Pausing Patterns Preceding and Following Adverbial Clause Conjunctions in English: A Prosodic Analysis of Native and Non-Native Speakers of English

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Abstract

This quasi-experimental research explores the difference between the pausing patterns of native English and nonnative Turkish speakers of English concerning their pause durations preceding and following English adverbial clause conjunctions. The findings reveal statistically significant differences between native and nonnative participants for two conjunctions, namely *because* and *whereas*. The study analyzes in detail the potential reasons for the difference and attributes the difference to three types of transfer: (i) transfer from teacher and teaching practices, (ii) transfer of cognitive planning habits in spontaneous speech to read speech, and (iii) transfer from other learners. Moreover, through experimental intervention, the current research tries to raise awareness in nonnative participants regarding their idiosyncratic pausing patterns. Based on the findings from the posttest measurements, we conclude that it is possible to fine-tune the pausing behavior of nonnative speakers of English. The study contributes to the literature on the teaching of temporal characteristics of speech.

Keywords: Pausing, prosody, temporal variables, foreign language teaching

Introduction

Background to the study

Spoken communication can simply be defined as a combination of sounds and silences. As Zvonik (2004, p. 2) states, "the silences are not disjoint from speech, but are intrinsically embedded into the communication act". Speech pauses, thus, may convey important information, although sound is not present. Nevertheless, a formalized and structured understanding of pause behavior has not been a much commonly focused area of language research so far.

Despite the fact that pauses are important in the formation of discourses, there is, however, limited scientific research focusing on this issue from a pedagogical perspective. Knowing where and how long to pause inside utterances is rather significant. It is one of the most important aspects of what linguists call 'speech production', which has been a critical area of interest in SLA research because it is one major indicator of L2 learners' progress regarding prosody.

Pauses are defined by Richards et al. (1992, p. 267) as "a commonly occurring feature of natural speech in which gaps or hesitations appear during the production of utterances". The primary function of pauses is to control the flow of the speech. The use of pauses in speech enables speakers to form lexical chunks which are both grammatically and semantically compact. This helps both speakers and listeners by creating comprehensibility and keeping "high-level attention" (Bada, 2006, p. 125).

Pauses play a crucial role in the cognitive planning of speech since they provide speakers with ample opportunity to organize what they are going to say next. The hypothesis proposed by Goldman-Eisler (1968) is that a pause is an external reflection of the cognitive processes going on in the speaker's mind during the production of speech. The researcher reached this conclusion based on several studies illustrating that speakers uttering fluent speech are more efficient in placing pauses in conformity with the grammatical requirements. On the other hand, those who speak non-fluently, or hesitantly, pause more often at non-grammatical places.

There are various communicative functions attributed to pauses, such as generating the listener's expectations about the rest of the speech, assisting the listener in comprehension, signaling anxiety, emphasis, syntactic complexity, degree of spontaneity, gender, and educational and socio-economic information (Esposito et al., 2004). The great variety of communicative functions played by pauses make them worth studying.

Because of the afore-mentioned communicative functions, pausing has been subject to several empirical studies seeking answers to questions concerning the boundaries where pauses occur (Martin, 1970; Klatt, 1976; de Pijper & Sanderman, 1994; Byrd, 2000, Zellner, 1994), functions of pauses (Grosjean, 1980; Cenoz, 1998), types of pauses (Goldman-Eisler, 1968; Drommel, 1980; Zellner, 1994), differences between spontaneous and read speech in terms of pause use (Howell & Kadi-Hanifi, 1991; Blaauw, 1994; Cucchiarini et al., 2002), differences between native and non-native speakers in terms of pause use (Anderson-Hsieh, Johnson & Koehler, 1992; Riazantseva, 2001; Tavakoli, 2011) etc.

Studies related to pausing are small in number both in Turkey and abroad. The first study dealing with pausing strategies in Turkey was conducted by Bada (2006), in which he compared Turkish L2 learners of English with native speakers of English in terms of their usage of pauses before and after 'that' particle in that clauses. The author found that while pauses preceding 'that' were much longer than following 'that' in the production of native speakers, the pauses of Turkish speakers of English were just the opposite. This study forms a basis for the current study in that they share the same methodology as will be explained in the methodology section of this paper.

Statement of the Problem

Pausing strategies are still a fertile area of research. Researchers focusing on pausing mostly tried to unearth the communicative functions of pausing (Esposito et al., 2004). Recently, there have been studies dealing with the boundaries where pauses are likely to occur and the duration of the pauses (Megyesi & Gustafson-Ĉapková, 2000). Studies comparing pausing patterns in spontaneous and read aloud speech (Megyesi & Gustafson-Ĉapková, 2000; Bada & Genç, 2008) are also

common in the field. Finally, some recent studies have realized the need to compare native and non-native pausing patterns (Riazantseva, 2001; Bada, 2006).

Nevertheless, almost all the studies conducted up to now have dealt with the detection of the properties of pausing. To our knowledge, none, whatsoever, has been concerned with how the discrepancy between native and non-native patterns of pausing can be compensated for. This is a huge gap in the pausing and prosody literature. Since the current study is in the field of English Language Teaching, it is of vital importance that it has implications for the teaching of English. This is the reason why the study has a twofold nature. It first attempts to describe the difference between native and non-native speakers of English as regards pausing patterns. Secondly, it endeavors to discover whether it is possible to teach native speaker pausing norms to EFL learners. Therefore, the study is both descriptive and quasi-experimental.

In line with the research problem stated above, it can be said that the primary aim of the current study is to describe the durations of pausing preceding (PP) and following (PF) adverbial clause conjunctions as they occur in native and non-native read speech. Since it is almost practically impossible to devise a study analyzing all word-boundary pauses in sentences (Bada, 2006), we limited our research to adverbial clause conjunctions only. Besides, we also attempted to qualitatively and quantitatively describe the reasons for occurring differences between native and non-native pause patterns.

The secondary aim of the study is to test whether or not it is possible to teach L2 learners of English where and how long to pause before and after adverbial clause conjunctions. This was achieved by providing the non-native group with some special training designed in the course of the study and by benefitting from a group of native speakers as the norm group.

Research Questions

This study is designed to answer the following research questions:

1. Is there any significant difference between the data obtained from native and non-native speakers regarding pausing preceding and following adverbial clause conjunctions? If so,
2. What is/are the possible cause(s) of this difference? And,
3. Is there any significant difference between the data obtained from the participants in the experimental and control groups regarding pausing preceding and following adverbial clause conjunctions in the aftermath of the experimental treatment?

Methodology

Research Design

As was mentioned previously, there is currently (to our knowledge) no study in the literature regarding the mitigation of any potential pause differences between native and non-native speakers of English. The current research can, thus, be considered pioneering in this sense. This investigation is basically a quasi-experimental study. However, since it includes a qualitative component, it can also be considered a mixed-methods research. The design for the experimental phase of the study is summarized in Table 1.

Table 1. Research Design of the Study

Language BG	Group	Pretest	Treatment	Posttest
Native	Norm	Yes	No	No
Non-native	Experimental	Yes	Yes	Yes
	Control	Yes	No	Yes

As can be seen in Table 1, the participants were divided into three groups. The first group is the native speaker group, which provided us with data considered to yield the native speaker pausing norms. Thus, it was called the Norm Group (which will be referred to as the NG from this point on). The NG was given the pretest together with the Experimental Group (EG) and the Control Group (CG). This first test enabled us to have a norm to which the experimental and the control groups were compared. The NG was not given any treatment, since they were assumed to have a norm-standard pausing pattern. They did not take the posttest, either.

The non-native participants were divided into the Experimental and Control groups with the purpose of understanding whether EFL learners' pausing patterns could be aligned more with those of native speakers. Table 1 illustrates that both the EG and the CG took the pretest and the posttest as was required by experimental research conventions. Nevertheless, the CG was not subjected to the treatment to check for the efficiency and effectiveness of the training program. Thus, it can be said that the research design of the current study is basically the Pretest-Posttest Equivalent-Groups Design.

Participants and Sampling

Forty senior students at the English Language and Literature Department of a state university in Turkey were chosen as the research participants. They all gave their oral consent to participate in the research and their participation was compensated with extra credit for a course they were taking from the first author. The students had all participated and successfully completed an English Language Teacher Training Program in their junior year. There were 31 female and nine male participants, whose ages ranged from 19 to 27. The average age was 21.6. The non-native participants will be referred to as the Non-Native Group (NNG) in the discussion of the findings.

To determine their proficiency levels in English, they were given the Michigan University English Placement Test. The test results suggested that three of the participants were intermediate; 32 upper-intermediate; and five advanced in English. The alpha (α) reliability coefficient for the test was .91. Therefore, it can be safely assumed that the test was a reliable measure of language proficiency levels of the participants.

To determine the native speaker pausing norms, 15 native speakers of English (seven American, six British, one Irish, and one Australian) were asked to participate on a voluntary basis as a convenience sample. All the native participants were college graduates and four of them had graduate degrees in language-related fields.

To determine the pausing norms in Turkish adverbial clauses, the Turkish sentences prepared by the researchers were given to 15 native speakers of Turkish who were different from the 40 participants who took place in the experimental phase of the current study. The 15 Turkish native speakers were randomly chosen from among 70 Turkish-native lecturers in the School of Foreign Languages.

Following the application of the first recordings (Pretest) and the analysis of the results of the pretest, the participants in the NNG were assigned into the EG and CG by looking at their average pause durations before and after the conjunctions. We attempted to include the same number of participants in each group with regard to their pausing durations. This was done in order to control the difference between the EG and CG before we started to experimentally train the EG on their pausing patterns.

Instrumentation

To gather the needed data for the analysis of pauses in native and non-native read speech, the participants were provided with sentences including target adverbial clause conjunctions. There were eight sentences for five conjunctions, totaling 40 sentences. The sentences were taken from the British National Corpus (BNC). These sentences were used as the pretest and the posttest of the experimental part of the research.

To answer the second research question, pausing before and after adverbial clause conjunctions in Turkish had to be tested. To test this, 16 sentences (eight for either of the two conjunctions) were created by the researchers.

For the protocol study conducted to find out the participants' opinions on the sources of their pausing discrepancies, an unstructured interview procedure was applied. The interviews were unstructured because the researchers wanted to allow a freer exchange of ideas on the issue.

Data Collection

The test sentences were given to native and non-native participants to be read to tape. The average length of the recordings was 6.3 minutes for the English test sentences and 2.6 minutes for the Turkish test sentences. The recordings were done with the non-native participants in the EG and CG once again to be used as a posttest for the experimental phase of the study after the experimental intervention.

The participants were given the sentences 10 minutes prior to recording to allow for pre-recording rehearsal, and were reminded to repeat a sentence when they thought they mispronounced something or they had to stop because of an interrupting factor (coughing, sneezing, voice in the corridor, etc.).

The qualitative component of the current study was solely devised to answer the second research question concerning the source of the difference between the native and non-native pausing patterns. The quantitative analyses would demonstrate whether the participants' L1 influences their target language pausing patterns. Thus, it was an analysis of the probable transfer from the first to the target language. However, there was another assumption as to the source of the difference between the pausing patterns. In order to understand whether participants' prior language training had any effect on the way they paused before and after the conjunctions, we devised an unstructured interview procedure. Ten participants who had non-native pausing patterns were selected for the interviews. There were no prepared questions leading the interview, since we did not desire to interfere with the participants' flow of ideas about why they paused at nonstandard places with nonstandard durations. The interviews were done after all the quantitative data collection procedure was completed, since we did not want the results of the posttest to be biased by the idea generation process in the interviews.

Experimental Treatment

In our study, the focus being on the difference between native and non-native pausing patterns, we decided to design and utilize a specific 10-hour training program on how to pause in the right places

with the right duration. The EG was taken to the training for five weeks. In every encounter, they were exposed to two hours of instruction, consciousness-raising and practice. Each session started with explicit instruction of English pausing norms for a specific discourse connective, followed by listening to relatively standard examples from movies and news reports, ending with practice of reading authentic examples.

Data Analysis

The analysis of the quantitative data for the current study was carried out using Goldwave 5.58 and SPSS 17.0 software packages. Goldwave is an audio editing program which can transform audio files into acoustic diagrams, which was essential for us to be able to measure the pauses preceding and following the conjunctions. On the acoustic diagram, every sound in an utterance presents as a wave starting with a small vibration on a straight line, then becoming wider as the frequency and intensity of the sound increases. The wave becomes narrower and consequently vanishes as the speaker finishes the articulation of the sound. Therefore, it becomes possible to visually observe where a word begins and ends inside an utterance. When the cursor of the mouse is placed on the starting point of a sound/pause, clicked, pulled towards the end of the sound/pause, and released, an indicator on the bottom ruler in the program shows us the length of the sound/pause. This was how the pauses before and after the conjunctions were measured. Figure 1 displays a demonstration of the measurement of a pause.
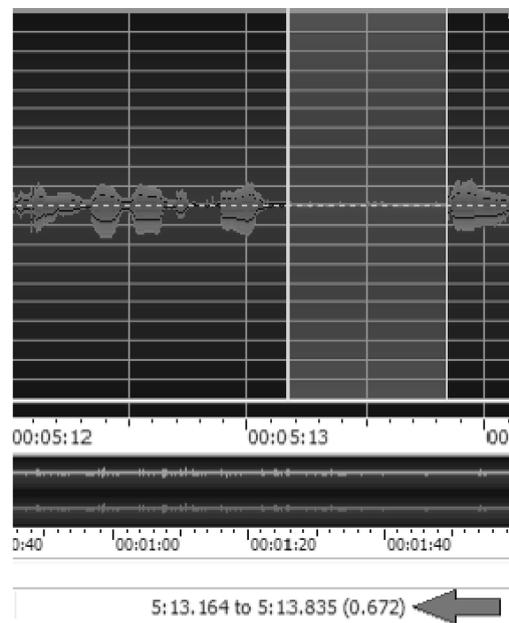
Figure 1. **A Demonstration of the Measurement of a Pause**

Having measured the pauses in the pretest, posttest and the test with the Turkish sentences, it was necessary to compare the means of the NG, EG and CG. The means of the groups were compared using t-tests.

Findings

Pretest Findings for the NG

As mentioned in the methodology section, the PP and PF adverbial clause conjunctions have been measured for the NG first to determine pausing durations to be considered standard for English. Table 2 shows the measurements and the t-test findings.

Table 2. PP, PF and T-test Findings for the NG for the Pretest

Conjunction	PP	PF	df	t	p
When (Pretest)	.1993	.0327	14	11.141	.000
Because (Pretest)	.2233	.0349	14	11.691	.000
Whereas (Pretest)	.1765	.0512	14	4.894	.000
Although (Pretest)	.1888	.0269	14	8.283	.000
If (Pretest)	.1774	.0325	14	6.887	.000

Table 2 clearly illustrates that the participants in the NG paused significantly longer preceding adverbial clause conjunctions than they did following them. For each conjunction, the t-test revealed that the difference between PP and PF was statistically significant. The measurements and statistical analyses obtained from the NG regarding their pausing durations clearly manifest a tendency. Native speakers pause for a significantly longer duration preceding the conjunctions than they do following them. This finding is both a proof and an indication for the fact that adverbial clause conjunctions are parts of the subordinate clauses that they are attached to, not parts of the main clauses they modify. This conclusion can be supported by the X-bar theory of syntax within the framework of Generative Grammar which claims that subordinate clauses are actually Complementizer Phrases (CPs) headed by a complementizer (an adverbial clause conjunction in our case).

Pretest Findings for the NNG

The same measurements were taken for the NNG in the pretest. The findings are given in Table 3.

Table 3. PP, PF and T-test Findings for the NNG for the Pretest

Conjunction	PP	PF	df	t	p
When (Pretest)	.1904	.0305	39	13.167	.000
Because (Pretest)	.0564	.1579	39	-7.043	.000
Whereas (Pretest)	.1657	.1385	39	1.278	.209
Although (Pretest)	.1957	.0320	39	13.475	.000
If (Pretest)	.1675	.0361	39	8.410	.000

Table 3 shows that the difference between PP and PF display a similar pattern to that of the NG for 3 conjunctions, namely *when*, *although,* and *if*. That is to say, the participants in the NNG pause for a longer duration preceding these conjunctions than they do following them. However, for *because* and *whereas*, the participants display different pausing patterns. As can be observed in the

table (PP = .0564 > PF = .1579), the difference in mean durations is in favor of PF, which means non-native speakers paused for a significantly longer duration after *because* than they did before the conjunction. For *whereas*, the participants in the NNG paused longer before the conjunction than after. Nevertheless, the difference is not statistically significant. We may interpret this result in two different ways: (i) non-native speakers tend to pause for a similar duration before and after the conjunction *whereas* and (ii) some non-native speakers pause longer after the conjunction than they do before it, somehow equalizing the mean durations of PP and PF.

Analysis of the Potential Causes for the Difference between the NG and NNG in terms of their Pausing Patterns

This section provides details on the analyses conducted to identify the likely causes for the obtained different pausing patterns between the NG and the NNG. We first analyzed Turkish participants' pausing durations before and after two Turkish discourse connectives (namely *çünkü* and *oysa*, corresponding to *because* and *whereas* respectively) so as to find whether the difference between the NG and NNG is due to transfer from L1 to L2. We selected 15 different Turkish participants for the analysis of pausing durations before and after the Turkish conjunctions, since the Turkish participants in the pretest might have been somehow aware of the research concern. Secondly, the findings are explained from an unstructured interview with 10 Turkish participants who used idiosyncratic pausing patterns for the mentioned conjunctions.

Analysis of Pausing Preceding and Following *Çünkü* and *Oysa*. The best way to assess transfer from an L1 to an L2 is investigating the inquired property in the source language and deciding whether the property is transferrable to the target language. For this reason, to assess whether the idiosyncrasy in pausing patterns in Turkish speakers of English described in the discussion of the pretest was actually caused by transfer from L1 (Turkish), we decided to analyze the durations of PP and PF corresponding discourse connectives in Turkish to the problematic conjunctions in English. *Çünkü* and *oysa* were selected since they are typical examples of cause and direct contrast discourse connectives respectively. The results are presented in Table 4.

Table 4. PP, PF and T-test Findings for *Çünkü* and *Oysa*

Conjunction	PP	PF	df	t	p
Çünkü	.2747	.0236	14	12.460	.000
Oysa	.2512	.0221	14	11.705	.000

Table 4 firstly displays that the difference between the durations of PP and PF *çünkü* is statistically significant (t (14) = 12.460, p <.001). The comparison of means reveals that native speakers of Turkish paused for a considerably longer duration preceding *çünkü* than following (PP = .2747 > PF = .0236). Secondly, the t-test conducted for the conjunction *oysa* shows that the difference between the mean durations of pausing before and after *oysa* in the read speech of native speakers of Turkish is also statistically significant (t (14) = 11.705, p <.001). When the mean durations of PP and PF are compared, it appears that, just like with *çünkü*, native speakers of Turkish paused longer preceding *oysa* than following (PP = .2512 > PF = .0221). The analysis of the recordings, thus, reveals that the difference between native and non-native speakers of English in terms of

pausing durations preceding and following *because* and *whereas* cannot be interpreted as transfer from Turkish, at least for read speech.

Qualitative Analysis. As was stated in the previous section, the first assumption to account for the difference between the NG and NNG was transfer from L1. However, as a result of the quantitative analysis of the pausing durations preceding and following corresponding conjunctions in Turkish, it was revealed that this was not the most likely cause for the difference.

Our second assumption was that the difference could have resulted from what is called "Transfer of Learning". As defined by Thorndike and Woodworth (1901), transfer of learning is the study of the dependency of human conduct, learning, or performance on prior experience. To clarify, we can state that the error made by Turkish speakers of English concerning PP and PF some adverbial clause conjunctions may be due to their prior experience with the conjunctions. Therefore, to test our assumption and to analyze any other underlying constructs related to this error in non-native speakers' minds, we selected ten Turkish participants who had non-native pausing patterns for some unstructured interviews. We asked the participants only one simple question: "Why do you think your pausing before and after *because* and *whereas* is different from that of native speakers?". The interviews generated three basic constructs that might have affected the difference between native and non-native pausing patterns.

The first and most commonly pronounced cause for the difference in pausing patterns emerged to be teachers and teaching practices. Most of the participants (eight out of 10) mentioned that their teachers paused longer after *because* than they did before. To quote one of the participants:

(1) Our teacher used to stop after 'because' before he told the reason. He did it while he was speaking and reading. In speaking, it is because he thought about what he was going to say next. In reading, he did the same thing since he was used to it.

The above extract is significant since it reveals two realities about non-native pausing patterns. Firstly, it shows that the non-native participants of the current study may have transferred their teachers' pausing patterns to their own speech. One of the participants even asked whether she "has to" pause longer preceding *because*, and she was clearly surprised when she learned that this was the proper pausing pattern. Secondly, the quoted participant refers to both read speech and spontaneous speech. Therefore, we may argue that Turkish speakers of English may be transferring their cognitive planning habits employed in spontaneous speech to read speech. We know that pauses after conjunctions in spontaneous speech are common, since they give the speakers time to process what they are going to utter after the conjunction. However, Goldman-Eisler (1968) states that read speech is more open to syntactic pauses rather than cognitive pauses. Therefore, the fact that non-native speakers of English transfer their pausing patterns in spontaneous speech to read speech is plausible. Moreover, as a result of the analysis of some grammar textbooks, we found some grammar exercises that may lead learners of EFL to assume that adverbial clause conjunctions belong to the main clause. A sample exercise from a well-known grammar textbook (Foley & Hall, 2012, p. 257) is displayed in Figure 2.

Figure 2. **Sample Exercise from a Grammar Textbook**

Figure 2 shows an exercise from a grammar textbook published by a renowned publishing house. The striking thing about the exercise is that the conjunctions are placed at the end of the main clauses, while placing them at the beginning of the subordinate clauses would create no problems for the exercise. This may seem to be a trivial and inappropriate usage of language, yet it may cause a subconscious inclination in learners of English that they have to pause longer after the conjunctions. Exercises of this kind are common in grammar textbooks and they point to the fact that authors of grammar books are not that considerate of the prosodic properties of speech.

The second construct coming out of the interviews has been briefly introduced together with the first construct. As a result of the interviews, we decided that Turkish speakers of English usually employ a different pausing strategy before and after *because* and *whereas* especially in spontaneous speech. They do so, since pauses play a significant part in the cognitive planning of speech. What we mean is that they pause for a significant duration especially after *because* as they are planning what they are going to say after the conjunction. Based on participants' self-reports on the issue, it is concluded that planning after *because* is a common habit among Turkish speakers of English. Therefore, they tend to transfer that habit to read speech as well. When asked why they do not tend to pause longer after *if*, *when*, or *although*, they expressed the fact that these conjunctions require less thinking (technically, cognitive planning) than *because* and *whereas*. Our assumption on this issue is that the higher level of thinking required for expressing causes and contrasts may have been a factor in this difference. This assumption is somewhat supported by the following extract:

(2) I usually think for a long time after I say 'because'. The reason is that I try to form an appropriate expression in my mind about the cause I am going to tell. I don't stop for a very long time after 'when' because I don't have to think for a long time about the time when something happened. However, thinking about the cause of something takes more time.

It can be understood from the second extract that there are different cognitive mechanisms for the construction of cause and time adverbial clauses. The planning of an utterance following *because* and *whereas* may require higher level thinking compared to the other conjunctions dealt with in this study.

The final construct emerging from the interviews is that Turkish speakers of English transfer other Turkish speakers' pausing patterns into their own speech. Most of the participants stated that everybody around them did the same thing. This is a plausible explanation for such an idiosyncratic usage, since this is transferrable among learners of EFL. Thus, we can assert that the development of a native speaker pausing pattern in people who have acquired English as an L1 is influenced by the correct pausing patterns they are exposed to. This assertion is in line with Chomsky's theory of

Principles and Parameters, which claims that exposure to comprehensible and sufficient language data results in the correct setting of parameters.

To sum up, it can be claimed that the difference between native and non-native pausing patterns regarding PP and PF *because* and *whereas* is due to three types of 'transfer': (i) transfer from teacher and teaching practices, (ii) transfer of cognitive planning habits in spontaneous speech to read speech, and (iii) transfer from other learners. Basically, all types of transfer we mention here can be included in what Thorndike and Woodworth (1901) defined as "Transfer of Learning", since what non-native speakers of English are inclined to transfer into their own speech regarding pausing is their prior experiences of learning and performance related to the issue.

Posttest Findings for the EG

The findings from the analysis of post-treatment recordings of the EG are given in Table 5.

Table 5. PP, PF and T-test Findings for the EG for the Posttest

Conjunction	PP	PF	df	t	p
When (Posttest)	.1921	.0313	19	8.663	.000
Because (Posttest)	.1922	.0429	19	7.245	.000
Whereas (Posttest)	.1941	.0274	19	10.936	.000
Although (Posttest)	.1853	.0409	19	11.274	.000
If (Posttest)	.1793	.0323	19	10.763	.000

As is observed in Table 5, following the experimental treatment, the participants in the EG started using pausing patterns similar to those used by the participants in the NG. To be more precise, for all the adverbial clause conjunctions tested in the study, the participants in the EG paused for a longer duration preceding the conjunctions than they did following them. The idiosyncrasy observed in the pretest concerning the conjunctions *because* and *whereas* seems to be eliminated with the help of the experimental treatment. However, we acknowledge the fact that this effect may be a result of the awareness that was raised in the training given to the EG and needs to be further tested with delayed posttests.

Posttest Findings for the CG

Table 6 illustrates the findings from the analysis of posttest PP and PF adverbial clause conjunctions for the CG.

Table 6. PP, PF and T-test Findings for the CG for the Posttest

Conjunction	PP	PF	df	t	p
When (Posttest)	.1896	.0317	19	9.165	.000
Because (Posttest)	.0429	.1884	19	-10,770	.000
Whereas (Posttest)	.1354	.1543	19	-.645	.527
Although (Posttest)	.2002	.0241	19	9.659	.000
If (Posttest)	.1634	.0242	19	8.081	.000

Our expectation in the posttest was to observe the idiosyncrasy detected in the pretest in the NNG to persist in the posttest since the CG did not receive any treatment. As can be seen in Table 6, the participants in the CG still displayed idiosyncratic pausing patterns in the posttest. Whereas the 3

conjunctions which had pausing patterns similar to those of the NG in the pretest (*when, although* and *if*) still remained so, *because* and *whereas* were still idiosyncratic in terms of pausing. The participants in the CG paused for a significantly longer duration following *because* than they did preceding it. As for *whereas*, PP and PF are not statistically significantly different.

Discussion and Conclusion

Evaluation of the Research Questions

In this section, each research question will be discussed with reference to the research findings and the related literature.

RQ1: Is there any statistically significant difference between the data obtained from native and non-native speakers regarding pausing preceding and following adverbial clause conjunctions?

When the mean durations of PP and PF were analyzed, some significant differences between pausing patterns of the native and non-native participants emerged regarding two of the conjunctions, namely *because* and *whereas*. While native speakers of English paused for a significantly longer duration preceding all the adverbial clause conjunctions than following them, Turkish speakers of English had difficulty with the two afore-mentioned conjunctions. The idiosyncrasy was that they paused for a longer duration following *because* than they did preceding it, which revealed a reverse pattern as opposed to the native speaker pausing norms. They also experienced difficulty in applying the canonical pausing pattern with the conjunction *whereas*, since the difference between PP and PF *whereas* was not statistically significant. This finding is in line with the findings of the studies conducted on the difference between native and non-native speakers' pausing patterns. For instance, Riazantseva (2001) displayed that L2 proficiency affects the pause duration of advanced non-native speakers in that they were more able to adjust their speech to produce a native-like pausing norm than less proficient participants. This result points to an obvious difference between native and non-native pausing patterns. It also proves that competence in applying native speaker pausing norms increases with L2 proficiency. In addition, Cenoz (1998) states that non-juncture pauses and other hesitation phenomena (repetitions, self-corrections, reformulations) are very likely to occur in second language speech and that second language learners can also have problems in mastering the language-specific use of pauses and hesitation phenomena. Our findings also correspond to the findings of this study, since they both show that native and L2 speakers of any language may have different pausing patterns. Bada (2006) compared the pausing patterns of native English and non-native Turkish speakers of English before and after 'that', in which the researcher took read speech samples from native and non-native participants and analyzed the recordings to eventually discover that while native speakers of English paused for a longer mean duration preceding 'that' in that-clauses than following it, the pauses in the samples gathered from Turkish speakers of English were found to be just the reverse. The present study is concordant with Bada's study as well, since they both found significant differences between native English and non-native Turkish speakers of English.

RQ2: What is/are the potential cause(s) of the difference between native and non-native participants in terms of their pausing patterns?

The second research question of the present study relates to the potential sources of the difference between the native and Turkish speakers of English in terms of their pausing patterns and durations preceding and following adverbial clause conjunctions in English. To answer this research question, we devised two different research methods. Firstly, we tried to understand whether the idiosyncrasy is caused by transfer from L1, which is Turkish in our case. As a result of the analyses of the recordings, we found that Turkish natives paused significantly longer preceding *çünkü* and *oysa*

than following them similar to the pausing patterns of the native English participants with English adverbial clause conjunctions. This finding led us to conclude that the idiosyncrasy was not caused by transfer from Turkish, at least for read speech. However, it should be noted that both English discourse connectives (e.g. *however*, *therefore*, *as a result* …etc.) and Turkish discourse connectives (e.g. *çünkü* 'because', *oysa* 'whereas', *sonuç olarak* 'consequently' …etc.) may require higher level thinking and cognitive planning in spontaneous speech. Therefore, our assumption concerning the findings of the analysis of the Turkish discourse connectives is that they may yield different pausing patterns in spontaneous speech.

The second method we employed in the causal analysis was unstructured interviews, which were conducted to identify any constructs in the non-native participants' minds regarding the difference between native speakers' and their own pausing patterns. The interviews yielded three important findings as regards the difference between native and non-native pausing patterns.

First of all, the participants of the interviews mostly suggested that the difference stems from teachers and teaching practices. Since Turkish teachers of English employ the same pausing patterns as those of the non-native participants of our study, we concluded that the participants may have transferred their teachers' pausing patterns into their own read speech. Moreover, even some distinguished grammar textbooks do not take into consideration the prosodic properties of speech while they present grammar. This is reflected in their grammar exercises which do not seem to be regarding prosodic chunking as an essential factor in the presentation of grammar.

Secondly, we inferred from the interviews that Turkish speakers of English may be transferring the cognitive planning habits they employ in spontaneous speech to read speech. Since Turkish discourse connectives *çünkü* and *oysa* are used to start new sentences and it is usually habitual to pause for a long duration following these connectives, we may safely assume that pausing longer following these connectives is not abnormal in spontaneous speech. As Megyesi and Gustafson-Ĉapková (2000) state, the difference between spontaneous and non-spontaneous speech may be explained by the complexity of the planning process involved in order to structure information. Besides, Goldman-Eisler (1968), Oliveira (2002) and Bada and Genç (2008) claim that spontaneous speech is more conducive to cognitive pauses than read speech. The difference between non-native speaker pausing patterns for *because/whereas* and for the remaining conjunctions can be explained using these arguments. There are no discourse connectives in Turkish corresponding to *when*, *although* and *if*. Therefore, there is nothing to transfer from Turkish into English regarding these conjunctions. Nevertheless, we acknowledge the need for further research to prove these assumptions.

The final conclusion we derived from the findings of the unstructured interviews is that the participants may have transferred their idiosyncratic pausing patterns from other Turkish speakers of English around them. They expressed the fact that most people who speak English around them do the same thing. Since we know that transfer from the speech of other speakers around us is possible, this is added as another possible cause for the difference between the pausing patterns of the native and Turkish participants in our study.

All in all, it can be stated that the difference between the pausing patterns of the native and non-native participants in our study may be stemming from the transfer of the pausing properties of some Turkish discourse connectives into English adverbial clauses. Furthermore, it may be brought about by three types of transfer (Transfer of Training): (i) transfer from teacher and teaching practices, (ii) transfer of cognitive planning habits in spontaneous speech to read speech, and (iii) transfer from other learners.

RQ3: Is there any statistically significant difference between the data obtained from the participants in the experimental and control groups regarding pausing preceding and following adverbial clause conjunctions after the experimental treatment?

As a result of t-tests comparing PP and PF the conjunctions in the read speech of the non-native participants in the EG and CG, it was concluded that the treatment had been effective in creating awareness in the minds of the non-native participants in the EG concerning the use of pausing before and after adverbial clause conjunctions. When mean durations of PP and PF for each conjunction in the read speech of the participants in the EG and CG are compared, it was observed that the participants in the EG started to use native speaker pausing norms while those in the CG kept their idiosyncratic pausing patterns. To elaborate, the participants in the EG paused longer preceding all the conjunctions than they did following them, in line with native speaker pausing norms. However, those in the CG paused longer following *because* than they did preceding it. Besides, there was no statistically significant difference between the preceding and following pauses for *whereas*. We did not utilize a delayed posttest, because our purpose with the experimental intervention was not to create a long-lasting change in the read speech of the Turkish participants, but to raise awareness on an issue which non-native speakers of English generally tend to ignore.

Implications

According to Van Loon (2002) "prosodic features of speech are important parts of pronunciation and the correct use of stress and pause can make a marked improvement in the speech of intermediate ESL learners". No specific language teaching methodology puts emphasis on the teaching of prosodic properties, which actually make great contribution to what we may call 'intelligibility' especially in the speech of those who intend to teach English for a living. Riazantseva (2001) claims that adherence to target language pausing norms may lead to the perception of non-native speech as more fluent and native-like. Moreover, it has also been shown that the length and location of pauses affect the perception of L2 fluency and speech (Pickering, 2002; 2004). The present study is a valuable contribution to language teaching methodology, since it has established that it is possible to reformulate non-native speakers' pausing patterns. We find it necessary to underscore here that the authors by no means attempt to impose a specific pausing pattern on speakers of English speaking the language in a global world, since the language is now spoken far beyond the inner circle in a world where communities and individuals communicate with each other through this medium at international level. Having said this, though, in line with Jenkins (2000; 2002), we find it necessary to reiterate the need to design and deliver instruction focused on Lingua Franca Core (LFC) features, which involve the teaching of "division of the speech stream into word groups" (Dauer, 2005, p. 545), which can be achieved through instruction on pausing patterns, observing linguistic laws specific to each language, albeit this may not seem to hinder communication to a significant level. However, not introducing the individual to such linguistic integrals would be deprivation of the very rights they are entitled to, i.e. the right to learn such linguistic realities, which would be violation of humans' linguistic rights. Based on this conclusion, there are two suggestions we can make for the teaching of prosodic properties of speech.

First of all, awareness should be raised as to the necessity of making one's speech prosodically similar to that of the native speakers of L2. Most non-native speakers of English, for instance, are not even aware of the fact that they should utilize correct stress, intonation and pausing patterns to sound more native-like. This can be achieved by placing 'Teaching of Prosody' classes into English Language Teaching department curricula. If prospective teachers of English are made more conscious about the issue, they will transfer their awareness to their prospective language students.

As we mentioned before, the fine-tuning of the speech of prospective English teachers is of great significance, since they are the prime models language learners have.

Secondly, we can adapt our language textbooks in such a fashion to include exercises and activities that will make learners more prosodically conscious. There are certain textbooks which focus on stress and intonation, yet no textbook the researchers examined deals with the teaching of pausing, which is a huge shortcoming when our findings are considered. As a matter of fact, it should not be that complicated to integrate pausing-focused exercises into textbooks, since the only requirement of the task is to point to the correct locations for pauses and make the learners practice.

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