

Reverse Transfer

English as a Second Language Effect on Arabic as a First Language □

Gafar bin Gassem

1. Introduction:

Generally, there is no debate among linguists and language teachers regarding the fact that when attempting to speak/write in a second language, learners occasionally transfer some items from their native language into their speech or writing of the second language. This consensus might stem from the fact the vast majority of scholars have focused their work on the influence of the first language (L1) on the other languages that are acquired; this includes bilinguals, trilinguals or even multilinguals (Laufer, 2003; Cook, 2003). Namely, the massive concentration was on *unidirectional transfer* (the effect of L1 on L2). However, the notion of *bidirectional transfer* (the impact of L2 on L1 and vice versa) has received the same amount of attention only over a decade ago despite the fact that i) Weinreich (1953) introduced the idea a long time ago (Cook, 1992, 2003; Zareva, 2010; Alfaifi, 2015), and ii) the original definition of the crosslinguistic influence concept is “the interplay between earlier and later acquired languages” (Kellerman and Sharwood, 1986, p. 1). Recent research has demonstrated compelling evidence that the influence of L2 on linguistic aspects of the L1 is possible. Hence, many studies were conducted to explore this phenomenon yielding very interesting results (e.g.; Laufer, 2003; Pavlenko, 2003; Jarvis, 2003, 2008; Balcom, 2003; Zareva, 2010; Brown and Gullberg, 2012; Alfaifi, 2015). The term which was used for this phenomenon is called *backward interference*, but is also known as *backward transfer* and *reverse transfer*, according to Cook (2003) who edited a book that is devoted to this topic.

As the concept of bidirectional transfer has received scholars’ interest, the debate in regard to its nature arose in both linguistic and psycholinguistic fields. Part of that debate is concerned with the question of whether bilinguals have a merged linguistic system (i.e., two languages in one area of the mind) or have two separate language systems without any connection between them. Another question that has provoked the ongoing debate is whether bilinguals differ from monolinguals with respect to their knowledge and awareness of their L1. Such questions and many others have promoted linguistic scholars to extensive research in order to find answers. As a consequence of such debate, the theory of multi-competence was put forward by Cook in the 1990s (Hall et al., 2006; Cook, 2009; Zareva, 2010; Brown and Gullberg, 2012).

The present study aims to investigate the phenomenon of reverse transfer under the framework of multi-competence. To the best of my knowledge, this area has not been sufficiently investigated, as can be elicited from several recent studies which reported that the influence of L2 on L1 has hardly been examined (Brown and Gullberg, 2012; Cook, 2003). The idea arose only a decade ago as a consequence of addressing the relationship between the L1 and L2 in the mind. Additionally, the perspective of multi-competence needs more investigation since it is not yet complete. The need for investigation in this area increased, particularly with more focus on L2 users who are at the early stages of learning (Brown and Gullberg, 2008; Alfaifi, 2015).

Further information about the notion of multi-competence is presented in the following section. Also, this section distinguishes between language transfer and language switching as contact phenomena of cross-linguistic influence. Additionally, it provides a brief overview of other models that dealt with the relationship of the L1 and L2 in the mind. Finally, it surveys a wide range of the previous studies that have been conducted in this linguistic domain, followed by the methodology of the present study.

2. Literature Review

2.1. *Language Transfer vs. Code-Switching*

The phenomenon of transfer or interference is often confused with the phenomenon of code-switching or language mixing. General definitions of any instances of language merging might also contribute to this confusion. For example, Odlin (1989) defined language mixing as “the merging of characteristics of two or more languages in any verbal communication” (p. 6). Researchers used such a definition as a cover term for all cross-linguistic influence, including language mixing, code-switching, borrowing, and language transfer (Yumoto, 1996).

Therefore, one should attempt to differentiate between transfer and code-switching in order to draw a clear distinction between the two terms. In fact, in some contexts it proves to be challenging to distinguish these two contact phenomena. De Bot (1992) argues that it is difficult to distinguish these two phenomena from each other. According to De Bot (1992), “Many instances of cross-linguistic influences are related to code-switching and cannot be simply separated from this on theoretical or empirical grounds” (p. 19). Hence, earlier linguists defined the transfer phenomenon with definitions that were too broad. Gorsjean, for example, cited Clyne (1972)’s definition of transference as the use of any other languages’ features or elements. This definition frequently includes other contact phenomena, such as code-switching and borrowing. It seems that some linguists see these two phenomena as similar. As Treffers-Daller (2009) pointed out, “Although many researchers think of CS and interference or transfer as different phenomena, instances of CS and transfer can be seen as similar in that they involve the occurrence of elements of language A in stretches of speech of language B” (p.59). Hence, the basis on which these linguists have judged these two terms to be similar is the existence of certain elements of two or more languages.

However, recent linguists defined the transfer phenomenon with more precision. For instance, Marian and Kaushanskaya (2007) defined it as adopting other language’s syntactic or semantic structure in a way that is not switching to the language. Such researchers differentiate between the two phenomena in terms of how bilinguals can control them. According to Treffers-Daller (2009), bilinguals are able to decide when to switch and when not to; conversely, it is less clear that bilingual can do the same thing during transfer. Treffers-Daller (2009) reports that “this inability of speakers to control (certain forms of) transfer may be an indication that there are at least some differences in the psycholinguistic processes behind code-switching and transfer” (p. 60). Treffers-Daller (2009) claims that code-switching can take place intentionally or sometimes unintentionally; on the other hand, the phenomena of transfer can only happen unintentionally and spontaneously. Another distinction between the two phenomena was drawn by Auer (1984). He defined *transfer* as “language alternation for a certain unit with a structurally provided point of return into the first language;” in contrast, he defined code-switching as “language alternation at a certain point in conversation without a structurally determined (and therefore predictable) return into the first language” (Auer, 1984, p. 26).

Overall, both language transfer and language switching share a number of similarities. One of these similarities is the fact that both are a type of language merging. Nevertheless, they are different in several ways, such as how bilinguals can control them.

2.2. *Multi-Competence Hypothesis*

According to Cook (2003), the term ‘multi-competence’ initially was used as a convenience since there was no equivalent term for ‘interlanguage’ (the speaker’s knowledge of L2). That is, there was no term that described the speaker’s knowledge of both L1 and L2. Thus, Cook introduced the term ‘multi-competence’ to basically refer to knowledge of more than one language in one mind or as Cook (1992) put it “to describe the compound state of a mind with two grammars” (Cook, 1992, p. 558). It arose out of the question of L2 influence on the L1. Cook claimed that multi-competent people are not similar to two monolinguals; rather they are unique individuals with a unique combination (Cook, 1992; Brown and Gullberg, 2012). Hence, the crux of Cook’s argument is that “the L2 user is a person in his or

her own right, not imitation of someone else” (Cook, 2003, p. 4). As a consequence of that distinction, bilinguals are expected to be different from monolinguals in many linguistic domains (i.e.; awareness, cognitive process, production, perception, etc.).

Cook further claimed that at some level, both L1 and L2 are stored in the same area of the bilingual’s brain (Cook, 1992), and because of that (i.e.; first language and the other language are in the same mind), the two languages must establish, somehow, a super-system of language rather than be two completely isolated systems. Principally, the multi-competence theory hypothesizes that the knowledge of an L2 user is restructured as a natural result of acquiring an L2, which eventually leads to an integrated system. In this integrated system, the L1’s elements are combined with that of the L2 (Cook et al., 2006).

In the framework of multi-competence, theorists have proposed several models that account for the relationship between both the L1 and L2 in one mind. One plausible account of these proposed models is the *total separation model* (TSM) which was proposed by Grosjean (1989). According to this model, the L2 and L1 are developed in two entirely different areas of the bilingual’s brain. That is to say, there is no connection whatsoever between the L1 and L2 in one mind when bilinguals speak one of two of their languages (Genesee, 1989; Cook, 1992; Paradis and Genesee, 1996; Marian et al., 2007; Harris, 2014). Consequently, this model sees no logical reason to examine the L2 influence on the L1 (Cook, 2003). As Cook (1992) pointed out, “It claims that there two or more discrete coexisting language systems in multicompetence without links between them” (p.566).

Another possible account is the *total integration model* (TIM) which proposed the opposite assumption of the TSM. It claimed that the L2 and L1 are developed in single area of the brain. Namely, the L2 merges or integrates with the L1, constructing one conceptual structure for the two languages (Cook, 1992; Berillmann et al., 2004; Yokoyama et al., 2006; Gandour et al., 2007). By this proposal, the integration model does not claim that bilinguals cannot control what they do; rather, it says that they are still able to choose the appropriate language for the suitable context (Cook, 2003). The focus discussion of this model is about how L2 users balance between the elements of a mono-language system rather than being about the effect of L2 on L1.

Cook (2003) criticized these two models as being very extreme and far from plausibility. Thus, she proposed a third model which she called the *integration continuum model* (ICM). This model occupied the middle position of the TSM and the TIM. According to this approach, there is a partial integration between L1 and L2 in the bilingual’s mind (Cook, 2003; Alfafi, 2015). This model attempts to create a holistic explanation for interaction of two grammars that takes place in the compound state of mind of L2 users. By doing so, it allows for a complexity in the relationship between the two languages. Namely, the ICM assumes that acquiring an L2 does not simply establish a new separate system by adding a new language to a complete existing language, but rather the L2 is acquired gradually creating a complex system in which both the L1 and L2 are tied together inextricably (Cook, 2009b). That is, the L1 and L2 are constantly related. Hence, it would not be surprising to find bidirectional interference (i.e., forward transfer, backward transfer) between the two languages.

Needless to say, one of the distinctive features of ICM is that it does not claim that the continuum implies a particular direction of movement. That is, some L2 users may start with integration and move towards separation, or they may start with separation and move towards integration. This explains why the arrow, in Figure 1, can go to both sides; from right to left (integration to separation) or from left to right (separation to integration). Another feature of this approach is that it does not assume that the integration continuum must apply to the whole language system. Rather, it proposes that it may apply to some linguistic domains but not others. For example, an L2 user’s phonology might be integrated, but his or her syntax or lexicon may be separate. Furthermore, it claims that even if reverse transfer was found, this does not necessarily mean that all the linguistic domains are impacted in the same exact way. That is, some linguistic areas might be less/more integrated than others (Cook, 2003). Hence, such features provide the ICM more flexibility than the other two models (i.e.; TCM, TIM).

The perspective of ICM can be summarized by the following points: i) it does not view the language system of bilinguals as an interaction or overlapping between separate language elements, but rather it sees the language systems of such L2 users as a whole, ii) it views that the influences of the L2 as influencing the whole mind, iii) it assumes a unified system for both the L1 and L2 in the same area of the bilinguals' mind, according to Cook (2003), and iv) it hypothesizes that the two languages' mental grammars interact to some extent; they are not isolated (Cook, 2009b).

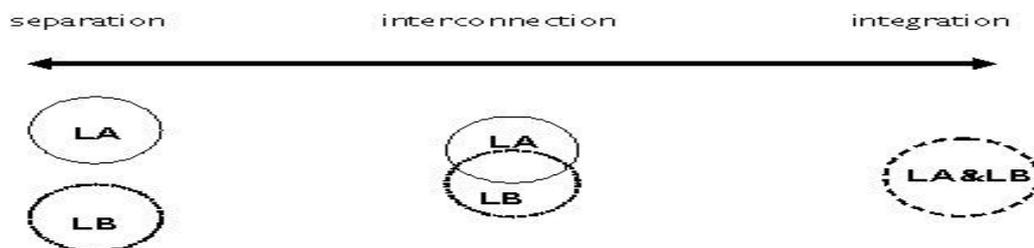


Figure 1. The integration continuum in multi-competence. (Cook, 2003, p. 9)

2.3. Previous Studies

Cook developed her idea of the multi-competence with a series of publications (Cook 1991; 1992; 1995; 1996; 1999; 2002; 2003; 2007; 2009) with the purpose of supporting it with solid evidence. Cook's work inspired many linguistic scholars to conduct studies investigating this topic in various domains, including reading (Yelland et al., 1993), word recognition (Cunningham and Graham, 2000), tense and aspect (Pavlenko, 2003), collocations (Laufer, 2003), manner of motion (Brown and Gullberg, 2008), lexicon (Brown and Gullberg, 2010), mental lexicon organization (Zareva, 2010), clausal packaging (Brown and Gullberg, 2012), and preposition selection (Alfaifi, 2015) among others.

In 2003, for example, Cook et al. examined the impact of the L2 on L1 via addressing the question of whether or not bilinguals' processing of L1 syntax differs from that of monolinguals. To achieve this goal, the researchers recruited 162 participants with both monolingual and bilingual speakers of Greek, Japanese, and Spanish studying English as an L2. The participants were given a wide range of sentences and were asked to identify the subject from two NPs using the following four cues: word order, animacy, agreement, and case. The prediction was that the L2 (English) would have an effect on the L1 (Greek, Japanese, and Spanish); hence, the bilinguals were expected to use different cues in deciding the subject from their monolingual counterparts. The results showed signs of L2 interference in L1. For instance, the Greek bilinguals differed significantly from their monolingual counterparts with respect to the case cue. Quite similarly, the bilingual Japanese scores were significantly dissimilar to that of their monolingual counterparts, suggesting an effect of L2 (English) on their L1.

Following Cook, Pavlenko (2003) conducted a quantitative study for the same intent of that of Cook (examining L2 influence on L1) using the elicited narrative technique. The study consisted of thirty (16 females, 14 males) advanced L1 Russian/L2 English bilinguals. Pavlenko utilized four 3-minute long films as stimuli and asked the subjects to retell/narrate what they had watched. Then, the researcher compared all elicited narratives with patterns of language use in the monolingual narratives elicited from the previous work (Pavlenko, 2002a). The researcher found signs of backward transfer in the data of Russian L2 users of English not only in the lexicon area, but also in both areas of semantics and morphosyntax. In the lexicon and semantics domains, the effect was visible in the examples of loan translation, lexical borrowing, and semantic extension (Cook, 2003), while the influence in the morphosyntax area was obvious in prepositional use and the violation of case-marking rules among others.

These findings were supported by Cook et al. (2006). The main goal of the study was to address the question of whether or not the bilinguals have different concepts from the monolinguals in categorizing objects and substances. The researchers selected 36 Japanese participants and divided them into two groups according to their length/duration of residency in the English-speaking countries $N=18$ long-stay group (6 months to 3 years), $N=18$ short-stay group (more than 3 years). The subjects were given the name of an item, and they were asked to decide which of two other items they thought would have the same name. The researchers found that the two groups did not significantly differ from each other. By comparing this study's results with the results of monolinguals of Imai and Gentner (1997), the researchers found that the long-stay group behaves in a way that ranks them in between English monolinguals and Japanese monolinguals, suggesting supported evidence for the multi-competence theory in the sense that the Japanese-English bilinguals' knowledge is restructured as a result of acquiring an L2.

Similarly, Athanasopoulos (2006) examined the effect of the L2 on L1. The main intent of this study was to investigate the relationship between language and cognition in bilinguals. To reach that goal, the researcher recruited a total of 80 participants distributed as the following: $N=28$ Japanese monolinguals, $N=14$ English monolinguals and $N=38$ L1 Japanese-L2 English speakers. On the basis of their proficiency level, the bilinguals were further divided into two groups: intermediate and advanced. The researcher measured the participants' cognitive dispositions using a picture depicting technique where the subjects were shown an 'original' picture and then another five different pictures that were similar to the original but with a single difference. The participants were asked to decide which of the five pictures were most like the original. The results revealed that the intermediate bilinguals responded similarly to their monolingual peers, while the advanced bilinguals behaved more like the English monolinguals, suggesting the presence of an L2 effect on the L1, but only at the advanced level of language learning.

Brown and Gullberg (2008)'s findings appeared to be in contrast with Athanasopoulos (2006) and Cook et al. (2006). Athanasopoulos (2006), as mentioned earlier, found that there is no influence of the L2 on the L1 at the intermediate level of proficiency. Conversely, Brown and Gullberg (2008) found that even L2 users who are at the intermediate level of proficiency do show signs of their L2 effect on their L1. The main purpose of Brown and Gullberg's study was to examine the bidirectional influence in the domain of manner of motion. With a total number of 57 adults, the study was comprised of four groups: Japanese monolinguals, English monolinguals, bilinguals of Japanese and English living in Japan, and others living in the United States. The Japanese bilinguals were at the intermediate level of learning English. After watching a 6-minute film, the participants were asked to narrate what they had seen. The film was chosen carefully so that it contained numerous action events. The results indicated that the four groups differ significantly in their tendency to encode manner in speech when describing events. Specifically, the English monolinguals encoded manner significantly more frequently than the other three groups, supporting the multi-competence theory in its claim that multilinguals are dissimilar from monolinguals with respect to multiple competencies.

Recently, Alfaifi (2015) conducted a quantitative study examining the multi-competence notation, specifically, the ICM. The major intent of the study was to investigate the backward transfer phenomenon via addressing the question of whether or not Arabic L2 users of English differ from Arabic monolinguals with respect to their knowledge in three linguistic areas: tense-aspect priority, null-subject, and preposition selection. To achieve this goal, the researcher recruited a total of 67 subjects. Thirty-three of these participants were Arabic native speakers learning English as second language which served as the experimental group. The control group consisted of thirty-seven Arabic monolinguals. Alfaifi, then, tested the participants' perception utilizing a preference judgment task and an acceptability judgment task. He also assessed the candidates' production via a narrative description task where they watched a short silent movie and were required to retell, in a written form, what they had watched. The main finding of this study was that the L2 (English) effect on the L1 (Arabic)

existed but was limited with the bilinguals who had a less developed L2, suggesting evidence for ICM's claim.

2.4. Research Gap

Despite the amount of interest that the phenomenon of reverse transfer in the framework of multi-competence has recently received, it has not been, at least to the best of knowledge, sufficiently investigated. This can be elicited from a number of recent studies. For example, Brown and Gullberg (2012) reported that, "Although the number of studies in this area has recently increased, we are still far from having complete characterizations of native speaker variation due to the presence of second language knowledge" (p.416). Before Brown and Gullberg, Cook emphasized the neglecting of this gap stating that the effect that second languages have on the learners' mother tongue has hardly been investigated (Cook, 2003). Zareva (2010) goes further to claim that "research, in some linguistic areas, has not yet provided satisfactory evidence of the extent to which there is an associative integration or separation of the two languages in a bilingual's repertoire, which will lend support or count against the notion of multicompetence" (p.5). Hence, more investigation in this area is needed.

Another reason that motivated this study is the fact that some of the previous studies regarding this topic have been criticized as having methodological problems. For example, many of the previous studies measured the participants' performance using the grammaticality judgment task (GJT). This task has been extensively criticized as being an unreliable instrument for measuring second language learners' performance, including the phenomenon of reverse transfer, as Gass (1994) put it, "the use of grammaticality judgments in second-language research has not been without difficulty or without controversy (p. 304). Therefore, the present study will avoid the use of GJT and rely more on the narrative instrument which was found more reliable in measuring such a phenomenon (Pavlenko, 2003; Kecskes and Papp, 200; Brown and Gullberg, 2008).

The present study attempts to investigate reverse transfer under the framework of multi-competence perspective, addressing in depth the following two research questions:

- 1) To what extent do Arabic monolinguals differ from L1 Arabic/L2 English users with respect to syntactic, lexical and semantic domains?
- 2) Does reverse transfer take place? If so, under what lexical, syntactic and semantic environments does it occur?

According to Pavlenko (2003), instances of L2 influence on L1 is found in "one or more of the following five phenomena: *borrowing transfer*, *convergence*, *shift*, *restricting transfer* and *L1 attrition*" (p. Cook, 2003, p. 33). The present study was narrowed to two of these phenomena: *borrowing transfer* and *L1 attrition* due to the limit space of this study.

3. Methodology

3.1. Participants

To investigate the above mentioned research questions, a total of 29 adult participants (18 male, 11 female), aged between 19 and 33 were recruited for the study. Half of these participants consisted of monolingual Arabic speakers as the control group, while the other half was native speakers of Arabic learning English as a second language as the experimental group. The monolingual speakers were non-randomly selected from Saudi Arabia. Most of them were the researcher's friends (a convenience sampling). Since the researcher was in a different country, the monolingual's data were collected using an online application (i.e., WhataApp). As for the bilingual participants, most of them were chosen from the American Language Institute (ALI) at California University Long Beach (CSULB). All participants in the experimental group are seen as "late bilinguals," as they had learned their English between the ages of 18-25, upon arrival in the United States. It was considered in selecting the bilingual students to be advanced, through the background questionnaire that had been

administered prior the experiment. Because it is difficult to find ‘pure’ monolinguals, the following points were considered in selecting the monolingual participants:

- i. They have not extensively learned English or been exposed to it for over two years.
- ii. They have not been in any English-speaking countries for a long period of time (one year).
- iii. None of them have had any exposure to languages other than Arabic in order to minimize the potential effect of the other languages on the participants’ performance.

3.2. *Data Collection and Procedures*

The participants were required to do two tasks: written and spoken. In the written task, they were shown a 6-minute long silent film that is called the ‘Pear Film.’ Subsequently, they were asked to describe what they had seen in the written form with the following instruction in Arabic (*Please, narrate what you just saw in the film in details*). In the spoken task, the participants were required to audio-record themselves while speaking a 2-minute spontaneous monologue using their smart phones. Before that, a short questionnaire was conducted to obtain information about their background, length of exposure, and level of proficiency. The tasks took place in a quiet place and took approximately one hour. All narratives, then, were transcribed, coded and analyzed by me after identifying all instances of variation/deviation from standard Arabic.

4. Results and Data Analysis

The first step of analysis involved identifying all instances of variation from standard Arabic, as I mentioned earlier. After that, I compared these instances with those elicited from monolinguals “in order to see whether particular instances fall within the range of acceptable language variation” (Cook, 2003, p. 39). The purpose of this comparison is to eliminate instances that represented a deviation from standard Arabic. For example, the elements of borrowing that appeared in all narratives were excluded from the data. The word *سيكل sykal* ‘bicycle’ is one example of such borrowing items that was found in all narratives; hence, it was excluded from the data.

In the eliminating process, I consulted two kinds of sources to ensure that the instances of lexical borrowings are unique to the bilinguals and not just loanwords that every Arabic speaker uses. The first type of source is the Online Arabic Corpus (OAC) which is the currently available corpus of Arabic data that contains a wide array of texts from several genres. The second source is *alqamu:s almuhi:t المحيط القاموس* which is an Arabic dictionary that includes every possible loanword in Arabic from other languages. Hence, the instances of lexical borrowings that were found in the data and in these sources were excluded from data analysis.

After elimination, a total of 37 instances of L2 influence on L1 were found in the narratives of L1 Arabic/L2 English bilinguals ($N= 15$ in the written task, $N= 22$ in the spoken task). Below, I will describe these instances according to their area: lexicon, morphosyntax, and semantics.

4.1. *L2 influence on L1 in the lexicon*

According to Pavlenko (2003), the impact of L2 on L1 with respect to lexicon is well documented in the literature on language contact, principally with bilinguals (Haugen, 1953; Andrews, 1999; Li, 2001). Hence, the bilinguals’ data revealed many instances of lexical borrowing, especially in the spoken task. In contrast, very few instances of such borrowing were observed in the monolinguals’ data. Conducting the independent sample t-test to compare the study’s two groups in the number of instances of lexical borrowing shows the following results:

An independent samples t-test was conducted to compare the bilingual group and monolingual group in the number of instances of lexical borrowing. There was a statistically significant difference between the two groups. In particular, the bilinguals group produced more lexical borrowing (M = 1.4, SD = .91) than the monolingual group did (M = .5, SD = .65); a statistically significant mean difference of .90 (95% CI: 1.51 to .29), $t(27) = -3.04$, $p < .05$, $d = .88$.

A total of 23 instances of lexical borrowing were identified in the bilinguals' narratives. Consider the following excerpt from one of the bilingual participants as an example:

(١) لو تلاحظ بعض الجوالات تشوف توك شاحنه وبسرعة يخلص. وبعضهم تحصل البطارية منتقخة. تقريبا كل الجوالات الجديدة بطاريتها تخلص بسرعة، لأنها مليانة أبليكيشنات مثل الكاميرا والبلوتوث.

law tlaħd^ʕ baʕd^ʕ aldʒwa:la:t tɪfu:f tawɪk ʃahnah wɪ bsorʕh yχlɪs^ʕ. wa bʕd^ʕhom tahs^ʕɪl albt^ʕry:ha mɪntafχah. taqri:ban kɪl aldʒwa:la:t aldʒdi:dah bat^ʕry:atha tχlɪs^ʕ bsorʕh; la'anha: maly:anh ablikiʃana:t mɪθl alkami:rah wa alblotu:θ

If you look closely at certain types of mobiles, you'll find that their batteries died fast. Almost all of the new mobiles' batteries died fast because they are full of applications, such as camera and Bluetooth.

Here, the word *ablikiʃana:t* 'أبليكيشنات' 'applications' is considered to be a loanword from English, and hence an effect of English on Arabic, due to the fact that Arabic monolinguals in such a context would use the Arabic equivalent to this word which is *taf^ʕbi:qa:t* or *bara:midʒ*.

Other lexical words that have been observed in the bilinguals' narratives involve *highway*, *hard-disk*, *supervisor*, *emotion*, *downtown*, and *farmer* among others. Arabic monolinguals would say *alt^ʕari:q alʕa:m* الطريق العام, *qurs^ʕ s^ʕalb* قرص صلب, *mudi:r* مدير, *ʕa:t^ʕifah* عاطفة, *aldirah* الديرة, and *falla:h* فلاح, respectively.

The majority of the lexical borrowing instances that were observed in the bilinguals' data, as mentioned earlier, were in the spoken task. Thus, I ran the dependent sample t-test to assess whether there was a significant difference between the two tasks, as shown below:

A dependent samples t-test was employed to compare the written task's results and spoken task's results in the number of instances of lexical borrowing produced by bilingual participants. There was a statistically significant difference between the two tasks. Specifically, the bilinguals uttered more lexical borrowing in the spoken task (M = 1, SD = .55) than they did in the written task (M = .63, SD = .50); a statistically significant mean difference of .36 (95% CI: .07 to .64), $t(13) = 2.69$, $p = .019$.

Besides of the single-word borrowing, I found instances of *loan translation*. Pavlenko (2003) called such use compound words, lexical collections or idioms. Two of these instances were observed in the bilinguals' data. The example in (2) is from the written task, while the example in (3) is from the spoken task:

(٢) بعد ما فضى جيبه، صعد مرة ثانية. وبعد ما صعد بشوي مر رجال ثاني ومعاها صخلة وكانت تطلع أصوات يوم مرو جنبه وكانت تطلع أصوات حتى قبل ما يقربون يمه.

baʕad maf^ʕ dzy:bah, s^ʕad marrah θa:ny:h. wa baʕad ma s^ʕad biʃwi:, mar radʒa:l θa:ni: wa mafah s^ʕaχlah w ka:nt tɪt^ʕlɪf as^ʕwa:t yo:m marrw dʒanbɪh.

After he [the farmer] emptied his pocket, he climbed [the tree] again. After he climbed, another man passed him with a goat which was making noise. It was making noise even before they passed him.

(٣) بس عن جد الموقف اللي صار يبين لك أنه الرجال معه حق لو فقد عقله. واحد يجيك لا يعرفك ولا تعرفه وبضربك وبستهزا بلبسك وش بتكون ردة فعلك؟

bas ʕan dʒid, almawqif alli: sʕa:r y:bay:n laʕ ennah alradʒa:l maʕh haq law faqad ʕalih. wa:hid y:dʒi:k la: y:ʕrfik wa la: taʕarfih wa y:dʕribk wa y:stahzi'a bilbsik, wif bitku:n radat fiʕlik?

But seriously in this situation, you can see that the man had the right to lose his mind. If someone that you don't know came to you, hit you and made fun of your clothes, what would your reaction be?

These two instances are prompted by the fact that Arabic lacks such uses. For example, the participant in (2) seems to translate the English collocation *أصوات تطلع* *tʕlaʕ asʕwa:t* 'make noise', while Arabic speakers normally say *تبايع* *tba:mbiʕ* 'the voice of goat' as found in the narratives of monolinguals and even in the other bilinguals' narratives. In (3), the participant appears to translate the English idiom into Arabic and say *فقد عقله* *faqad ʕaqlah* 'lost his mind', while the appropriate Arabic word is *عصّب* *ʕasʕab* 'get angry'. The Arabic use can be seen in the following excerpt from the written task of a monolingual subject:

(٤) مر راعي الغنم وكان نفسه في الكمثرى وكان معه صخلة تبايع بس كان الراعي يسحبها معه.

marr ra:ʕi: alyanam wa ka:n maʕah sʕxalah tɔbambiʕ, bas alra:ʕi: ka:n y:ʕhabha: maʕh

A shepherd passed the farmer. He likes the pears, and he was pulling a goat who was bleating.

4.2. L2 influence on L1 in the morphosyntax

The L2 influence on L1 of bilingual participants was not restricted to the area of lexicon, but it extended to the area of morphosyntax though it was not as much in the lexicon domain. A total of 13 instances of the L2 effect in the morphosyntax area were identified in the bilinguals' narratives. These instances can be categorized in three domains: prepositional choice, conjunctive usage and word order restriction.

The first area where the bilinguals showed instances of L2 impact is that of prepositional choice. I found three instances of such L2 influence in the bilinguals' data, as can be seen below; the first two examples are from the written task, while the third example is from the oral task:

(٥) وترك الفلاح التفاح على الأرض ورجع صعد الشجرة. بعدين جا جاهل وباق التفاح وشرد فيه وما انتبه للي يصير في هناك تحت.

wa traka alfalla:h altoffa:h ʕla: alardʕ wa riʒa'a sʕaʕad alfadʒarah. baʕdi:n dʒa: dʒa:hil wa ba:q altofa:h wa ʕarad fi:h wa ma: entubah lli: y:sʕi:r fi: hna:k taħat.

The farmer left the apples on the ground and went back to climb the tree. After that, a boy came and stole the apples and got away. He [the farmer] was not aware of what happened in there.

(٦) بدأ الفلاح يعد السلالم واستغرب من نقص سلة. بدأ يطالع يمين يسار على أمل أنه يرى أي دليل، إلا والثلاثة الأطفال يمرون من عنده وكل واحد معه حبة كمثرى، وجلس ينظر فيهم بشي من الاستغراب!

bada'a alfallah y:ʕid alsila:l wa estayrab min naqs^ʕallah. bada'a y:tʕala'a y:mi:n y:sa:r ʕal: amal ennah y:ra: ay: dali:l, ella: wɪ alθla:θih alatʕa:l y:morru:n min ʕindah wa kil wa:hid maʕah habbh kamaθra:, wa dʒalas yandʕir fi:hom biʕy:min alstya:r:b

The farmer started counting the baskets and he was shocked that he was missing a basket. He started looking to his right and left hoping to find it, and suddenly the three boys passed him holding a piece of pear in their hands. He then started looking at them with confusion.

(٧) أحيانا الدوام يتطلب مني أنني أحضر من بدري. بصراحة عملي كمهندس في شركة أرامكو طورني في أشياء كثيرة ومنها أنني ألتزم بالمواعيد وأربط حزام الأمان لما أسوق.

aħy:a:nan aldawa:m y:atatʕllab minni: enni: aħdʕr min badri:. bisʕrahħ ʕamali: kamohandis fi: ʕarikat ara:mko tʕawa:rni: fi: aʕy:a'a kɪθy:r wa minha: enni: altizim bilmwa:ʕi:d wa arbitʕ ħiza:m ala:ma:n lamma: asu:q.

Sometimes, my job requires me to arrive early. Honestly, working as an engineer in Aramco Company has changed lots of things in me, such as being punctual and fastening my seat belt when driving.

Similar to the instances of the lexicon domain, these instances in the area of morphosyntax are prompted by the fact that Arabic lacks such uses. For example, Arabic grammar does not require any preposition before هناك *hina:k* 'there'; however, in (5) the participant inserted the preposition في *fi:* 'in' before the position adverb 'there' which seems to be an influence of English on Arabic, especially since English does use this particular preposition in such context. In (6), the bilingual subject misused the correct preposition after the verb ينظر *yandhor* 'look' and wrote فيهم *fi:hum* 'at/in them' while the appropriate usage in Arabic is إليهم *elay:hum* 'to them'. Finally, in (7) the participant used the preposition ك *ka* 'as' in a context where it is not required by Arabic grammar, but, conversely, it is required in English.

The second area where the influence of the L2 on the L1 was observed is that of conjunctive usage. These instances are extremely rare, and this might be the reason behind the fact that it has not been documented in previous studies, but I did find two examples of it in the bilingual speakers' data. Both of these instances are from the written task:

(٨) كان فيه مزارع يلقط الأنجاص من الشجرة، وكل ما تعبت المريلة اللي لابسها ينزل ويفضيها بالصناديق. كان عدد الصناديق ثلاثة: واحد كان يعيبه، واحد فاضي وواحد مليان.

ka:n fi:h moza:rɪ'a y:laqtɪ ala:ndzas^ʕ min alfadzarah, wa kil ma: taʕbat almari:lah elli: la:bisha y:nzil wa y:fadʕi:ha: bisʕana:d:q. ka:n ʕadad alsʕana:di:q θala:θih: wa:hid ka:n yʕabi:h, wa:hid fa:dʕi:, wa wa:hid mali:a:n.

There was a farmer who is collecting pears from the tree. Every time his pocket got full, he came down and emptied it into the boxes. There were three boxes: one was with him, one was empty, and one was full.

(٩) كان المزارع يقطف نوع من الفاكهة ويحطها في السلال. وكمل يقطف علشان يكمل السلة الثالثة. وهو يقطف مر ولد سرق سلة حطها على مقدمة سيكله ومشى.

ka:n almōza:rɪʕ y:aqtʕif nu:ʕ min alfa:kħah wa y:ħatʕaha: fi: alsila:l. wa kamal y:aqtʕif ʕlafa:n y:kamil alsallɪħ alθalθih. wa hwa y:qtʕif marr walad saraq sallɪħ ħatʕha: ʕala: moqadimat sy:kilah wa miʕa:

There was a farmer who is collecting a type of fruit and putting it in the baskets. He continued collecting [them] in order to fill the third basket. Meanwhile, a boy passed, stole a basket, put it on the front of his bike, and walked away.

Such L2 influence is motivated by the fact that Arabic grammar, with no exceptions, requires a conjunction before every element or phrase when listing unlike English where the conjunction appears only before the last element or phrase in the list. Table 1 demonstrates this difference visually. In (٨) and (٩), the two bilinguals seem to be effected by English grammar and hence, they omitted the coordinating conjunction و 'and' and placed it only before the last element or phrase in the list.

Table 1 presents the difference between Arabic and English in using coordinating conjunctions

English	Arabic
I like to eat oranges, apples and bananas.	I like to eat oranges and apples and bananas.
Do you like white, red, blue or black cars?	Do you like white or red or blue or black cars?

The following two excerpts are from two different monolinguals contrast the bilinguals' excerpts in (٨) and (٩); it shows how the monolinguals differ in using the coordinating conjunction و wa 'and':

(١٠) وهو في الطريق طارت قبعته واتشغل يطالع وين طاحت فانقلب. شافوه شباب وجاوا يساعده وجمعوا الكمثرى وركبوا السلة في السيكل.

wa howa fi: alt^ʕari:q t^ʕart qobaʕiθh wa enʕayal y:tʕlɪʕ wi:n ra:ħt. ʕa:fu:h ʕaba:b wa dʕa:w y:sa:ʕdu:nah wa dʕamaʕu: alkamaθra: wa rakobau: alsallih fi: alsy:kal

While he was on his road, his hat flew away. He was busy looking at it, and hence, he fell down. Three guys saw him and came to help him and gathered the pears and placed the basket on the bike.

(١١) نزل من الشجرة وقل السلة الثانية وصعد مرة ثانية.

nɪzal min aʕadʕarah wa fallal alsallih alθa:ny:ah wa s^ʕaʕad marrh θa:ny:h

[The framer] came down from the tree **and** fell out the second basket **and** climbed [the tree] again.

The last area where the bilinguals are observed as having L2 influence on their L1 in morphosyntax is that of word order restriction. This area can be further divided into two parts, as shown below:

a) The word order of reflexive pronouns

English allows a word order of structure that is not allowed in Arabic and vice versa. For example, the Arabic word order of a noun/modifier is different from English. While in English the modifier precedes the noun, in Arabic the noun comes before the modifier (Al-Najjar, 1984; Obeidat, 1995), as can be seen in the following examples:

haðrhi fata:t-un fatenaht-un

this girl-Nom gorgeous-Nom 'This is a gorgeous girl'

That being said, one might expect to find challenges with the bilingual participants in producing such constriction. That is, they might mistakenly produce the modifier before the noun, as influenced by L2 grammar. However, such influence was not observed in the data. What was actually observed is the word order of reflexive pronouns. Table 2 shows the difference between Arabic and English with respect to the order of reflexive pronouns.

Table 2 the difference between Arabic and English in the order of reflexive pronouns

English	Arabic
I taught each one a lesson.	علمتُ كل واحد درساً I taught each one a lesson.
Each one took a dollar	كل واحد أخذ دولار Each one took a dollar.
I gave a dollar for each one.	

Not possible in Arabic

As it can be seen from table 2, the third option is allowed in English but not in Arabic. Hence, I suggest that the following two instances from two different bilinguals are a result of L2 influences in their L1 morphosyntax:

(١٢) مشوا الأطفال فلقوا قبعة الولد مرميه على الأرض. أخذها واحد منهم وصفر للولد وراح يرجعها له. الولد أعطى ثلاثة كمثرات لكل طفل.

mīšaw alataʕfa:l faʕiqaw: qubaʕat alwalad marmi:h ʕala: alardʕ. aʕaðha: wa:ħid minhom wa sʕafar lilwalad wa ra:h y:radzifha lah. alwalad aʕtʕa: θla:θh kamaθrat likil tʕifil

The three boys walked and they found the boy's hat on the ground. One of them picked it up and whistled to the boy and gave it to him. The boy gave them three pears, one for each boy.

(١٣) قبعة الصغير طارت فقد التوازن وطاح والكمثرى تنتثر في الأرض. ثلاثة من المارة ساعدوه وعطوه القبعة اللي مشى ونساها. عطاهم كمثرى لكل واحد.

qubaʕat alsʕayi:r tʕa:rt faqad altawazin wa tʕa:h wa alkamaθrah tinaθarat fi: alardʕ. θala:θh min alma:rrah sa:ʕidu:h wa ʕatʕu:h alqabaʕh elli: mīʕa: we nisa:ha:. ʕatʕahom kamaθrah likil wa:ħid

The boy's hat flew [away] and [he] lost his balance and the pears scattered on the ground. Three people helped him and gave him the hat that he forgot. He handed a pear to each one [of them].

In fact, these two excerpts have two instances of L2 influence. The first one is the order of *each one*, and the second one is the use of the preposition ʕ 'for' after the di-transitive verb أعطى 'give' since Arabic grammar does not require this verb to be followed by any preposition (Abdalhami, 1979). Consider this excerpt example from the monolingual data which shows the difference in using reflexive pronouns between monolinguals and Arabic L2 users of English:

(١٤) بعد ما طاح الولد اللي في السيكل جاوا الأطفال الثلاثة وساعدوه، وهو سوه روحه كريم وعطه كل واحد منهم كمثرى وحدة.

baʕad ma: tʕa:h alwalad, dzaw: alataʕfa:l alθalaθh wa sa:ʕidu:h wa howa sawah ru:ha kari:m wa ʕatʕa: kil wa:ħid minhom kamaθrah waħdih:

After he fell down, the three boys helped him; He rewarded and gave each one a piece of pear,

b) The word order of frequency verb

Even though English is more flexible with the word order of adverbs than it does with other syntactic properties, it does not allow some other possibilities that are allowed in Arabic

grammar for adverbs. Consider the following examples of the adverb of frequency *usually* in English:

- i. I **usually** sleep at midnight.
- ii. **Usually**, I sleep at midnight.
- iii. I sleep at midnight **usually**.

The previous three examples are the only acceptable word order for *usually*, according to Azar and Hagen (2009). However, in Arabic there is one more possible (marked) order including these three possibilities (unmarked), as shown below:

ana: anam-u ʕa:da:ta-n fi: muntasf-i ally:l-i

I sleep-Nom usually-Acc in mid-Gen nig-t-Gen

‘I sleep **usually** at midnight’.

The word order in English is more rigid in regards to the negative frequency adverb (e.g., never, rarely, and seldom). The usual position for these adverbs in English is in the middle of a sentence (Azar and Hagen, 2009), whereas in Arabic they can be placed anywhere in a sentence.

In the present study, the bilinguals’ data demonstrates high restriction in the word order of frequency adverbs when they occur. That is, the bilinguals show preference in placing the frequency adverb in the unmarked order which is the only allowed possibility in English, suggesting an L2 influence in their L1 morphosyntax. Comparing the monolinguals’ data with that of the bilinguals led to this conclusion. Unlike bilinguals, the monolinguals showed more free variation of the word order for frequency adverbs, as can be seen in (15) and (16) which are excerpts of two different monolinguals’ spoken task:

(15) في أيام الأسبوع أنا متفرغ للدراسة، أما في الجمعة والسبت فأنا مخصصهم للترفيه. بالذات في الليل أنا أطلع غالباً وأعسل مع الشباب أو ألعب بليستشن.

fi: ay:a:m alesbu:ʕ ana: mitfary lɪdrash, amma: fi: aldʒamaʕah wa alsabt fana: myas'is hom lɪtarfi:h. biða:t fi: elli:l ana: at'laʕ ya:lɪban wa aʕasɪl maʕa aʕaba:b aw: bla:steitʃɪn

On the weekdays, I am dedicated to school, but on Friday and Saturday I set aside time for fun, especially at night I hang out **often** and smoke hookah with my friends or I play PlayStation.

(16) تدري أن محمد رسب في اختبار السوافة؟ هذا ثالث مرة يختبر ويرسب دائماً بسبب إنه ما يعرف يريوس.

tadri: ennah maḥammad rɪsab fi: eʕtɪba:r alswa:qah? haða: θa:lɪθ marrah y:ʕtɪbr wa y:arsɪb da'aeman bɪsbab ennh ma: y:aʕrɪf y:ri:wɪs.

Do you know that Muhammad failed in the driving test? This is the third time that he failed. He failed **always** because he does not know how to reverse.

Interestingly, placing the frequency adverb after the verb was only found in the monolinguals’ data, but not in the bilinguals’ data. Rather, the bilinguals always placed it either before the verb (%90) or in the initial position of the sentence (%10), as can be seen in (17) which is an excerpt of a bilingual’s written task and in (18) which is from a bilingual’s spoken task:

(17) والولد اللي لابس أزرق طلع لعبته مرة ثانية من جيبه وبدأ يلعب وكان غالباً يمشي في الأخير وطبعاً كانوا يأكلون في الكمنثري اللي أخذوها من الصبي.

wa alwalad elli: la:bis azraq t^ʕallaʕ lɪʕbitɪh marrh θany:ah mɪn dʒi:bah wa bada'a y:lʕab wa ka:ŋ ʔa:liban y:amʒi: fi: ala:ʒi:r wa t^ʕabʕan kanaw: y:aklu:n fi: alkamaθrah elli: aʒaθw:ha: mɪn als^ʕabi:

And the boy who was wearing blue took out his toy again and started playing with it, and **he often** walked behind his friends who were actually eating pears that they took from the boy.

(١٨) أحيانا الدوام يتطلب مني أني أحضر من بدري. بصراحة عملي كمهندس في شركة أرامكو
طورني في أشياء كثيرة ومنها أني ألتزم بالمواعيد وأربط حزام الأمان لما أسوق.

aħy:a:nan aldawa:m y:atat^ʕllab mɪnni: enni: aħd^ʕr mɪn badri:. bis^ʕraħħ ʕamali: kamohandis fi: ʕarikat ara:mko t^ʕawa:rni: fi: aʕy:a'a kɪθy:r wa mɪnha: enni: altɪzɪm bɪlmwa:ʕi:d wa arbit^ʕ ħɪza:m ala:ma:n lamma: asu:q.

Sometimes, my job requires me to arrive early. Honestly, working as an engineer in Aramco Company has changed lots of things in me, such as being punctual and fastening my seat belt when driving.

Hence, this might suggest L2 influence in the bilingual morphosyntax since this restriction is only required by their L2.

4.3. L2 influence on L1 in the semantics

The final area where L2 influence on the bilinguals' L1 was evident is that of semantics. Pavlenko (2003) documented several instances of L2 influence in the area. Nonetheless, only one instance of such influence was observed in this study. This instance is found in the following excerpt of a bilingual's spoken task:

(١٩) لو سمحت يا بشار صب لي غلاس شاي معك.

law samaħt baʕa:r s^ʕob li: ʔla:s^ʕ ʕa:i: maʕak

Bashar, please pour a *glass of tea for me.

The word *glass* in English refers to the known material. American people say *a glass table*, *a glass of water* (i.e.; these objects are made of glass). However, the bilingual participant seems to adapt this word and extend its meaning to refer to cups made out of any material (i.e., plastic, steel or iron).

Overall, the bilinguals' narratives provide convincing evidence that English affects both the Arabic lexicon and morphosyntax of these Arabic L2 users of English, suggesting some evidence of reverse transfer.

5. Discussion

The present study attempts to investigate the reverse transfer, addressing the two research questions in depth. As for the first question concerning the extent of difference, if exists, between Arabic monolinguals and Arabic L2 users of English as a result of L2 influence. The data, as discussed earlier, provides evidence that L2 (English) influence on L1 (Arabic) takes place in the lexicon, morphosyntax and semantics domains.

The instances of L2 influence on the L1 of Arabic L2 users of English were mostly observed in the lexicon domain. This seems to be in consistent with what was found in previous studies (Andrews, 1993; Pavlenko, 2003; Laufer, 2003; Pavlenko and Jarvis, 2002; Brown and Gullberg, 2010; Zareva, 2010). Pavlenko (2003), for example, found that the majority of 56 instances of L2 influence on L1 in narratives of Russian L2 users were in the lexicon area.

The findings also reflect that the morphosyntax domain is also vulnerable to L2 impact but not as extensively as the lexical domain. This supports the results of Pavlenko (2003) who

found fewer instances of L2 influence on the L1 morphosyntax in the narratives of Russian L2 users. Hence, she points out that “it is not surprising that the participants’ morphosyntax is less affected than their lexicon” (p. 45). She attributes such result to the fact that most of her subjects have been in the target language context for less than ten years. This assumption might be also valid in this study’s participants due the fact that none of them had spent more than ten years in an English-speaking environment, as elicited from the background questionnaire.

Furthermore, the study’s findings reveal one example of L2 influence on L1 semantic domain. I anticipated finding more of such L2 influence, especially since previous studies have documented a wide range of it (Pavlenko and Jarvis, 2002; Jarvis, 2003; Pavlenko, 2003, Alfaifi 2015). However, the only instance of L2 influence in this domain was the semantic extension of the borrowed word *glass* (i.e., Look at (19)). My assumption is that this rareness might be due to the fact that previous studies concentrated on the semantic area as one main area of the research, and hence, they found lots of semantics instances of L2 influences. For example, both Pavlenko (2003) and Alfaifi (2015) focused their studies on the L2 influence with respect to tense and aspect which cannot be separated from the semantics domain. In my study, however, there was no concentration on a particular domain or another due to time and page limit which was beyond this paper.

In general, having bilingual participants who are at the advanced level of learning English and conducting two different tasks (written and spoken), I anticipated to observe much more than what was observed in this study, comparably with others studies who relied only on one procedure to collect data (Pavlenko 2003; Athanasopoulos, 2006, Brown and Gullberg, 2008). Nonetheless, the data provided fewer instances of L2 influence than these studies did. Again, this might be due to the fact that none of the current study’s participants spent more than ten years in the English environment, and it is plausible to find more instances if the participants have more extensive exposure to L2, as pointed out by Pavlenko (2003).

As for the second question of this study regarding the environments in which lexical, syntactic and semantic reverse transfer take place, the findings indicate that the L2 influence was exhibited in the extensive use of the L2/English lexicon in the context of L1/Arabic (i.e., borrowing). This is also exhibited in loan translation, as we saw in (2) and (3). With respect to morphosyntax, the L2 influence was exhibited in violations in prepositional choice where the bilinguals use a preposition in a context that does not require one, or use an inappropriate preposition in a sentence. In fact, the preposition domain provides very fertile ground for examining the transfer phenomenon since the majority of L1Arabic-L2English learners encounter difficulties when acquiring English prepositions, as O’Dowd (1998) reported, “non-native speakers of English find prepositions and particles among the most difficult, but also the most intriguing forms that they have to master in learning the English language” (p. 6). There are two reasons which can explain this difficulty: i) the senses of English preposition exceed those of Arabic (Mukattash, 1985), and ii) the number of English prepositions is remarkably more than that of Arabic prepositions. There are about 124 prepositions, whereas there are only 32 of them in Arabic, according to Abdulmoneim (2011).

Furthermore, the L2 influence on the bilinguals’ L1 morphosyntax was exhibited in violations in conjunctive usage where the bilinguals are found to omit the coordinating conjunction that is required by Arabic grammar, as we saw in (8) and (9). The paucity of omitting along with the fact that both instances of conjunction were observed in the written task might be a challenge suggesting that the coordinating conjunction was just omitted mistakenly (i.e., it is a typographical error not a grammatical error). However, the fact that such an error was produced twice by two different bilinguals seems to increase the potentiality that it is grammatical (and hence L2 influence). Thus, I include such an error in my data as a potential effect of English on the bilinguals’ Arabic morphosyntax.

Because bilinguals of Arabic/English have knowledge of both languages’ prepositional and conjunctive system, it is expected that they might perform differently from their monolingual peers with respect to these two domains. That is to say, it is plausible to find evidence of bidirectional transfer among the bilinguals since they have a wide range of input

and selections from both Arabic and English comparing to their monolingual counterparts (Cook, 2009; Zareva, 2010; Brown and Gullberg, 2012).

Finally, the L2 influence on the bilinguals' L1 morphosyntax was identified in violations in word order where the bilinguals show high preference of English word order over Arabic word order with respect to both frequency adverbs and reflexive pronouns. This finding appears to be in contrast with the results of Cook et al. (2003) where the study revealed no statistically significant difference between the monolinguals and bilinguals of Japanese, Greek and Spanish languages in the word order cue. Nonetheless, the finding of the present study supports the Albirini et al. (2011)'s study which found that Arabic speakers prefer using English word order (SVO) rather than the basic Arabic word order (VSO), suggesting L2 influence on their L1's syntactic domain.

In general, the word order area of the bilinguals' morphosyntax in the present study seems to be less effected by English despite the discrepancy between Arabic and English in this domain.

One final related point that must be mentioned is the fact that most the instances of reverse transfer in the study were observed in the spoken task. To me, this is not a surprising result, simply because the participants in the written are perhaps manipulated by the short film constraint. In other words, their narratives are controlled by the fact that they should narrate what they had watched. However, in the spoken task, where participants were required to just speak spontaneously about any topic, the subjects are free from that constraint. Hence, they are more creative and natural.

Implications

Now it remains to discuss some implications of this study. If one recalls Cook's (2003) integration continuum in multi-competence which viewed the two language as being in constant relationship along the way rather than in total integration or total separation, one will find supporting evidence for integration continuum in the sense that the reverse transfer was observed in some aspects of the bilingual's morphosyntax but not others. For instance, English influence on Arabic was identified in the word order of frequency adverb, but not in others aspects, such as the word order of noun/modifier or verb/subject. Hence, this might suggest that the bilingual morphosyntax of both Arabic and English was not completely integrated nor entirely separated in their minds.

The findings of this study also reaffirm the integration continuum in the claim that reverse transfer may apply to some linguistic domains but not others. In the present study, a wide range of instances of L2 influence on L1 lexicon were observed. However, there were fewer instances in the morphosyntax domain, and there was only one example in the semantic domain. Hence, such results may be counted as evidence indicating that the L1 of bilingual participants was not entirely influenced by the L2. This, of course, does not necessarily mean that those areas would not be impacted at all; rather, they might be influenced gradually as the bilinguals become more advance in the second language.

Moreover, the fact that the bilinguals behave differently with some aspects of their L1 as elicited from the comparison between them and their monolingual counterparts provides interesting support for the multi-competence hypothesis. We have seen, for example, how the bilinguals show restrictions in their preference with the word order of adverbs of frequency (i.e., they prefer the English word order over the Arabic one). This can only be explained through the multi-competence hypothesis which claims that bilinguals' knowledge is restricted as a result of acquiring an L2, leading to the stage of integration where the two languages' elements are combined (Cook, 2003). This, in fact, is in consistent with Cook et al. (2006)'s study which revealed that bilingual Japanese exhibited restriction in their preference comparing to their monolingual parallels.

6. Conclusion

The main purpose of this study was to investigate the phenomenon of reverse transfer (L2/English influence on L1/Arabic) between Arabic monolinguals and L1 Arabic users of English. The findings demonstrate some instances of reverse transfer in the narratives of bilinguals, even though these instances were not frequent. Most of these instances were observed in the lexical domain. Others were found in the morphosyntax domain and one in the semantic domain. Conducting the appropriate statistical tests revealed that the majority of these instances were in the spoken task. As for the Cook (2003)'s multi-competence nation, the study's results support the Cook's model of integration continuum rather than total separation or total integration.

Notwithstanding these results, it is essential to acknowledge some limitations of this study. Firstly, the study is only comprised of 29 participants; half of them were bilinguals. In order to have more compelling results, it is recommended to have a large sample size of subjects. Having a large sample size would provide more generalizable claims about the greater population and result in the study being more credible and reliable. Secondly, despite the fact that the narrative/written task seems to be reliable, especially since it was used in many previous studies (Pavlenko and Jarvis, 2002; Pavlenko, 2003; Alfaifi, 2015), it appears to me sometimes after conducting this study that it is not sufficient in demonstrating what the participants really have, so one can build a generalizable claim about their performance. Thus, future studies might get a better picture if they consider others experimental instruments. Corpus data might be at the forefront of these valuable instruments due to the fact it usually conveys more natural utterances and often built upon huge amount of data.

Lastly, it would be interesting if future works consider the proficiency and frequency role in their studies including. That is, there is a need to find if these two variables contribute a unique role in the reverse transfer phenomenon, especially since the few previous studies (Cook, 2006; Athanasopoulos, 2006; Brown and Gullberg, 2008; 2010) that considered the proficiency role found conflicting results, as mentioned earlier in the literature review section. Finally, it is worth mentioning that this study contains Arabic monolinguals. It has been believed that Arabic monolinguals are not typical monolinguals since they have access to the Modern Standard Arabic and also to the multiple dialects, such the Syrian, Egyptian and Moroccan ones. Hence, further studies should consider this point and might include monolinguals with a different L1 background.

I expect that follow-up studies would yield compelling results if they take into consideration these points.

7. References

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8. Appendixes

A sample of the background questionnaire that the participants were required to fill before the experiment. Adapted from <http://www.bilingualism.northwestern.edu/leapq/>

استبيان الخبرة والكفاءة اللغوية

اسم العائلة	الاسم الأول	تاريخ اليوم			
السن	تاريخ الميلاد	ذكر <input type="checkbox"/>	أنثى <input type="checkbox"/>		

(١) رجاء سرد كل اللغات التي تعلمها بترتيب تمكّنك في كل واحدة منها:

٥	٤	٣	٢	١
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(٢) رجاء سرد كل اللغات التي تعلمها بترتيب اكتسابك لها (لغتك الأم أولاً):

٥	٤	٣	٢	١
---	---	---	---	---

(٣) رجاء سرد النسبة المئوية للوقت الذي تتعرض فيه حالياً لكل لغة في المتوسط.

					أدرج اللغة هنا:
					ادرج النسبة المئوية هنا:

(٤) عند اختيار قراءة أحد النصوص المتاحة في كل لغاتك، كم بالمائة من الحالات تختار فيها القراءة في كل واحدة من لغاتك؟ لنفترض أن النص الأصلي كان مكتوباً بلغة أخرى غير معروفة لك.

					أدرج اللغة هنا:
					ادرج النسبة المئوية هنا:

(٥) عند اختيار أحد اللغات للحديث مع شخص في نفس مستوى الفصاحة في كل لغاتك، ما هي النسبة المئوية للوقت الذي تختاره للحديث بكل لغة من اللغات؟ رجاء وصف النسبة من إجمالي الوقت الكلي.

					أدرج اللغة هنا:
					ادرج النسبة المئوية هنا:

(٦) رجاء تسمية الثقافات التي تميزك. في مقياس من صفر إلى عشرة، رجاء تقدير درجة تميزك في كل ثقافة.

					أدرج الثقافات هنا
(انقر هنا للمقياس)					

(٧) كم عدد سنوات التعليم الرسمي الذين تلقيتهم؟

رجاء اختيار على مستوي تعليمي حصلت عليه (أو المعادل الأمريكي التقريبي للدرجة التي حصلت عليها في دولة أخرى):

أقل من مدرسة ثانوية	جزء من تعليم جامعي	درجة الماجستير
مدرسة ثانوية	تعليم جامعي	دكتوراه في الفلسفة/الطب/القانون
تدريب مهني	جزء من دراسات عليا	أخرى:

(٨) اكتب تاريخ هجرتك إلى الولايات المتحدة الأمريكية، إذا كان ينطبق

إذا هاجرت أبدأً إلى دولة أخرى، رجاء ذكر اسم الدولة وتاريخ الهجرة إليها هنا.

(٩) هل تعرضت أبدأً لمشاكل في الرؤية ، أو ضعف في السمع ، أو إعاقة في اللغة ، أو إعاقة في التعلم ؟ إذا جاوبت بـ "نعم"، رجاء أشرح (بما في ذلك أي تصحيحات)

اللغة:

هذه هي لغتي (رجاء الاختيار من القائمة المنسدلة).

كل الأسئلة التالية تشير إلى معرفتك بما يلي:

(١) السن الذي....:

بدأت فيه اكتساب:	أصبحت فصيحاً في	بدأت القراءة في	أصبحت فصيحاً في القراءة في
:	:	:	:

(٢) رجاء سرد عدد السنوات والشهور التي أمضيتها في كل بيئة لغة:

الشهور	السنوات	
		البلد التي يتحدث فيها باللغة
		العائلة التي يتحدث فيها باللغة
		المدرسة و/أو بيئة العمل التي يتحدث فيها باللغة

(٣) على مقياس من صفر إلى عشرة ، رجاء اختيار مستوى كفاءتك في الحديث باللغة وفهمها وقرائنها من القوائم المنسدلة التالية:

الحديث	(انقر هنا للمقياس)	فهم اللغة المتحدث بها	(انقر هنا للمقياس)	القراءة	(انقر هنا للمقياس)
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(٤) على مقياس من صفر إلى عشرة ، رجاء اختيار مدى إسهام العوامل التالية في تعلمك :

التفاعل مع الأصدقاء	(انقر هنا للمقياس المنسدل)	شرائط اللغة/التعلم الذاتي	(انقر هنا للمقياس المنسدل)
التفاعل مع الأسرة	(انقر هنا للمقياس المنسدل)	مشاهدة التلفاز	(انقر هنا للمقياس المنسدل)
القراءة	(انقر هنا للمقياس المنسدل)	الاستماع إلى المذياع	(انقر هنا للمقياس المنسدل)

(٥) رجاء تقدير مدى تعرضك حاليًا لـ في السياقات التالية:

التفاعل مع الأصدقاء	(انقر هنا للمقياس المنسدل)	الاستماع إلى المذياع/ الموسيقى	(انقر هنا للمقياس المنسدل)
التفاعل مع الأسرة	(انقر هنا للمقياس المنسدل)	القراءة	(انقر هنا للمقياس المنسدل)
مشاهدة التلفاز	(انقر هنا للمقياس المنسدل)	معمل اللغة/التعليم الذاتي	(انقر هنا للمقياس المنسدل)

(٦) في تصورك، كم عدد اللهجات الأجنبية لديك في ؟

(٧) رجاء تقدير مدى تكرار المرات التي يميزك الآخرون على أنك متحدث غير أصلي بناءً على لهجتك في :

اللغة:

هذه هي لغتي (رجاء الاختيار من القائمة المنسدلة) .

كل الأسئلة التالية تشير إلى معرفتك بما يلي:

(١) السن الذي....:

بدأت فيه اكتساب:	أصبحت فصيحًا في	بدأت القراءة في	أصبحت فصيحًا في القراءة في
	:	:	:

(٢) رجاء سرد عدد السنوات والشهور التي أمضيتها في كل بيئة لغة:

الشهور	السنوات	
		البلد التي يتحدث فيها باللغة

		العائلة التي يتحدث فيها باللغة
		المدرسة و/أو بيئة العمل التي يتحدث فيها باللغة

(٣) على مقياس من صفر إلى عشرة ، رجا اختيار مستوى كفاءتك في الحديث باللغة وفهمها وقرائتها من القوائم المنسدلة التالية:

الحديث	(انقر هنا للمقياس)	فهم اللغة المتحدث بها	(انقر هنا للمقياس)	القراءة	(انقر هنا للمقياس)
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(٤) على مقياس من صفر إلى عشرة ، رجا اختيار مدى إسهام العوامل التالية في تعلمك :

التفاعل مع الأصدقاء	(انقر هنا للمقياس المنسدل)	شروط اللغة/التعلم الذاتي	(انقر هنا للمقياس المنسدل)
التفاعل مع الأسرة	(انقر هنا للمقياس المنسدل)	مشاهدة التلفاز	(انقر هنا للمقياس المنسدل)
القراءة	(انقر هنا للمقياس المنسدل)	الاستماع إلى المذيع	(انقر هنا للمقياس المنسدل)

(٥) رجا تقدير مدى تعرضك حاليًا لـ في السياقات التالية:

التفاعل مع الأصدقاء	(انقر هنا للمقياس المنسدل)	الاستماع إلى المذيع/الموسيقى	(انقر هنا للمقياس المنسدل)
التفاعل مع الأسرة	(انقر هنا للمقياس المنسدل)	القراءة	(انقر هنا للمقياس المنسدل)
مشاهدة التلفاز	(انقر هنا للمقياس المنسدل)	معمل اللغة/التعليم الذاتي	(انقر هنا للمقياس المنسدل)

(٦) في تصورك، كم عدد اللهجات الأجنبية لديك في ؟

(٧) رجا تقدير مدى تكرار المرات التي يميزك الآخرون على أنك متحدث غير أصلي بناءً على لهجتك في :