structurally ambiguous. There are two syntactic interpretations: 'the professors who visit us are boring' and 'the visit of the professors is boring'. Lexical ambiguity is "Ambiguity which does not arise from the grammatical analysis of a sentence, but is due solely to the alternative meanings of an individual lexical item" (p.17). For example, '*do you have a favorite letter?*'. The word 'letter' has two meanings: 'a written message that is put in an envelope' and 'a written symbol representing a unit of an alphabet.'

1.2. Structural Ambiguity in English

“An utterance is structurally ambiguous when it can yield more than one syntactic interpretation or when it implies more than one syntactic relationship between constituents within a structure” (Oaks, 2010, p. 15). Structural ambiguity has been defined as a sentence with more than two structural interpretations or an ambiguity which arises from the grammatical analysis of a sentence (Crystal, 2008). Structural ambiguity occurs when the grammatical structure of an utterance has more than one interpretation (Burgess & Lund, 1994; Oaks, 1995; Prideaux & Baker, 1980; Zavrel, Paelemans & Veentstra, 1997; Zimmer, 2016).

Stageberg (1966) states that structural ambiguity “stems from a grammatical feature of the language, not from the meaning of any individual word” (p.558). He explains that structural ambiguity may create confusion about the part of speech or word class such as whether a particular word is a noun or a verb. For example, ‘*He likes to spear muskrats and fish*’ (Stageberg, 1966, p. 559). This sentence is structurally ambiguous. The word ‘fish’ can be a noun or a verb. There are two syntactic interpretations: ‘He likes to spear muskrats and to fish’ and ‘He likes to spear fish and muskrats’. In the first interpretation, the word ‘fish’ is a verb; however in the other interpretation, the word ‘fish’ is a noun.

Structural ambiguity may also create confusion about the grammatical function of a word in a sentence. For example, whether a particular word functions as a subject or an object

(Oaks, 2010). For example, ‘John loves Peter as much as Mary. This sentence is structurally ambiguous. It is unclear whether the word Mary functions as a subject or an object. There are two syntactic interpretations: ‘John loves Mary and Mary loves Peter’. In other words, we can say ‘John loves Peter as much as he loves Mary’ or ‘John loves Peter as much as Mary loves Peter’.

Structural ambiguity can also involve the scope of modification (Oaks, 2010). For example, ‘*I hit the girl with glasses*’. This sentence is structurally ambiguous. It is unclear whether the prepositional phrase ‘with glasses’ modifies either the noun ‘the girl’ or the verb ‘hit’. There are two syntactic interpretations: ‘I hit the girl by using glasses’ or ‘I hit the girl who wears glasses’.

Prideaux and Baker (1980) explain that:

Structural ambiguity refers to two or more meanings of a clause rather than to different meanings of a particular lexical item within a sentence ... Structural ambiguity obtains in those sentences in which strings of words can be grouped in different ways or in which words can have different grammatical functions depending on the inferred relations among them (p. 205).

They explain that there are two types of structural ambiguity: surface structure ambiguity and deep structure ambiguity. Surface structure ambiguity refers to those sentences whose ambiguity is revealed in the surface structure. In other

words, in surface structure ambiguity, the surface structure can be presented in two different ways, one for each meaning (Jurgens, 1972; Prideaux & Baker, 1980). For example, ‘*the stout doctor’s wife*’ (Prideaux and Baker, 1980, p. 205). This phrase is structurally ambiguous. We have two meanings: [The stout doctor’s] wife and [The stout wife] of the doctor. “Surface structure ambiguity is generally associated with the scope or grouping of various words” (Prideaux and Baker, 1980, p. 205).

Prideaux and Paker (1980) state that:

Deep structure ambiguity, on the other hand, refers to those sentences for which the different meanings reside in distinct grammatical roles or functions being played by particular constituents.... Deep structure ambiguity depends on different interpretations of grammatical relations such as subject and direct object in a given sentence (p. 205).

An example of deep structure ambiguity is ‘*Mary is easy to please*’. This sentence is structurally ambiguous. There are two syntactic interpretations: one in which the word ‘Mary’ functions as a subject and the other in which the word ‘Mary’ functions as an object. There are two meanings:

- (a) – Mary is easy to please people.
- (b) – Mary is easy to be pleased.

Oaks (1990) states that “grammatical ambiguity results from a particular combination of syntactic structures and ambiguity enablers” (p. 5). He classifies the types of structural ambiguity into three major types: Ambiguity of lexical category, ambiguity of grammatical function and ambiguity of pattern. He states that “Ambiguity of lexical category involves a situation in which one part of speech is confused with another” (p.18). For example, ‘*I made her dress*’ (p. 67). This sentence is structurally ambiguous. It is unclear whether the word ‘dress’ is a verb or a noun.

The ambiguity of grammatical function, according to Oaks (1990), involves a situation in which there is a confusion about the grammatical function of words in sentences or utterances, such as whether a word functions as a subject or object within a sentence. For example, ‘the turkey is ready to eat’. This sentence is structurally ambiguous. It is unclear whether the word ‘the turkey’ is a subject or object. There are two meanings: ‘The turkey is ready to eat something’ and ‘The turkey is ready for someone to eat.’

Oaks (1990) explains that the ambiguity of pattern:

contains those ambiguities that occur when it is not clear about what the arrangement or grouping of modifiers, what sentence element is being modified, how different elements are being coordinated, or what sentence elements are being coordinated, or what sentence elements serve as an antecedent to a following pronoun (p. 117).

For example, '*the man singing the song that was ugly*' (adapted from Oak, 1990, P.67). This sentence is structurally ambiguous. It is unclear whether the relative clause 'that was ugly' modifies the NP 'the song' or 'the woman'.

Oaks (1990) also states that "the key to identifying the environment of grammatical ambiguity seems in identifying which factors will enable an ambiguity" (p. 6). In this regard, English has many factors that enable structural ambiguity to occur. In other words, there are many source types of structural ambiguity. These source types are pragmatic, phonological, morphological and syntactic sources (Oaks, 2010). This research paper will concentrate on the syntactic sources of structural ambiguity.

1.2.1 Some Syntactic Sources of Structural Ambiguity in English

There are many syntactic sources of structural ambiguity. It may result from ellipsis, the use of adverbials, prepositional phrases, coordination, comparison, modals, the passive, and other sources (Stageberg, 1958, 1966, 1968, 1970, 1971; Oaks, 1990,1994,1995,2010).

Ellipsis plays a vital role in creating structural ambiguity. The omitted words help create more than one interpretation (Asher, Hardt & Busquets, 2001; Kairyte & Bikeliene, 2016; Oaks, 1990, 2010; Stageberg, 1958). For example, '*Mary cleans her room and so do I*'. This sentence is structurally ambiguous.

There are two syntactic interpretations: ‘Mary cleans her room and so do I clean mine’ and ‘Mary cleans her room and so do I clean her room’.

The use of the adverbial may cause structural ambiguity. The adverbial can modify either the verb of the main clause or the verb in the subordinate clause (Hirst, 1987; Oaks, 1990, 1995, 2010; Stageberg, 1958, 1968). For example, ‘*John wanted to buy a car in the evening*’. This sentence is structurally ambiguous. It is unclear whether the adverbial phrase ‘in the evening’ modifies the verb ‘wanted’ or the verb ‘buy’. There are two syntactic interpretations: ‘John wanted in the evening’ and ‘John bought the car in the evening’.

The use of the prepositional phrase causes structural ambiguity (Boland & Blodgett, 2006; Hirst, 1987; Inggris & Sastra, 2007;; Kairyte & Bilkelinene, 2016; Merlop & Ferrer, 2006; Nadh & Huyick, 2009, 2012; Oaks, 1990, 2010; Patel, 1980; Snedeker & Casserly, 2010; Stageberg, 1966, 1968; Weighall, 2008; Zavrel, Daelemans & Vennstra, 1997; Zimmer, 2016, 2017). For example, ‘*John killed the man with the gun*’. This sentence is structurally ambiguous. It is unclear whether the prepositional phrase ‘with the gun’ modifies either the noun ‘the man’ or the verb ‘killed’. There are two syntactic interpretations: ‘John killed the man by using a gun’ and ‘John killed the man who had a gun’.

The use of the passive may cause structural ambiguity (Stageberg, 1968; Oaks, 2010). For example, ‘*the man was*

stoned'. This sentence is structurally ambiguous. There are two syntactic interpretations: 'someone stoned the man' and 'the man was intoxicated with alcohol or drugs'. It is unclear whether the word 'stoned' is an adjective or the past participle of the verb.

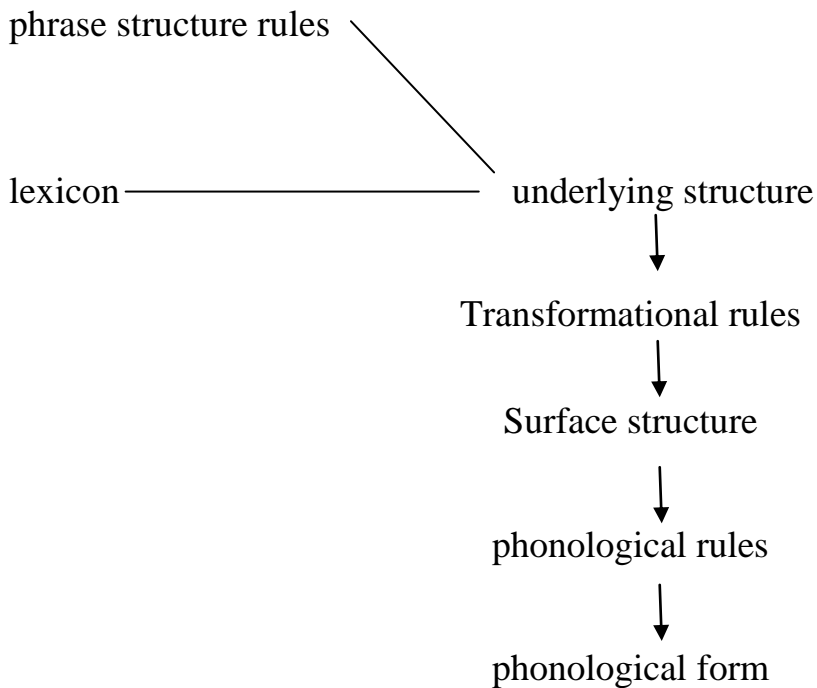
Sometimes modals can cause structural ambiguity (Inggris & Sastra; Oaks, 1994, 1995, 2010). For example, 'visiting friends can be amazing'. This sentence is structurally ambiguous. There are two syntactic interpretations: 'the visit of friends is amazing' and 'the friends who visit us are amazing'.

The use of coordination can be a source of ambiguity (Engelhardt & Ferreira, 2010; Khan, Deemter & Ritchie, 2008; Oaks, 1990, 1994, 2010; Resnik, 1993; Stageberg, 1958). For example, '*short boys and girls*'. This phrase is structurally ambiguous. It is unclear whether the adjective 'short' modifies either the noun 'boys' or the coordination 'boys and girls'. There are two syntactic interpretations: 'girls and short boys' and 'short boys and short girls'.

The use of comparison may create structural ambiguity (Kairyte & Bilkeline, 2016; Oaks, 2010; Patel, 1980). For example, '*I trust the professor more than the student*'. This sentence is structurally ambiguous. It is unclear whether the noun 'the student' functions as a subject or an object. There are two syntactic interpretations: 'I trust the professor more than I trust the student' and 'I trust the professor more than the student trusts him [the professor]'.

1.3. Surface Structure and Deep Structure

In order to fully understand structural ambiguity, we need to explain Chomsky's surface and deep structure. Chomsky (1957) explains that there are two levels of syntactic structure in every sentence: deep structure and surface structure. Deep structure is the underlying meaning of the sentence and is formed by the phrase structure rules. It plays an important role in the interpretation of sentences. Surface structure is the phonological form of sentences and is formed by applying transformational rules to the deep structure of sentences. The following figure may explain clearly the relationship between them (Malmakjaer, 2004, p. 177).

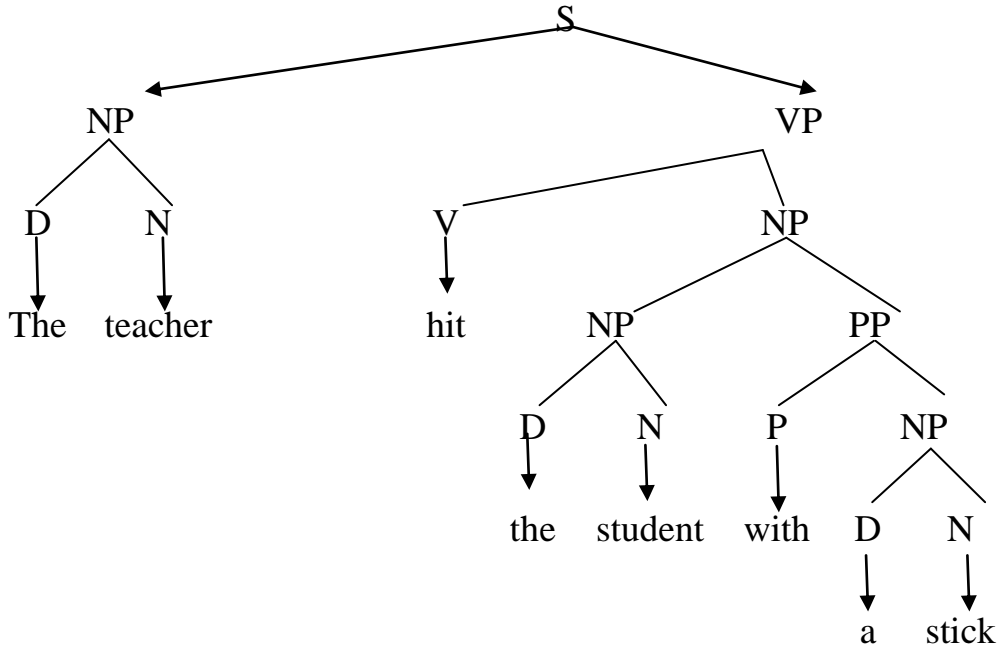


Chomsky (1957) notes that the phrase-structure rules generate an underlying deep structure which is transformed by transformational rules to provide a final surface structure. Chomsky (1966) states that “the syntactic component of a grammar must specify, for each sentence, a deep structure that determines its semantic interpretation and a surface structure that determines its phonetic interpretation” (p. 16).

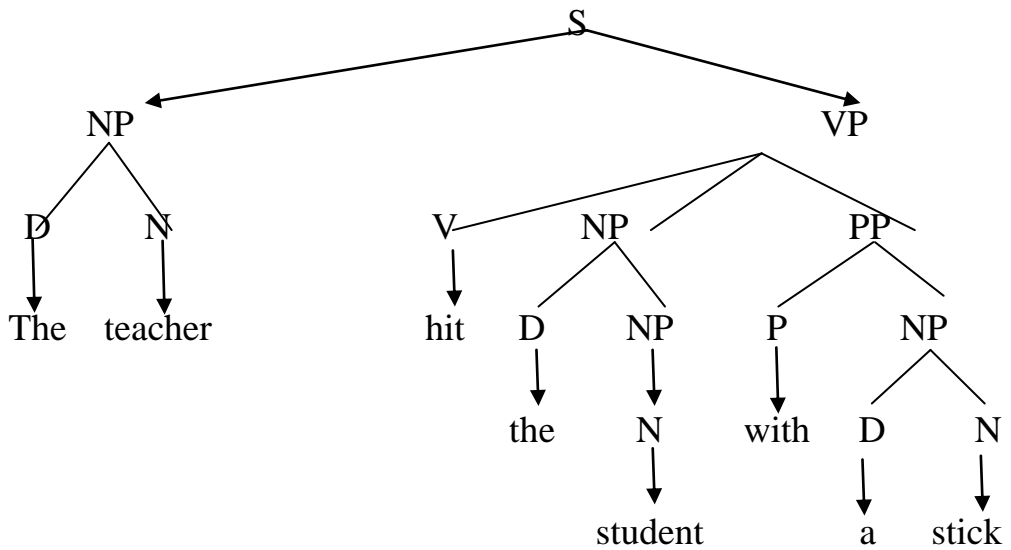
Prideaux and Baker (1980) state that when a sentence has more than one possible deep structure, it is said to be structurally ambiguous. Jurgens (1972) and Prideaux & Baker (1980) explain that there are two types of structural ambiguity: surface structure ambiguity and deep structure ambiguity. Surface structure ambiguity refers to those sentences whose ambiguity is revealed in the surface structure. In other words, in surface structure ambiguity, the surface structure can be presented in two different ways, one for each meaning (Jurgens, 1972; Prideaux & Baker, 1980). When analyzing the surface structure ambiguity, we have two surface structure phrase markers or brackets that represent the two different meanings. For example, *‘the stout doctor’s wife’* (Prideaux and Baker, 1980, p. 205). This sentence is structurally ambiguous. We have two meanings: [The stout doctor’s] wife and [The stout wife] of the doctor.

“Surface structure ambiguity is generally associated with the scope or groupings of various words” (Prideaux and Baker, 1980, p. 205). For example, *‘the teacher hit the student with a stick’*. This sentence is structurally ambiguous. It is unclear whether the prepositional phrase ‘with a stick’ modifies the noun phrase ‘the student’ or the verb ‘hit’. This is a surface structure ambiguity. The surface structure is represented by two different phrase markers, one for each meaning. Consider these diagrams:

(1.a)-



(1.1.b)-



Surface structure ambiguity is clear in this example: '*old women's dress*'. The adjective 'old' modifies either the noun 'women' or the noun 'dress'. There are two meanings presented by these brackets:

(1.2.a) - [old women's] dress.

(1.2.b) - [old dress] of the women.

So, surface structure ambiguity can be explained by using different diagrams or brackets.

Prideux and Paker (1980) state that "deep structure ambiguity, on the other hand, refers to those sentences for which the different meanings reside in distinct grammatical roles or functions being played by particular constituents" (p. 205). Deep structure ambiguity involves sentences which allow for two different deep structures. Each deep structure is associated with a different meaning.

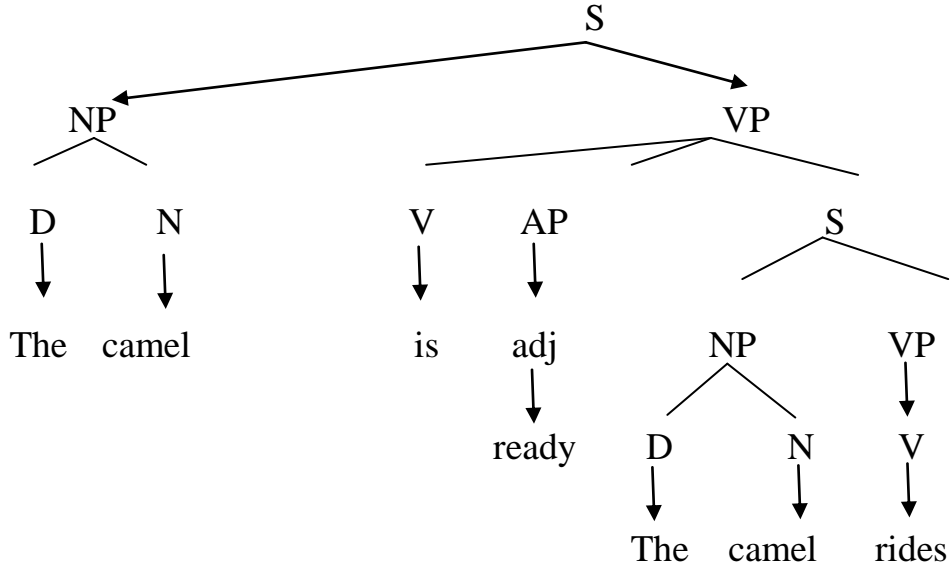
For example, '*the camel is ready to ride*'. This sentence is structurally ambiguous. There are two syntactic interpretations: one in which the word 'camel' functions as a subject and the other in which the word 'camel' functions as an object. There are two meanings:

(1.3.a) - The camel is ready to ride something.

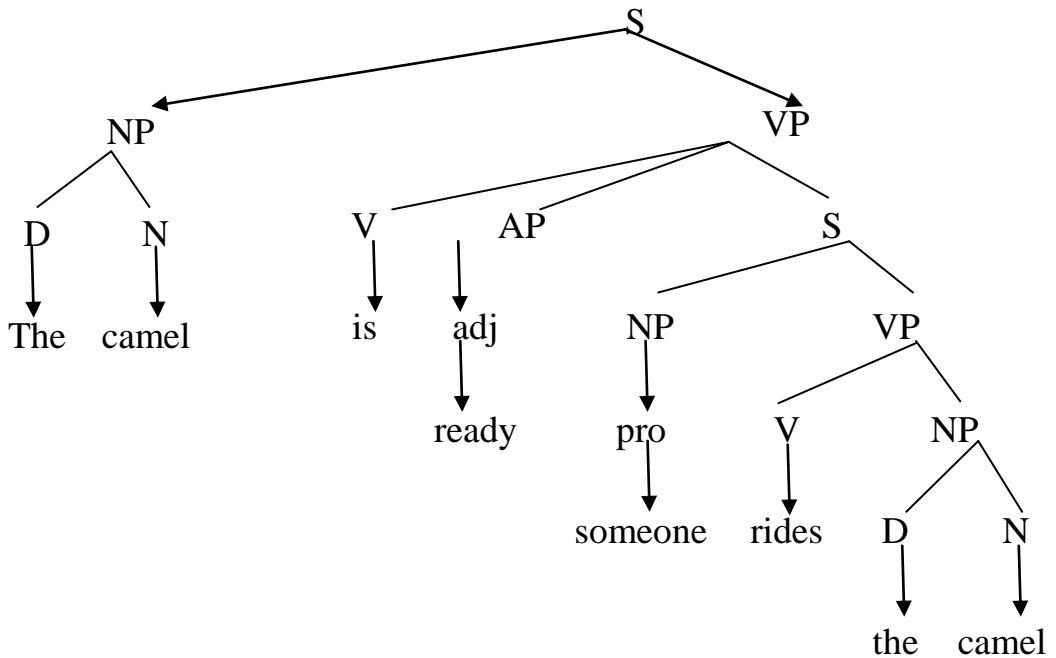
(1.3.b) - Someone is ready to ride the camel.

In (1.3.a) the word 'camel' functions as a subject, but in (1.3.b) the word 'camel' functions as an object. Consider these two diagrams which represent the different deep structures or meanings of the sentence.

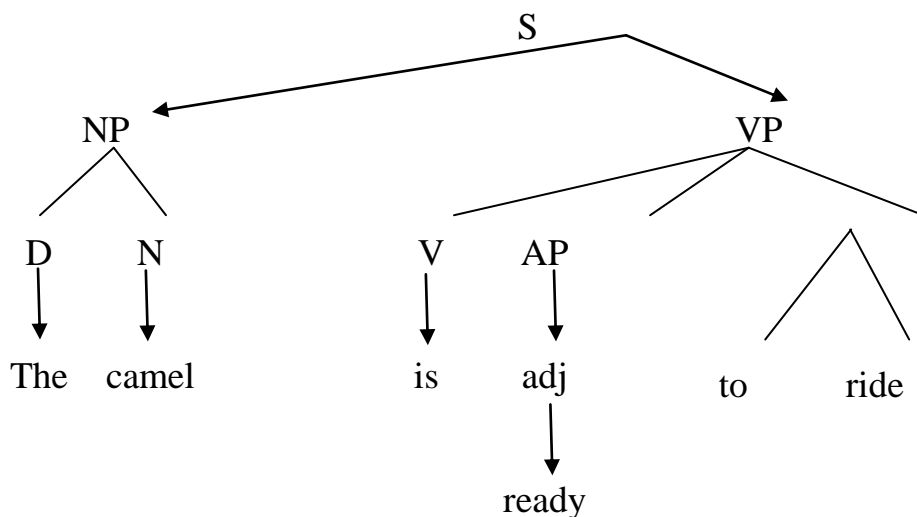
Deep structure of the sentence with the meaning (1.3.a)



Deep structure of the sentence with the meaning (1.3.b)



Surface structure of the sentence



In deep structure ambiguity, there are two different deep structures and one surface structure, but in surface structure ambiguity, there are two or more surface structures, one for each of the meanings of the sentence (Prideaux and Baker, 1980).

1.4. Structural Ambiguity in Arabic

Parsing Arabic sentences is not easy. The difficulty comes from several sources such as the length of the sentence and the complex Arabic syntax, the omission of diacritics in written Arabic ‘?attaškiil’, the free word-order nature of the Arabic sentence and the presence of an elliptic personal pronoun ‘?aDDammiir-u l-mustatir’ (Othman, Shaalan, RaFea, 2003).

“The Arabic sentence is syntactically ambiguous and complex due to the frequent usage of grammatical relation, order of words and phrases, conjunctions and other constructions such as diacritics” (Al-Taani, Msallam, Wedian, 2010). The problem of ambiguity in Arabic is poorly investigated by researchers. This is mainly because of the special characteristics of Arabic including its high syntactic flexibility (Daimi 2001).

1.4.1. Some Sources of Structural Ambiguity in Arabic

1.4.1.1. The Use of the Abbreviated Noun

(1.4) Darab- muusaa ʔiisaa

hit- pf. Moses-Nom./Acc. Iessa-Nom./Acc.

‘ضرب موسى عيسى’

‘Moses hit Iessa.’

This sentence is structurally ambiguous. The abbreviated nouns /muusaa/ ‘Moses’ and /ʔiisaa/ ‘Iessa’ cannot have case marking. So, it is not clear whether /muusaa/ is the subject or the object. There are two syntactic interpretations: one in which /muusaa/ is the subject and the other in which /ʔiisaa/ is the subject.

1.4.1.2. The Use of the Suffixed Personal Pronoun

The use of the suffixed personal pronoun may cause structural ambiguity in Arabic (Daimi, 2001). Consider this example:

(1.5) ?axbar-a ?aHmad-u ?aliyy-an ?anna-hu muxTi?-un

told- [pf.] Ahmed-Nom. Ali-Acc. that-he wrong-Nom

‘ اخبر احمدُ علياً أنه مخطئٌ ’

‘Ahmed told Ali that he was wrong’

This sentence is structurally ambiguous. It is unclear whether the suffixed personal pronoun ‘hu’ in /?anna-hu/ ‘that he was’ modifies the subject /?aHmad-u / ‘Ahmed’ or the object /?aliyy-an / ‘Ali’

There are two syntactic interpretations:

a- ?axbar-a ?aHmad-u ?aliyy-an

[?anna ?aHmad-a muxTi?-un]

‘Ahmed told Ali [that Ahmed was wrong]’

b- ?axbar-a ?aHmad-u ?aliyy-an [?anna ?aliyy-an muxTi?-un]

‘Ahmed told Ali [that Ali was wrong]’.

1.4.1.3. The Use of Coordination

The use of coordination may enable structural ambiguity to occur in Arabic (Al-Ali & Al-Zoubi, 2009; Daimi,2001). For example:

(1.6) [jaa?-a l-?aabaa?-u wa-l-?abnaa?-u l-mutamayyizuun]
came-pf. the-fathers-Nom. and-the-sons-Nom. the- distinguished-
Nom

‘ جاء الآباء والأبناء المتميزون ’

‘The distinguished fathers and sons came.’

This sentence is structurally ambiguous. It is unclear whether the adjective /l-mutamayyizuun ‘the distinguished’/ modifies the noun /l-ʔaabaaʔ-u/ ‘fathers’ or the coordination /l-ʔaabaaʔ-u wa-l-ʔabnaaʔ-u / ‘fathers and sons’.

There are two syntactic interpretations:

a- jaaʔ-a l-ʔaabaaʔ-u wa-[l-ʔabnaaʔ-u l-mutamayyizuun]

‘[The distinguished sons] and fathers came.’

b- jaaʔ-a [l-ʔaabaaʔ-u l-mutamayyizuun] [wa-l-ʔabnaaʔ-u l-mutamayyizuun]

‘[The distinguished fathers] and
[the distinguished sons] came.’

1.4.1.4 The Use of the Prepositional Phrase

The use of the prepositional phrase may cause structural ambiguity in Arabic (Al-Ali & Al-Zoubi, 2009; Daimi, 2001). For example:

(1.7) [qaal-a ʔaHmad-u fii l-masjid-i yuSalli n-naas-u]

said-pf. Ahmed-Nom. in the-mosque-Gen. pray-Indic. people-Nom.

‘قال أحمد في المسجد يصلي الناس.’

‘Ahmed said that people pray in the mosque.’

This sentence is structurally ambiguous. It is unclear whether the prepositional phrase /fii l-masjid-i/ 'in the mosque' modifies the verb 'qaal-a' 'said' or the verb /yuSalli/ 'pray'.

There are two syntactic interpretations:

a- qaal-a ?aHmad-u fii l-masjid-i

'Ahmed said in the mosque'

b- yuSalli n-naas-u fi l-masjid-i'

'People pray in the mosque.'

1.4.1.5. The Use of Comparison

The use of comparison may cause structural ambiguity in Arabic (Daimi,2001). For example:

(1.8) yuHibb-u ?aHmad-u muHammad-an ?akθar-a min huda

‘يحب أحمدُ محمداً أكثر من هدى’

'Ahmed loves Mohamed more than Huda'.

This sentence is structurally ambiguous. It is unclear whether the noun /huda/ functions as a subject or an object.

There are two syntactic interpretations:

a- yuHibb-u ?aHmad-u huda

'Ahmed loves Huda.'

b- tuHibb-u huda muHammad-an'

'Huda loves Mohammed.'

1.5. Conclusions

It can be noticed through the data discussed in the paper that English and Arabic exhibit some similarities and differences with respect to the phenomenon of structural ambiguity. On the one hand, English seems to be generally more productive with respect to the phenomenon of structural ambiguity mainly because Arabic has case marking while English doesn't. Another reason has to do with subject- verb agreement and adjective-noun agreement in Arabic. It is found in this study that the types of structural ambiguity in English can be classified into lexical category ambiguity, grammatical function ambiguity and an ambiguity of pattern. At the same time, the types of structural ambiguity in English can be classified into: surface structure ambiguity and deep structure ambiguity. In addition, there are many sources of structural ambiguity in English such as the use of the passive, modals, coordination, comparison, the adverbial, the prepositional phrase, ellipsis.

On the other hand, it is shown that Arabic is less productive than English with respect to the phenomenon of structural ambiguity. The types of structural ambiguity in Arabic are surface structure ambiguity and deep structure ambiguity. The English grammatical function ambiguity and the ambiguity of pattern have Arabic counterparts. However, the English lexical category ambiguity doesn't have Arabic counterparts. The sources of structural ambiguity in Arabic are less common than the sources of structural ambiguity in English. In Arabic, the use of the suffixed personal pronoun, the abbreviated noun, the adverbial,

the prepositional phrase, coordination and comparison are only the sources of structural ambiguity in Arabic.

In particular, English and Arabic have many similarities with respect to the phenomenon of structural ambiguity. In both languages structural ambiguity occurs when a phrase or sentence has more than one meaning or deep structure. In both languages, the types of structural ambiguity can be classified into surface structure ambiguity and deep structure ambiguity. In addition, in both of them the use of the adverbial, the prepositional phrase, coordination, comparison, and ellipsis create structural ambiguity.

At the same time, English and Arabic have many differences with respect to the phenomenon of structural ambiguity. English is more productive than Arabic with respect to this phenomenon. The types and sources of structural ambiguity in English are more common than its types and sources in Arabic. In English, there are many sources of structural ambiguity that don't have Arabic counterparts such as the use ellipsis, modals and passive. On the other hand, there are many sources of structural ambiguity that don't have English counterparts such as the use of the suffixed personal pronoun, the abbreviated noun.

Thus, case marking can solve some types of structural ambiguities in Arabic such as the ambiguities created by the use of the abbreviated noun and in some cases of coordination.

The findings of the study of structural ambiguity in English and Arabic can help in the area of Arabic-English translation, as well as in the area of language teaching.

APPENDIX

Symbols Representing the Arabic Data

The phonemic symbols used to represent the Arabic data in this research paper are listed below with their corresponding Arabic graphemes.

[b]	Voiced bilibial stop	[ب]
[t]	Voiceless dento-alveolar stop	[ت]
[T]	Voiceless dento-alveolar emphatic stop	[ط]
[d]	Voiced dento-alveolar stop	[د]
[D]	Voiced dento-alveolar emphatic stop	[ض]
[k]	Voiceless velar stop	[ك]
[q]	Voiceless uvular stop	[ق]
[ʔ]	Voiceless glottal stop	[ء]
[j]	Voiced alveo-palatal affricate	[ج]
[H]	Voiceless pharyngeal fricative	[ح]
[ʕ]	Voiced pharyngeal fricative	[ع]
[f]	Voiceless labio-dental fricative	[ف]
[θ]	Voiceless dental fricative	[ث]
[ð]	Voiced dental fricative	[ذ]
[ð̤]	Voiced dental emphatic fricative	[ظ]

[s]	Voiceless dento-alveolar fricative	[س]
[S]	Voiceless dento-alveolar emphatic fricative	[ص]
[z]	Voiced dento-alveolar fricative	[ز]
[š]	Voiceless alveo-palatal fricative	[ش]
[x]	Voiceless uvular fricative	[خ]
[ɣ]	Voiced uvular fricative	[غ]
[h]	Voiceless glottal fricative	[ه]
[r]	Voiced alveolar flap/trill (when geminate)	[ر]
[l]	Voiced alveolar lateral	[ل]
[m]	Voiced bilabial nasal	[م]
[n]	Voiced alveolar nasal	[ن]
[y]	Voiced palatal glide	[ي]
[w]	Voiced bilabial round glide	[و]
[i]	Short high front vowel	كسرة
[a]	Short low front vowel	فتحة
[u]	Short high back rounded vowel	ضمة
[ii]	Long High front vowel	ياء
[aa]	Long low front vowel	ألف
[uu]	Long high back rounded vowel	واو

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