Involuntary Syntactic Error of Interlingual Word Order

When English Rigid Word Order Momentarily Deforms Arabic Clauses

Saleh Jarallah AlQahtani

1 Department of Linguistics and Translation Studies, College of Languages and Translation, King Saud University, Riyadh, Kingdom of Saudi Arabia

Correspondence: Saleh Jarallah AlQahtani, Department of Linguistics and Translation studies, College of Languages and Translation, King Saud University, Riyadh, Kingdom of Saudi Arabia. E-mail: alashry@ksu.edu.sa

Received: February 2, 2021      Accepted: March 4, 2021      Online Published: March 8, 2021
doi:10.5539/ijel.v11n3p1     URL: https://doi.org/10.5539/ijel.v11n3p1

Abstract

This paper intends to explore the potential momentary influence of English rigid word order on the placement of Arabic preverbal subjects. The idea is that English as a Subject-Verb-Object language has one subject position; thus, it poses no restrictions on the distribution of determiner phrases in this position. By contrast, Standard Arabic (henceforth, Arabic) uses two different word orders (Subject-Verb/Verb-Subject-(Object), SVO/VSO). As a result, indefinite determiner phrases are not freely distributed in the subject position; that is, they can appear in the postverbal subject position -VSO but not in the preverbal subject position -SVO. Because the two languages use different syntactic word orders and different subject positions, two experimental tasks (an Arabic guided writing task and an English-to-Arabic translation written task) were administered to find out whether the English word order momentarily causes Arabic learners of English to violate their language subject distributions. Analysis of the performance of Arabic native participants in the two tasks revealed two important outcomes: a) when participants were asked to reorder scrambled words into full clauses, they significantly preferred VSO order; in contrast, b) when participants were asked to translate full English clauses into Arabic, they strikingly preferred SVO order violating syntactic parametric (distributional) restrictions on the placement of indefinite determiner phrases. In other words, they used indefinite determiner phrases in the preverbal subject position. Based on the results, the study argues that the improper use of indefinite determiner phrases in the preverbal subject position is not due to the implicit knowledge of Arabic grammar; it is due to the momentary influence of English syntactic word order involuntarily exerted by participants.

Keywords: Arabic, determiner phrases, English, subject, syntax, word order

1. Introduction

The involuntary influence of the first language (L1) grammar on the second language (L2) grammar has been extensively investigated in the literature (Derakhshan & Karimi, 2015; Juffs, 2005; Kobayashi & Rinnert, 1992; Kosterina, 2007; Woodall, 2002, etc.). Researchers have investigated this type of influence on the basis that L1 is the potential source of influence and concluded that L1 can positively affect L2 (positive transfer) or negatively affect L2 (negative transfer). The current study digresses from this norm. In other words, it investigates the effect of L2 grammar on L1. Precisely, it tries to determine whether English rigid word order (i.e., Subject-Verb-Object, SVO) involuntarily influences Arabic variable word order (i.e., VSO or SVO) in terms of the subject placement in pre/postverbal positions. This phenomenon (L2 effect on L1) has not received much attention in the literature. Few studies (Abu-Rabia et al., 2013; Agheshteh, 2015; Balcom, 2003; Benmamoun et al., 2010; Cook, 2003; Montrul, 2010; Zinszer et al., 2015) have investigated L2 effect on L1 on the basis that L2 is the dominant language and L1 is less dominant. By contrast, this study aims to investigate the effect of English (L2) as a less dominant language on Arabic (L1) as a dominant language (i.e., in a context where English is considered a second language).

English and Arabic have different syntactic word orders. The former has one rigid word order, SVO, whereas the latter has SVO and VSO. Additionally, English has no restrictions on the distributions of indefinite determiner phrases (henceforth, DP) in the subject position whereas Arabic does. That is, English indefinite DPs are permitted
as preverbal subjects as illustrated in (1). By contrast, Arabic permits indefinite DPs in the postverbal subject position, VSO; however, it does not permit them, indefinite DPs, as preverbal subjects in SVO as shown by (2a&b) respectively.

(1) A boy broke the pen

(2) a. kasara walad-u-n ?al-qalam
   broke boy-NOM-NUN the-pen
   ‘A boy broke the pen.’

b. *walad-u-n kasara ?al-qalam
   boy-NOM-NUN broke the-pen
   ‘Intended to read: A boy broke the pen.’

The structure in (2a) represents the syntactic word order VSO, the basic word order in Arabic (Benmamoun, 2017; AlQahtani & Sabourin, 2015; AlQahtani, 2016); it is the intact translation of the English example illustrated in (1). Clearly, the two examples show different word orders (Arabic: VSO; English: SVO). Strikingly, the structure in (2b) is ungrammatical because the preverbal subject position is occupied by an indefinite DP; this structure is equivalent, in word order -SVO, to the English structure in (1); however, this structure is ill-formed (Note 1). The above-introduced exemplarlesshow that the two languages use different subject distributions. That is, English subject syntactic distribution allows indefinite DPs to occupy the subject position. On the contrary, Arabic subject syntactic distribution allows subjects to appear pre- and post-verbally; see Note 1 for some restrictions on preverbal subjects.

1.1 Research Question

Building on the notion that Arabic and English have different parameterizations ‘distributions’ in regard to the subject position, the current study posits the following research question:

(3) When translating from English to Arabic, will English learners who are native speakers of Arabic involuntarily apply English syntactic word order to Arabic structures being translated?

The paper proceeds as follows: Section 2 reviews the linguistic and empirical background for the study; section 3 outlines the research methodology; section 4 presents the results; section 5 discusses the findings of the study, and section 6 concludes the paper.

2. Review of Linguistic and Empirical Background

This section has a two-fold purpose. First, it aims to give a brief account of the linguistic property of the syntactic word order and the distributions of subject determiner phrases found in Arabic and English. Second, it introduces some previous studies that have investigated the L2 effect on L1 in different contexts with a focus on English-Arabic interlingual influence.

2.1 Linguistic Property

In this section, I discuss the linguistic properties of Arabic and English. I shed light on the two languages’ asymmetrical word order. Arabic has two different word orders, VSO or SVO, with a noticeable temptation toward the use of VSO more than SVO, whereas English has only one rigid word order, SVO.

2.1.1 Arabic Syntactic Word Order

The dominant word order in Arabic is assumed to be the VSO order (Al-Khaz’ali, 2008; AlQahtani, 2016; Benmamoun, 2017, etc.). However, the SVO order is another option. The two orders differ in the agreement between the subject and the verb and in the process of syntactic derivation. I will give a brief account of the agreement system and show how they vary according to the word order type. Subject-verb agreement varies depending on the type of word order. The idea is that VSO structures show partial agreement (e.g., person and gender only). By contrast, SVO structures show full agreement (person, gender and number), which means that φ features are established between the subject and the verb. The following examples exemplify these two types:

(4) a. zāra ?al-mudarrisōn modiratam
   visited-3G the-teacher-PPL their-principal
   ‘The teachers visited their principal.’

Looking at structure (4a), the verb is in partial agreement with the subject; it shows person agreement (3rd person)
and gender agreement (male); however, number agreement is missing. By contrast, structure (4b) shows full agreement because all \( \phi \) features are established between the verb and the subject.

As far as the syntactic derivation is concerned, the VSO order is a result of (V)erb-to-(T)ense movement (i.e., head movement), which raises the verb to a higher position. The syntactic tree schematized in (5) is a representation of (4a).

![Syntactic Tree](image)

Overt movement of the subject is not assumed; the subject \( \text{ʔal-mudarris} \) ‘the teachers’ remains in situ. That is, in VSO order, the subject remaining in the specifier (Spec) of the verb phrase (VP) is different from that in English, which requires the subject to move from [Spec: VP] to [Spec: TP] (TP: tense phrase). The latter movement satisfies the extended projection principle (EPP) put forth by Landau (2007).

The derivation of SVO order differs from that of VSO order in the sense that one additional phrasal movement is required; the subject has to move from [Spec: VP] to [Spec: TP] in order to spell out the structure (4b); see the proposed syntactic derivation illustrated by (6) below.

![Syntactic Tree](image)

Clearly noticed, the syntactic derivation of VSO is assumed to require one syntactic movement, namely V-to-T head-movement. On the contrary, the SVO syntactic derivation requires two syntactic movements, V-to-T head movement and phrasal movement; the subject DP moves from [Spec: VP] to [Spec: TP]. The syntactic derivation of a particular structure that requires more syntactic movements may indicate the complexity of the structure.

### 2.1.2 English Syntactic Word Order

Morphosyntactically, English differs from Arabic in its agreement system. Arabic is classified as a [+strong] language since it shows full agreement in the case of SVO; English is classified as a [-strong] language because it shows only partial agreement. Unlike Arabic, English has weak inflectional features; therefore, the V remains in the VP domain and does not move overtly. In English, the subject moves from its canonical position [Spec: VP] into the [Spec: TP], satisfying EPP features as suggested below.

![Syntactic Tree](image)

Examining the structure in (7b) above, we notice that the subject moves from the internal subject position [Spec: VP] to the external subject position [Spec: TP]. This movement is grammatically required. If the subject does not
move, the output of the narrow syntax will be as follows:

(8) *have the teachers visited their principal

To serve as a declarative structure, (8) is not acceptable by English grammar because the movement of the subject from [Spec: VP] to [Spec: TP] is not triggered to satisfy the EPP requirement.

2.1.3 Distribution of Arabic Definite DPs

The above discussion showed that the word order in both languages (English and Arabic) radically differs specifically when comparing Arabic VSO to English word order. They show different syntactic movements. In the following subsection, I present the syntactic distributions of the external argument (subject DPs in the Spec of TP) in both languages.

I begin with English because it has only one word order. English DPs occupying the external subject position are freely distributed. The idea is that, whether subject DPs are definite or indefinite, there is no syntactic restriction in terms of in/definiteness to occupy the external subject position; the free distribution is instantiated by (9a&b), respectively.

(9) a. The boy broke the pen
   b. A boy broke the pen

Regardless of their being ±definite, examples (9a&b) show that English DPs can be freely distributed in the subject position [Spec: TP].

Regardless the definite DPs, Arabic definite DPs behave in the same way that English DPs do; they have relatively free syntactic distributions, as shown below.

(10) a. kasara ?al-walac-u ?al-qalam
    broke the-boy-NOM the-pen

    (VSO order)

b. ?al-walad-u kasara ?al-qalam
    the-boy-NOM broke the-pen
    ‘The boy broke the pen.’

    (SVO order)

As illustrated in (10a&b), the definite subject DP ?al-walad-u has free syntactic distributions to appear in preverbal, external, or postverbal, internal, subject positions (i.e., in VSO or SVO). The syntactic behaviour of definite DPs differs from indefinite DPs in terms of their distributions in the preverbal subject position; the difference in distribution is discussed in the following subsection.

2.1.4 Distribution of Indefinite DPs

There are syntactic restrictions on the distributions of Arabic indefinite DPs. Precisely, they cannot appear in the preverbal subject position. The ungrammaticality of (11a) is caused by the indefinite subject DP, which appears in the external subject position.

(11) a. *walad-u-n kasara ?al-qalam
    boy-NOM-NUN broke the-pen
    ‘Intends to reac: A boy broke the pen.’

b. kasara walad-u-n ?al-qalam
    broke boy-NOM-NUN the-pen
    ‘A boy broke the pen.’

    (SVO order)

Unlike indefinite DPs in the external subject position, indefinite DPs can occupy the internal subject position without any restrictions, as shown by (11b).

To sum up, Arabic grammar does not allow indefinite DPs to occupy external subject positions in SVO order, whereas it allows them to appear post-verbally in the internal subject position. By contrast, English grammar allows indefinite DPs to appear as preverbal external subjects. In the following section, I introduce some studies that show the interlingual effects of L2 on L1.

2.2 Empirical Studies

Albirihi et al.’s (2011) investigation of Egyptian heritage speakers’ linguistic knowledge of Arabic finds that the SVO order is predominant, despite the fact that the dominant word order is the VSO. They argue that the preference of the SVO order might be attributed to transfer from English. Alternatively, they also assume that the preference for SVO might be due to the complex syntax of the VSO order because VSO derivation, in their
argument, is more complex than SVO derivation. To test the complexity of Arabic different word order, Thompson and Werfèllī (2012) investigate the processing of VSO and SVO structures in spoken Saudi Arabic. They examine the processing times associated with these constructions. As mentioned above, in section 2.1, that VSO order is derived with the subject remaining in situ, in VP, and the verb raising over the subject to T. In contrast, SVO order is derived by extracting the subject out of VP to Spec of TP and the verb raising to T. The authors use the processing time as evidence to determine which structure takes more time, concluding that VSO takes less time than SVO. Their study’s findings might be used to argue against the idea that VSO is more complex than SVO as claimed by Albirinī et al. It can be inferred that the dominance of SVO order shown by Egyptian heritage speakers is due to the transfer of English language rigid word order to Arabic; it may not be due to the complexity of VSO structure. Cross-linguistically, Harrington (1987) contends that Japanese as L2 learners of English tend to adopt English word order Noun-Verb-Noun (NVN) and prefer it to NNV or VNN; inanimate subjects are permitted by the learners to appear in NVN, a process that is not acceptable in Japanese registers. It seems that English word order has affected the learners’ tendency toward using NVN order.

Polinsky (2009) compares English dominant heritage speakers of Russian to monolingual Russian speakers. Participants were asked to match pictures to either active or passive constructions. Russian can be SVO, VOS or VSO. She finds that heritage speakers have problems whenever the word order differs from the English word order, SVO. It can be argued that the dominant language has a positive transfer on the weak language. By contrast, it can be claimed that heritage speakers have the necessary implicit knowledge of their heritage language, but because of the dominance of the strong language, they cannot exploit it given the negative transfer.

In summary, the effect of the dominant language, L2 in the previous studies, on L1 is transparently attested. More specifically, the distribution of the clause elements (subjects, verbs, objects) of languages that structurally differ from English is affected by the English word order.

3. Methodology

3.1 Participants

Thirty-three native speakers of Arabic who were university undergraduate students participated in the study. They are enrolled in the second year in the Faculty of Engineering at King Saud University. English was the medium of instruction. Prior to their admission to the Faculty of Engineering, the participants had been taught English for one year in the preparatory year program.

3.2 Stimuli

The study used two tasks: an Arabic guided writing task and an English-to-Arabic translation written task. These tasks are described in the following two subsections.

3.2.1 Arabic Guided Writing Task

This task was administered for two important reasons. First, it aimed to explore participants’ preferred Arabic word order and their tendency toward the distribution of indefinite DPs in the preverbal subject position. Second, it aimed to determine whether the results of this task, on the one hand, confirmed that participants employed indefinite DPs in the suitable syntactic position, postverbal subject position (VSO); and whether the results of the translation task, on the other hand, proved that the participants incorrectly placed the indefinite DPs in the preverbal subject position (SVO). Then, it can be strongly argued that the incorrect placement of indefinite DPs is attributed to the momentary influence of L2 subject distribution and word order and not to any other factor. Regarding the guided writing task design, the task consisted of 16 Arabic sentences. Specifically, each sentence’s content words were presented in a scrambled order. The participants were asked to rearrange them in the correct order. The stimuli included in this task were as follows: a) ten target sentences and b) six distracting sentences. The target sentences consisted of transitive verbs in the past form, indefinite DPs and additional complements (object DPs or prepositional phrases). The distracting sentences consisted of similar contents except for the indefinite DPs; definite DPs were used instead. In those generated sentences, no adjectives were used. Therefore, the only grammatically correct word order that participants were expected to use was VSO order. Three different versions were generated: E1, E2 and E3; see Appendix A for a sample version.

3.2.2 English-to-Arabic Translation Written Task

This task aimed to explore whether the English word order momentarily causes Arabic learners of English to violate the preverbal subject distributions parametrized by their language grammar. The design of this task was basically a ‘mirrormage’ translation of the three versions of the guided writing task stimuli. In other words, the contents of the guided writing task were translated word for word from Arabic into English. Of course, the scrambled content words were translated as full sentences. Since the aim of this task was to check L2 word order
effect on L1 subject placement, the lexical items that were used in the translation were from the high familiar items. Additionally, the instructor who ran the experiment was kindly requested to give the Arabic meaning of any English word if questions arose during the experiment; one version of the task is attached in appendix B.

3.3 Procedure

The two tasks were administered at two different stages. The translation task was administered first. I assumed that running this task first eliminated participants’ awareness that the task was intended to check for the placement of the indefinite DPs in a suitable subject position. By doing so, data gathering took place in a naturalistic setting. Each participant was assigned a unique identifying number written on the front page of the task. One week later, a guided writing task was administered. Before the distribution of the task papers, the same identifying number was written, by the instructor, on the front page of the writing task and was given to the respective participant. In support of eliminating external factors’ effect, such as memory effect, each participant was given a different version. The idea was that the 33 participants were hypothetically divided into three eleven-participant sets. Every set was given a designated version (E1, E2 or E3). In other words, if the participants in the first set were given E1 task in the translation task, they were given E2 task in the guided writing task; see Table 1 below. Doing so assured the elimination of unwanted memorizing/recalling effects. There was no timeframe to perform the tasks. However, when administering the tasks, the average taken time ranged from 15 to 20 minutes.

Table 1. Task assignment distribution

<table>
<thead>
<tr>
<th></th>
<th>Guided Writing Task</th>
<th>Translation Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Set</td>
<td>E1</td>
<td>E3</td>
</tr>
<tr>
<td>Second Set</td>
<td>E2</td>
<td>E1</td>
</tr>
<tr>
<td>Third Set</td>
<td>E3</td>
<td>E2</td>
</tr>
</tbody>
</table>

As illustrated in Table 1, participants were given different versions of each task during the experiment.

4. Results

This section presents the tasks’ data and analyzes participants’ performance in each task separately. Prior to introducing each task’s results in a separate subsection, it would be helpful to present a general overview of the results. The data obtained from the 33 participants amounted to 1056 sentences; the analyzed target sentences formed 660 sentences, 330 sentences for each task. The distracting sentences, 396 sentences, were not analyzed; there was a linguistic reason behind excluding them from the analysis. Distracting sentences’ subjects are definite DPs; these DPs are syntactically permitted in preverbal and postverbal subject positions. That is, they are freely distributed in both orders, VSO and SVO. They were included to distract the participants from the tasks’ main focus (i.e., indefinite DPs in different word order).

From the analyzed data, two crucial outcomes emerged. First, as depicted in Figure 1, participants’ performance in the guided writing task showed a significant preference for the VSO order (229: 69.39%) over the SVO order (97: 29.39%). This finding conforms to previous studies’ finding (Al-Khaz’ali, 2008; AlQahtani, 2016; Benmanoun, 2017, etc.) that the dominant word order in Arabic is the VSO order. Second, regarding participants’ performance in the translation task, participants excessively translated English sentences into SVO order (277: 83.94%), whereas they translated only a small portion of the sentences into VSO order (53: 16.06%).

Figure 1. Participants’ performance in both tasks
4.1 Analysis of the Guided Writing Task

This task was administered to probe participants’ preferred word order, VSO or SVO. Results showed that participants preferred VSO to SVO; see Figure 1 and Table 2 for an overview. Participants’ tendency for VSO resulted in them placing the indefinite subject DPs in the correct place, in the postverbal position. Using the scrambled words determined for each sentence, participants rewrote 229 sentences in the VSO order; this number represented 69.39% of the total number, 330 sentences. By contrast, participants incorrectly rewrote 97 (29.39%) sentences in the SVO order, placing the indefinite subject DPs in the preverbal positions. The participants ordered a very small portion of the sentences in neither VSO nor SVO. Only four sentences were encoded as non-specified, as shown in Table 2.

Table 2. Participants’ performance (Guided writing task)

<table>
<thead>
<tr>
<th>Placement of Indefinite DPs per word order</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVO</td>
<td>97</td>
<td>29.39%</td>
</tr>
<tr>
<td>VSO</td>
<td>229</td>
<td>69.39%</td>
</tr>
<tr>
<td>Not specified</td>
<td>4</td>
<td>1.22%</td>
</tr>
<tr>
<td>Total</td>
<td>330</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.2 Analysis of the Translation Task

The translation task aimed to determine whether participants translated English sentences in VSO or SVO. Strikingly, participants translated a high number of the given sentences in SVO. They translated 277 sentences in SVO order. By contrast, they translated only 53 sentences (16.06%) in VSO order; see Table 3 for illustrations. The translated sentences in SVO order formed 83.94% of the 330 sentences included in the task. More explanations follow in the discussion section below.

Table 3. Participants’ performance (Translation task)

<table>
<thead>
<tr>
<th>Placement of Indefinite DPs per word order</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVO</td>
<td>277</td>
<td>83.94%</td>
</tr>
<tr>
<td>VSO</td>
<td>53</td>
<td>16.06%</td>
</tr>
<tr>
<td>Total</td>
<td>330</td>
<td>100%</td>
</tr>
</tbody>
</table>

5. Discussions

The study explored the noticeable effect of English language word order as an L2 on native speakers’ native language. Participants’ performance in the translation task administered in the study was assumed to be affected by L2 word order. To answer the study’s research question, when translating from English to Arabic, will English learners who are native speakers of Arabic involuntarily apply English syntactic word order to Arabic structures being translated? the results showed that participants had involuntarily used the English language word order to translate the given sentences into Arabic. As can be inferred from the results, participants strikingly translated most of the given sentences in SVO. They exerted English language word order on Arabic sentences; this resulted in the wrong placement of the indefinite DPs in the preverbal subject position. The incorrect placement of indefinite DPs in the preverbal subject position might well be attributed to the English word order effect and not to the implicit knowledge of the participants’ native language. This claim is supported by participants’ performance in the guided writing task. That is, the administration of the guided writing task revealed that the participants grammatically reordered the scrambled words in VSO order, adhering to Arabic language grammar rules in terms of placing the indefinite DPs in the right syntactic position, the postverbal position. To sum up, it is assumed that English word order momentarily influenced participants’ native language grammar.

6. Conclusions

The study found that participants applied English syntactic word order to Arabic translated sentences. Consequently, they produced ungrammatical structures that violated Arabic language grammar, which preserves the preverbal subject positions for definite DPs only. In other words, participants involuntarily used the indefinite
DPs in the preverbal subject position. The improper placement of the indefinite DPs in the preverbal subject position is assumed to result from the English word order, which allows indefinite DPs to appear in the preverbal subject position, which, by Occam’s razor, is the only subject position in English. It can be postulated that when the participants were translating English sentences, their implicit knowledge of Arabic was momentarily affected by English word order, which resulted in incorrectly translated sentences.

References


**Notes**

Note 1. The ill-formedness of (2b) can be repaired by modifying the indefinite subject, *walad* ‘boy’, as shown below.

![Arabic text](image)

The structure becomes well-formed because the indefinite subject is modified by the adjective *taweel* ‘tall’; see AlQahtani (2016) for a detailed discussion of licensing indefinite subjects in the preverbal subject position.

**Appendix A**

**Sentence reordering writing task (E3)**

![Image of the sentence reordering task](image)
Appendix B
Translation task (E1)

You are, kindly, requested to translate the following sentences from English into Arabic:

1. A student studied math at the library.
2. A boy drank the juice.
3. The girl wears a beautiful dress.
4. A child played football.
5. The mother cooks the dinner.
6. A teacher explained the difficult lesson.
7. Osama washes his hands well.
8. A father visited his sick son.
9. The student reads the poem.
10. A student said the correct answer.
11. A girl ate the delicious cake.
12. A man wrote a long letter.
13. Khalid takes a photo of his family.
14. A teacher corrected the exam papers.
15. A cat entered the house.
16. Mohammed prays all prayers in the mosque.

Thank you very much indeed for your participation!

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