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Age and Cross-linguistic Influences on the Acquisition of L2 English Stress

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Abstract

This paper provides a review of studies on L2 lexical stress perception and production of learners of different ages and a variety of linguistic backgrounds. The first section outlines general information about pronunciation teaching and the role of suprasegmentals within it. The second section with its corresponding subsections is dedicated to the description of the foundational suprasegmental feature – stress and its effects on the other linguistic units. The third section considers learners' age and the L1 as possible factors that may influence the L2 learning process. Finally, section five is a review of some relevant theories, such as Parameter (Re)Setting and Contrastive Analysis Hypothesis as well as the phonological and phonetic approaches, supported by empirical studies.

Keywords: L2 Acquisition, Suprasegmentals, Stress, Age, L1 Parameters, Parameter Resetting.

1. Introduction

The main goals of most language learners are understanding other speakers and making themselves understood. When it comes to English, in order to achieve successful communication with native or non-native speakers of English, learners, other than being immersed in grammar and vocabulary, need to be aware of the fundamental principles of English pronunciation. The *idée fixe* of the traditional approaches to pronunciation teaching up to the 1960s was native-like pronunciation, and the focus was on all segmental aspects of the language. According to the *nativeness principle*, achieving native-like pronunciation was both feasible and preferable (Levis, 2005). However, contemporary approaches favour *comfortable intelligibility*, defined as “a pronunciation which can be understood with little or no conscious effort on the part of the listener” (Abercrombie, 1956, quoted in Brown, 1991, p. 48). Comfortable intelligibility can be achieved through an emphasis on selected segmental as well as suprasegmental features that put on a pedestal the most important information in the stream of speech (Grant & Brinton, 2014).

Although all suprasegmental features are important in L2 phonological learning, this paper will focus on the acquisition of English stress since it is the basic prosodic feature that not only sets a course for the rest of suprasegmentals but is also relevant to other components of the English language (Solé, 1991). One of the advantageous or disadvantageous factors in the acquisition of stress might be learner’s linguistic background. According to Lado (1957)’s *Contrastive Analysis Hypothesis (CAH)*, L1 phonological patterns have a bearing on L2 pronunciation, and consequently, the acquisition of features that are shared among L1 and L2 are relatively easier than the features that are different. What is more, the *Critical Period Hypothesis (CPH)* holds

that the earlier the exposure to the target language, the better, since the ability to achieve native-like competence declines over time (Lenneberg, 1967; Scovel, 1988, cited in Lantolf, 1990). Therefore, the aim of this paper is to explore to what extent learners' age is an obstacle to the perception and production of L2 stress and how can learners' linguistic backgrounds either help or prevent them from acquiring this prosodic feature.

2. Different Approaches to Pronunciation Teaching from Historical Perspectives

Celce-Murcia, Brinton & Goodwin (1996) posit that, compared to vocabulary and grammar, pronunciation has been understudied for a long time. Towards the end of the 19th century and the beginning of the 20th century, foreign language pronunciation was taught through the *Direct Method*, which was based on the observations on L1 acquisition. Thus, similarly to babies' language-learning process, it implied teaching L2 through the *intuitive-imitative* prism. The intuitive-imitative approach relied on learners' capacity to listen and repeat sounds and rhythmic patterns of a foreign language without any help of explicit instructions (Celce-Murcia et al., 1996).

It was not until the 1940s and 1950s, when the Reform Movement in the United States contributed much to *Audiolingualism* and the Oral Approach - in Great Britain, that pronunciation teaching through the *analytic-linguistic* scope came under the spotlight (Celce-Murcia et al., 1996). Hence, teachers in the middle of the 20th century began integrating transcription systems as well as diagrams illustrating the place and the manner of articulation of sounds as a complementary approach to their Direct Method classrooms (Celce-Murcia et al., 1996). However, the eager attention towards pronunciation teaching began to flicker with the emergence of the *Cognitive Approach*

in the 1960s, under the influence of generative grammar, which maintained that achieving native-like pronunciation was an unrealistic goal for foreign language learners, and their main focus should be on grammar and vocabulary of the target language (Celce-Murcia et al., 1996).

As for the 1970s, two new approaches, namely the *Silent Way* and the *Community Language Learning (CLL)* added to the pronunciation teaching techniques. The Silent Way was similar to the analytic-linguistic approach in that both were paying attention to the sound system of the target language. Yet, Silent Way learners were not being taught explicit linguistic information, such as the *International Phonetic Alphabet (IPA)* chart. In this approach, the focal point was suprasegmentals (such as stress, rhythm, and intonation), making up units of speech (Celce-Murcia et al., 1996). As Celce-Murcia et al. (1996) point out, “proponents claim[ed] that this enable[d] Silent Way learners to sharpen their own inner criteria for accurate production” (p. 5). In the case of the CLL, pronunciation was taught through an interactive method, in which learners would say utterances in their native languages and the counsellor would provide them with corresponding translations of the utterances in the target language. The translated utterances should have been repeated by the learners and tape-recorded so that they could listen to their pronunciation and eliminate the flaws they might have had (Celce-Murcia et al., 1996).

Finally, contemporary approaches postulate that considering successful communication is the primary goal of learners of English as a foreign language (EFL), teaching pronunciation is essential since there is “a threshold level” (Celce-Murcia et al., 1996, p. 7) for EFL students which most likely will prevent them from achieving their goals (Celce-Murcia et al., 1996). Although, as the Cognitive Approach holds,

perfect, native-like pronunciation, for the most part, is a futile expectation on the part of non-native learners, the threshold level is still surmountable, which is enough for the purpose of being easily understood (Grant & Brinton, 2014). Therefore, contemporary approaches favour *comfortable intelligibility* and *comprehensibility*, which can be achieved through the combination of carefully selected segmental and suprasegmental features (Grant & Brinton, 2014). Regarding the definitions of the terms, intelligibility is defined as the degree to which the listener can grasp the speaker's message, while comprehensibility is the amount of effort the listener puts in to understand the transmitted information (Grant & Brinton, 2014).

3. Suprasegmentals: Stress

Considering current approaches to foreign language teaching are leaning towards comfortable intelligibility, suprasegmental features come into play. Suprasegmentals, as Grant & Brinton (2014) explain, “are features of pronunciation that stretch over phrases or short sentences” (p. 16). In fact, some authors argue that suprasegmental features play a more important role in the flow of speech than segmental features since they highlight the foremost information in phrases and sentences. For instance, Solé (1991) claims that stress and rhythm are the pillars of English pronunciation. Especially stress, which exceeds prosodic/non-prosodic level and is relevant to other domains of language, such as, for instance, morphology, grammar, and semantics. There are two levels of stress in English, namely word stress and sentence stress, and these concepts are going to be addressed in the next few sections.

3.1 Word Stress

At the word level, English stress is assigned to content words (words with semantic meaning, such as verbs, nouns, adjectives, adverbs, etc.), while function words (words with little lexical meaning, such as prepositions, articles, pronouns, conjunctions, etc.) remain unstressed (Grant & Brinton, 2014). Unlike English, some languages do not have linguistic stress, and those that do have it, are not all alike (Cutler, 2015). English is characterized by having non-predictable lexical stress, meaning that the stress position in English varies, and the words that contain more than one syllable will differ from another syllable(s) in terms of prominence (Roach, 1984). Another lexical language, along with English, is Spanish, where stress patterns also vary depending on the syllable position in a word (Lado, 1957). Other stress languages that differ from English and Spanish are languages with predictable fixed-stress positions, where stress occupies the same position in all words. One of the fixed-stress languages are Polish (where the stress is assigned to the penultimate syllable) and Finish (characterized by fixed word-initial syllable stress) (Brown, 2014). Languages that do not have stress are mostly of Asian origin that use other prosodic cues (e.g., tone) in the identification of lexical items (Archibald, 1995), but they will not be discussed in this paper.

According to Ladefoged & Johnson (1975/2014), the function of word stress in English consists of indicating syntactic categories of words (e.g., Noun ‘project’ [ˈprɒdʒekt] vs. Verb ‘project’ [prɒˈdʒekt]), as well as distinguishing between compound nouns [ˈdɒɡdʒm] and [dɒgm] and compound adjectives – on each word. However, Cutler (2005) argues that there are not

many minimal pairs as a result of stress assignments in English. Thus, following Cutler (2005)'s argument, paying little attention to stress should not be a major problem in speech perception. Yet, since vowel quality often depends on the position of stress, it does have an indirect effect on speech perception and recognition (Ladefoged & Johnson, 1975/2014).

3.2 Sentence Stress

At the sentence level, sentences may have either simple, default stress, which usually falls on its last content word, contrastive stress, emphasizing the contrastive information to that of the previously mentioned utterance, or emphatic stress, highlighting the core message. Contrastive and emphatic stresses go beyond the standard stress assignment rule that implies that only content words can be stressed. In the case of contrastive and emphatic stresses, the stress may be assigned to content as well as function words and its position depends entirely on the semantic meaning the speaker intends to transmit (Lado, 1957; Ladefoged & Johnson 1975/2014; Solé, 1991; Grant & Brinton, 2014).

3.3. Correlates of Stress in English

Analysing physical properties of stress used to be considered difficult (Roach, 1983), involving diagnostic procedures, such as electromyography, which records “the electrical activity in a muscle that is generated when the muscle fibres contract” (Lehiste, 1970/1977, p. 106). However, the introduction of spectrograms in speech analysis made stress detection much easier (Ladefoged & Johnson, 1975/2014). On the perceptual level, what best describes stressed syllables is their prominence. That is,

stressed syllables are more prominent than the rest of the parts of a word, and the degree of salience is made explicit by means of several phonetic cues. The four major phonetic cues for stress in English are duration, frequency, intensity, and vowel quality of a stressed syllable (Roach, 1984), and all these cues can be observed in the spectrogram. Therefore, those syllables that seem longer, higher in pitch, louder, and contain full vowels are most likely to be stressed; yet, not all these cues are equally important. In spite of intensity being in intimate contact with muscles involved in respiration and the subglottal pressure (Lehiste, 1970/1977), based on numerous studies conducted with the aim of discovering the most important cue in stress identification appears to be not loudness but pitch instead. The last three positions are shared among duration, vowel quality, and intensity (Lehiste 1970/1977; Ladefoged & Johnson 1975/2014; Solé, 1991).

Even though lexical languages use the above-mentioned phonetic correlates, not all the cues are shared across them. For instance, in English, vowels have either full or reduced quality, and those with reduced quality are never stressed (Cutler, 2015), whereas Spanish, whose stress is perceived through pitch and duration, has only full vowels in its phonetic inventory (Schwab & Llisterri, 2014; Cutler, 2015). Therefore, native Spanish learners of English need to reset their L1 parameter of vowel quality in order to meet the L2 English requirements because non-native stress patterning causes alteration of vowel quality, and consequently, the overall difficulty of understanding the uttered word (Cutler, 2015).

3.4. Stress Placement in English

As for stress placement, it is variable and often unpredictable in English vocabulary (Ladefoged & Johnson, 1975/2014). Stress placement represents an important cue for word boundaries. Given that stress syllables contain full vowels and the vowels in unstressed syllables are mostly reduced, it is likely that syllables that contain full vowels constitute the onset of a new word in the stream of speech (Cutler, 2015). Other stress languages are also in line with the importance of stress distribution as a practical tool for differentiating words. The stress position in lexical stress languages, such as Spanish and Dutch activates the full word. Therefore, mis-stressed syllables will disturb the lexical activation process and hinder sentence comprehension (Cutler, 2015).

Cutler (2015) postulates that English speakers pay much more attention to segmental cues (e.g., correct pronunciation of consonants and vowels) than suprasegmentals. Cutler (2015) backs up her assumption by citing in her paper the experiment conducted by Slowiaczek (1991, cited in Cutler, 2015). In Slowiaczek's experiment (1991, cited in Cutler, 2015), native English subjects heard a sentence having its final word stress patterns represented by a noise. Based on the context, the subjects had to judge whether the final lexical item was a correct continuation of the sentence in which it occurred. The experiment revealed that the incorrect stress pattern did not prevent the listeners from decoding the meaning of an utterance. Nevertheless, Cutler (2015) continues that although English speakers look more for the segmental cues, "stress and vowel realization are so interwoven in the English lexicon" (p. 116). Thus, since mis-stressed syllables alter vowel quality (segmental cue), correct stress patterns still remain relevant features in speech recognition.

4. Some Possible Factors Affecting the Perception and Production of English Stress by Non-Native Speakers

4.1 Age Factor

It is generally agreed among scholars that early exposure to the target language is much more fruitful than late exposure (Flege, 2002). Flege (1995) reports that early bilinguals demonstrate a greater probability of achieving native-like proficiency in terms of pronunciation than those who start acquiring a foreign language after childhood. However, the reason why age affects foreign language acquisition is reckoned differently by different researchers.

Scovel (1969) suggests that adults are unable to achieve nativelike L2 pronunciation due to the loss of brain plasticity, unlike children who, with enough exposure, demonstrate perfect mastery of the target language phonology in a relatively short span of time (Celce-Murcia et al., 1996). Scovel (1969)'s assumption goes hand in hand with Lenneberg (1967)'s Critical Period Hypothesis, which takes place during puberty, and after which the ability to acquire foreign languages declines. However, according to cognitive science, the brain never loses its plasticity until the end of its existence (Celce-Murcia et al., 1996). Besides, even if the assumptions by Lenneberg (1967) and Scovel (1969) were valid, their theories do not provide evidence that can account for the difference between the L1 and foreign language acquisition, or the causes of having a foreign accent (Flege, 1995).

4.2. L1 Factor

L2 acquisition indeed differs from L1 acquisition in many ways. Despite infants' inborn ability to perceive all sounds of any language, this skill becomes blunt over time. In fact, by age of 10 months, infants become sensitive only to those sounds that they get acquainted with during their first years of life (Zielinski & Yates, 2014). As reported by Lado (1957), when children acquire their first language, they not only become familiar with the contrastive elements of their native language but also develop "blind spots" (p. 1) that make them immune to non-native contrastive elements. Consequently, the first thing foreign language learners do is transferring their entire L1 knowledge to the L2, whether these are phonemes, intonation, stress, and rhythmic patterns, and so on. Thus, these "blind spots" that humans develop from the beginning prevent them from hearing the target language acoustic features (Lado, 1957). That is, the L1 phonology will have a great influence on the perception of the L2 sound units once speakers become familiar with their L1 sound system.

Lado (1957)'s approach to L2 acquisition gave way to what is known as the *Contrastive Analysis Hypothesis (CAH)*, which speculated that the sound units that are the same in the L1 and the L2 would not bear any acquisition problem, while different acoustic features would be a problem to the learner. However, as experiments disclosed, some errors produced by some learners could not be predicted by CAH, which called the veracity of the hypothesis into question (Brown, 2014). Similarly, Llisterri & (p. 625).

However, Werker (1989) explains that the perceptive sensitivity to sounds, other than those of the L1, can be recovered through perceptual training. The results extracted from the experiment conducted by Llisterri & Schwab (2014) aiming at exploring whether prosodic training could enhance the French speakers' perception of L2 Spanish stressed syllables agree with Werker (1989)'s postulation. Considering French is a fixed-phrasal stress language, providing an important cue to the segmentation into rhythmic groups, and Spanish - a free stress language having a distinctive function at the word level (Llisterri & Schwab, 2014), the experiment provides interesting evidence on the perception of L2 stress by the speaker of different L1 stress backgrounds. Llisterri & Schwab (2014)'s experiment revealed that the native French subjects who received pre-training to perceive Spanish stress patterns, although did not achieve perfect accuracy, became able to identify Spanish accentual contrasts.

When it comes to the production of English stress in a native-like manner, non-native speakers of English with a variety of L1 linguistic backgrounds face some serious challenges (Tremblay, 2021). This assumption does not only ring true to the learners whose L1 does not have stress but to those learners too, whose L1 does have stress but a different kind (Cutler, 2015). As it was already mentioned above, stress patterns have an influence over vowel quality, and vowel quality - to listener's comprehension. EFL learners who fail to make use of correct stress patterns of English may give way to three kinds of perceptual problems on behalf of listeners, namely "pseudo-homophony" (i.e., the phonetic similarity of words and non-word (Martin, 1982)), "spurious word activation" (accepting pseudowords as real words), and "temporary ambiguity" (misperceiving words or activating other words different from the ones that the speaker said) (Cutler, 2015, p. 119).

4.3 Alternate Explanation for Age Factor

Apart from age (from the CPH perspective), and the L1, another component may affect the acquisition of the L2 sound system. For instance, children, due to their age, are expected to attend school, whereas adults are supposed to work. Given this contextual difference related to age, children are more likely to have better exposure to the target language than adults; this is especially true for immigrants. Flege (2002) considers the importance of linguistic input and states that immigrant children are better in the L2 acquisition not because their mental plasticity is operating successfully, but because they are intensively “immersed in an L2 speaking environment” (e.g., at school, in the country of arrival) (p. 219). When it comes to adult immigrants, in general, they might be working in places where oral communication is limited or not required at all, or else where they might have an opportunity to interact with the native speaker of their L1 (Flege, 2002).

5. L2 Acquisition Theories and Empirical Studies Exploring the Effect of Age and the L1 on the Acquisition of L2 Stress.

5.1 Theories

Öner (2012) states that once linguistic values are set for one parameter or another of L1, the process is complete, and it becomes impossible to deactivate it, i.e., to get rid of the already set value for one parameter and substitute it by another over time. Öner (2012) also maintains that if deactivation of parameters was possible, there would be no difference between L1 and L2 acquisition. Therefore, since deactivation is impossible, L1 learners start off learning L2 with the L1 setting of all parameters.

However, according to *Parameter Resetting Hypothesis*, through interlanguage¹ (which maintains some characteristics of L1 and is shaped by *Universal Grammar (UG)*) learners have indirect access to L2 values too (Cook, 1985; White, 2003).

Öner (2012)'s statement is in line with Lado (1957)'s Contrastive Analysis Hypothesis (CAH), the phonological approach to language acquisition, which was supported by many experimental research. CAH holds that EFL learners whose L1s share linguistic similarities with the target language will be able to acquire similar features with little effort. Therefore, in light of this paper, the EFL learners whose L1 has contrastive lexical stress (e.g., Spanish) will have better results in the perception of English stress than those whose L1 has either non-contrastive lexical stress (e.g., French) or does not have lexical stress at all (e.g., Korean) (Tremblay, 2021). What is more, current studies adopt the phonetic approach, as well, to the non-native learners' production and perception of English stress, and consider the transfer of prosodic cues (loudness, pitch, duration, and vowel quality) crucial for EFL learners' perception and production of lexical stress (Tremblay, 2021).

5.2 Empirical Studies

Archibald in a series of studies explored the perception and production of word stress by non-native learners of English. For instance, Archibald (1994) tested adult native speakers of different L1 stress languages such as Polish (a non-contrastive stress language, where stress always falls on the penultimate syllable), Spanish (contrastive

¹ The term *interlanguage (IL)* was coined by Selinker (1972). The first developmental stage of IL, influenced by transfer of the L1 setting, has fewer parameters reset than later stages of development. As a number of studies demonstrate, resetting takes place both in children and adults.

lexical stress language), and Hungarian (another fixed language, where stress falls on the initial syllable). All the participants of the study were at the initial stage of L2 English acquisition. The purpose of the study was to find out whether values were set for just only one parameter or more than one and whether learners of different stress languages would transfer their L1 parameters on the L2 English. Archibald (1994)'s experimental research showcased that learners were able to, at least, partially reset their L1 parameter values. Thus, they were able to acquire L2 English stress by resetting the L1 stress parameter through interlanguage. Although this experiment was later reinterpreted by other linguists such as Pater (1997) as just an L1 transfer to the L2, Archibald (1994)'s experiment laid the foundation for the consequent studies in the field.

Pater (1997) ran another experiment testing Canadian French speakers producing English nonce words. Canadian French, like European French, does not have lexically contrastive stress. French is characterized by having phrasal stress falling on the final syllable. The reason for choosing nonce words over real words was to avoid familiarity with real words or memorized patterns of lexical items on behalf of the tested subjects. Being consistent with the notion of parameter resetting, the purpose of this study was to get better insight into EFL learners' ability to make phonological generalizations in the target language.

The experiment showed missetting of English stress by native Canadian French speakers usually stressing the first syllable in trisyllabic nouns without taking into consideration the syllable weight. Therefore, Pater (1997) concluded that during foreign language learning, the learners might misset L2 stress, which is not a result of neither the L1 transfer nor the parameter resetting. Thus, while parameter resetting is possible,

parameter missetting is also possible, and the assumption that in the developmental stage of *Interlanguage (IL)*, L1 has the major influence on the L2 while as the learner becomes more familiar with the L2 settings gets more like the L2, might not be entirely true.

In another study by Archibald (1998), the perception and production of L2 English stress by adult speakers of Polish, Hungarian, and Spanish learners of English was tested. The participants had to read a list of words aloud and then listen to the exact same words produced and audio recorded by native English speakers. Later on, in the perception task, they had to write which syllable they perceive to be stressed. Based on the results of the experiment, Archibald (1998) concluded practically the same as in his (1994) investigation that the learners' interlanguage was a mixture of reset parameters in favor of L2 and the L1 parameter transfers.

Guion, Harada & Clark (2004) conducted an experiment aiming at exploring the application of statistical regularities of stress patterns by native speakers of English as well as by early and late Spanish learners of English. Statistically, English disyllabic nouns have a tendency to be stressed on the first syllable, while English disyllabic verbs usually receive stress on the last syllable. The results demonstrated that early Spanish learners of English acquired statistical regularities of English stress patterns since they performed similarly to the native English subjects. As for the late Spanish learner of English, unlike early learners and native speakers, they paid much more attention to the phonological similarity of words than their lexical categories. Given that the late learner subjects could not apply statistical regularities successfully proves the postulation that the “earlier is better” (Flege, 2002, p. 217).

Altmann (2006) examined the perception and production of English stress by learners with diverse L1 stress backgrounds such as Spanish, Turkish, French, and Arabic from stressed languages, and Japanese, Korean, and Chinese from non-stressed languages. Similar to previous experiments, here too, subjects had to read nonce words out loud. The study showed that learners with fixed stress languages such as Arabic, Turkish and French performed poorly in perception tasks, while in production tasks they demonstrated similar results to that of the native speakers. This assumption is in contradiction with Archibald (1993)'s experiments in which the subjects with fixed stress languages, in this case, Polish and Hungarian, got better results in perception tasks than in production activities. These experiments prove that subjects with similar lexical stress backgrounds do not automatically perform similarly in perception and production of English stress.

Concerning the phonetic approach, Ortega-Llebaria, Hong & Fan (2013) tested native English speakers' perception of Spanish word patterns in declarative sentences, where the perception is possible by paying close attention to the phonetic cues that signal stressed syllables. The most important phonetic cue that helps the identification of Spanish stressed syllables is post-tonic pitch rise in pre-nuclear position (Tremblay, 2021). In English, similarly to Spanish, the most important cue for stressed syllables is pitch. However, in English, pitch rise cues the stressed syllable, while in Spanish, pitch rise cues the stress on the preceding syllable. In addition, English speakers give much attention to vowel duration since English is characterized by having both tense and lax vowels, while in Spanish, all vowels have the same length. The results showed that English subjects transferred the L1 lexical stress parameter to Spanish and failed to identify the correct Spanish stressed syllables. This experiment demonstrates that even

if both Spanish and English have contrastive lexical stress, it does not necessarily mean that the learners will automatically perform equally well in stress perception tasks as the native speakers of the target language.

6. Conclusion

In conclusion, pronunciation teaching has undergone a great change over time. The native-like pronunciation yearning of the target language was replaced by a more realistic attitude towards language acquisition. While in traditional approaches, each segmental or suprasegmental feature were giving equal importance for getting the desired outcome – perfect pronunciation, the modern approach found the selective method more practical and efficient for comfortable intelligibility. In the selective method, the focus is on selected segmental as well as prosodic features. As numerous authors maintain, stress patterns are rather significant for intelligibility since they have not only suprasegmental but also segmental realization. However, some authors have observed that factors such as learners' age and the L1 may disturb the acquisition of the L2. Experiments conducted through different periods demonstrate different results. Archibald (1994, 1998) posits that the interlanguage (a combination of reset parameters and L1 transfers) enables learners to perform well in the target language, while Pater (1997) argues that the errors committed by the subjects in Archibald (1994)'s experiment conform to neither the L1 nor the L2 parameters. As for learners' age, Guion et al. (2004)'s experiment proves that age is

important in the acquisition of a foreign language on the phonological level. The combination of the outcomes of Altmann (2006)'s and Archibald (1993)'s studies shows that similar lexical stress placement in languages does not necessarily mean the similar performance by subjects in stress perception and production; thus, other features should be taken into consideration too. Indeed, as Ortega et al. (2013)'s research demonstrates the transfer of phonetic cues that identify stressed syllables has a bearing on the perception of the target language stress patterns. Therefore, as the studies demonstrate, both age and L1 play an important role in the acquisition of L2 stress.

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