AMERICANS' PERCEPTION OF THE ROMANIAN ACCENT IN ENGLISH

by

IULIA PITTMAN

(Under the Direction of Don McCreary)

ABSTRACT

This dissertation explores the relationship between Romanian accented speech in English and American native speakers' perception of it. Being that Romanian is a Romance language with some Slavic influences, this dissertation seeks to answer the question of what the Romanian accent in English sounds like to Americans. Twenty-one naïve raters, all native speakers of American English, listened to recordings of fifty speakers: twenty Romanians, twelve native speakers of various Romance languages, thirteen native speakers of various Slavic languages, and five native speakers of American English. When hearing the Romanian accent, most raters were unable to place it even within a language group such as Romance or Slavic. The percentages of Romanians guessed to be speakers of a Romance language (28%) and a Slavic language (25%) were very close and show that the Romanian accent did not sound particularly Romance or particularly Slavic to the raters in this study.

Raters were also asked to note what features in all non-native speakers' speech sounded accented. Based upon what the raters noted, it was shown that speakers had difficulties with several marked sounds as well as with phonemic and allophonic contrasts not existent in their native languages. The two theoretical frameworks used to explain these difficulties are the Markedness Differential Hypothesis (Eckman 1977) and the Speech Learning Model (Flege

1984). In addition to segmental features salient to the raters, a large number of tokens referring to suprasegmental features was recorded. Due to the challenge of accurately describing suprasegmental features faced by the naïve raters, more research is necessary to obtain insight regarding the differences and commonalities between American English, Romanian, other Romance languages, and Slavic languages.

INDEX WORDS: Romanian, Foreign accent, Perception, Phonology, Language identity, Misperception, Naïve raters

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DEDICATION

Édesanya, ez a doktorátus és disszertácio egy kis fizetség a sok áldozatért és befektetésért amit értem csináltal. Papa, cu dedicații speciale pentru tine. I also dedicate this dissertation to my dear husband.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In this introduction, I will begin with a brief history of the Romanian language and of Romanians in the United States. I will then state the problem addressed by this dissertation, followed by research questions and research hypotheses. A discussion of the significance of the present study will follow, both in theoretical terms and in terms of its applied pedagogical implications. An overview of the methodology will also be presented, and, for purposes of clarity, some new and ambiguous terms will be defined. The chapter will then end with a brief section on the study's limitations.

For centuries, the United States has been a country with significant immigration. The waves of immigrants have varied along with political and historical events in immigrants' countries of origin. The first Romanian recorded in America was Samuil Damian, an Orthodox priest from Transylvania, who came in 1748 for scientific reasons (Wertsman 1975). Since then, there have been several waves of Romanian immigrants to the "land of opportunity." According to a study conducted by the Romanian-American Network, Inc., there are presently 1,200,000 Romanians in America.[1] Throughout the United States, there are several concentrations of Romanians, mainly in major cities. New

[1] The study includes Romanian minorities who live in neighboring countries, other minorities who live in Romania, and second and third generation Romanians in the US. By contrast, the US Census Bureau reported only 361,170 in its 1990 census. This number only reflects foreign-born Romanians and does not include any estimations of numbers of illegal immigrants.

York State has the most Romanian immigrants (21% of the total), followed by California (14%), Illinois (9%), Michigan (8%), Ohio, and Arizona (7% each). Since Romanians tend to arrive in kinship groups or via network migration, they form strong communities and are well known among other Eastern Europeans as a people with a great deal of internal cohesion and a tradition of mutual assistance.

Compared to other immigrants (e.g., Mexicans, Polish, and Chinese), Romanians are not a large minority group in the United States, but they are also not so obscure as to be unheard of. Their relatively slight impact upon U.S. ethnography can partly be explained by the relatively small population of Romania (22 million). Much the same can be said of the Romanian language. Though Romanian is a Romance language, it is not one of the four most commonly recognized Romance languages (these being French, Spanish, Italian, and Portuguese). Though some people at least know that Romanian is a Romance language, many have simply not been exposed to it enough to draw this conclusion. Furthering this ignorance is the fact that Romania lies in Eastern Europe, where Slavic languages predominate.

Most of what is today Romania (once known as Dacia) belonged to the Roman Empire. Although Dacia was conquered by the Romans in 107 AD and the Roman occupation only lasted until 271 AD, the Romanization of the Dacians was very intense. Most historians presume that Latin did not exist continuously in Romania, but "was reimported later from the south of the Danube" (Posner 1966). However, Macrea (1973) claims that "Carpathian-Danube Latin" (26) has been used without interruption and merely went through a process of "rustification," out of which modern Romanian has emerged. The theory of Daco-Roman continuity is still highly debated among scholars in

the fields of history, linguistics, and archeology. Posner's anti-continuity view is supported by scholars such as Stratilesco (1906), Nandriş (1946), Scărlătoiu (1988), Izzo (1985), and Philippide (1927). Supporters of the Daco-Roman continuity include Densuşianu (1901), Bourciez (1946), Rosetti (1968), Puşcariu (1976), and Niculescu (1990). According to Du Nay (1996), the controversy stems in no small part because of methodological and political issues related to the continuity theory. Whatever the answer to the continuity question may be, the existence of a Latin-based tongue in Romania today is impressive when one considers both that the Roman occupation of Dacia was much shorter than the later Ottoman and Austro-Hungarian occupations and that, for the past fifteen centuries, Romania has been a Romance island in a heavily Slavic region.

Despite its perseverance, Romanian has still been influenced by surrounding tongues. In particular, Slavic vocabulary has continuously infiltrated, in no small part because, up until the 19th century, the liturgical language of the Romanian Orthodox Church (the dominant organized religion in Romania) was Old Church Slavic. For this reason, church-related vocabulary in Romanian tends to have a larger Slavic influence than other parts of the lexicon. Statistical analysis based on data collected from *The Modern Romanian Dictionary* of 1958 shows that Latin and other Romance language-based vocabulary in Romanian represents 62.85% of the language. Slavic-based vocabulary represents 14%, and the rest is divided among Hungarian, German, Turkish, and other languages. If we look, however, at the *frequency* of words used in both written and spoken Romanian, the Romance language-based vocabulary represents as much as 86.45% of the vocabulary of Romanian (Macrea 1973:40). Romanian, therefore, can be best described as a Romance language with *some* Slavic influences. These influences also

seem to appear in the accents of Romanians speaking English. I and many other Romanians I know have often been thought by Americans to be speakers of a Slavic language. This is often an unexpected assumption (and perhaps an unwelcome one) for many Romanians, who were so diligently taught to be proud of their Latin roots and many of whom chafed under Russian influence during almost fifty years of Communism. As a Romanian who lives in the United States, speaks English with a Romanian accent, and has a linguistic background, I decided to investigate the topic of the Romanian accent in English to see whether the data will support the proposition that the Romanian accent sounds "Slavic," and, if so, to see why and to what extent.

In addition to the erroneous notion that Romanian is a Slavic language, another common misconception about Romanians is that most of them know how to speak Russian. This assumption is again based on geo-historical facts. Romania is located in Eastern Europe, close to Russia, and it was part of the Communist block (but not, as is often believed, part of the USSR) for nearly fifty years. The reality is that not all people in Eastern Europe speak a Slavic language as their native language, and not all countries in Eastern Europe taught Russian in their schools. As a matter of fact, English and French have been the most commonly taught foreign languages in Romanian schools since the late 1970s.

Looking at political and historical realities, it is not hard to see why Romanians may have some identity issues to work out. When living abroad, they tend not to mind *not* being recognized as Romanians as long as they are also not identified as “Russians." This is not surprising. Because of years of Soviet influence, many Romanians do not want to “sound Russian.” The same may be said with regard to learning Hungarian.

Hungary lies north-west of Romania and is a country with which Romania has had a long history of political conflict. I personally witnessed this phenomenon as I grew up in a Hungarian-Romanian household, in a part of Romania with a large Hungarian minority. I was always surprised, not only by how infrequently Romanians would study or learn to speak Hungarian, but also how seldom they even learned the occasional word or phrase they might hear on the street. This may be owing to the fact that Romanians think of neither Hungarian nor Russian as mere foreign languages. The sound and notion of these two languages often conjure up sentiment in the Romanian mind more political and historical than linguistic. For this reason, although the focus of this work is on language proficiency, the empirical sociolinguistic context of the study is also of great interest to me and will be dealt with here as well.

1.2 Statement of the problem

The main goal of this dissertation is to explore the relationship between Romanian accented speech and American native speakers' perception of it. The study addresses both the issue of second language (L2) proficiency of Romanian non-native speakers (NNSs) and the issue of native speakers' (NS) reactions to Romanian NNSs' speech. Furthermore, it looks at Romanians' own perception of their accent and contrasts it with Americans' perceptions thereof.

1.3 Research questions

My research questions concern the relationship between the Romanian accent in English and American native speakers' perception of it.

1. How do Americans perceive the Romanian accent in English?

2. What is the relationship between certain variables related to the speaker's linguistic and personal background and the perceived type and degree of accent on a scale from 1 – native speaker to 9 – very thick accent?

The first question explores the extent to which Romanian has become a presence in America. It may be divided into three sub-questions:

a. Do Americans recognize the Romanian accent?

b. What does the Romanian accent sound like to Americans in terms of the language family that it resembles?

c. What are some of the foreign accented elements in the non-native speakers' speech that are salient to the ears of the native speaker raters, and do any of the features predict a Romance-sounding or Slavic-sounding accent for Romanians speaking English? Are the accented features deemed salient by native speakers the same ones Romanians report to be prominent in their own speech?

When people encounter a new situation, they generally try to associate it with the closest and most similar piece of information they can retrieve from previous knowledge. An examination of the Romanian accent in English will eventually yield an answer to the question of whether Americans perceive it more as a Romance or a Slavic language. Since Romanian is a Romance language with Slavic influences, the question is really which features are more salient to certain people, the Romance or the Slavic?

Hypotheses related to the first research question:

1. Americans do not identify the Romanian accent as Romanian.

2. The Romanian accent sounds more Slavic than Romance to Americans.

3. While stress and intonation are features salient to the ears of American native speakers, they are not considered important in the self-perception of Romanians about their own accent.

4. The NNSs who read faster tend to have less of a foreign accent.

The second research question also tests a number of hypotheses. These are:

1. Speakers with a shorter length of residence (LOR) tend to overrate themselves, whereas advanced speakers' self-ratings are closer to the NSs' ratings.

2. Overall, the younger the speakers are, the better their accents are, despite the exclusion of the effect of the critical period in this study.

3. The longer the participants have lived in the United States the better their accent are.

4. Instruction in the home country has no effect on the degree of accent.

5. Instruction in the United States has a positive effect on the degree of accent.

6. Participants who have knowledge of a language in addition to English and their first language have a better accent in English than participants who only speak two languages.

7. Amount of first language (L1) use is directly proportional to degree of foreign accent (i.e., the more participants use their L1, the heavier their accents in English are).

8. Participants who report that they want to improve their accent have a better accent than participants who report that they do not want to improve their accent.

9. Degree of self-reported assimilation is closely related to degree of perceived foreign accent for most participants.

1.5 Significance of the study

The implications of the present study are multiple. A thorough analysis of the Romanian accent in English fills an important gap in the literature. Romanian is one of the least analyzed Romance languages, and this study offers valuable insight into the characteristics of the Romanian accent. Moreover, we learn how the Romanian accent is perceived by American native speakers, which in turn adds to the body of literature regarding perceptual studies of accented speech.

Furthermore, this study has valuable implications for classroom teaching. Certain mistakes, such as confusion of minimal pairs in English ("leave" and "live") can cause communication problems. Without ignoring difficulties of a lower caliber, teachers then can put more emphasis on the more difficult sounds when teaching English. The findings of this dissertation can be of great use to English teachers in Romania, as well as to Romanians living in North-America who wish to improve their English accent. Derwing et al. (1997) conducted a study on pronunciation instruction for fossilized learners. The participants, who had lived in Canada for an average of 10 years, showed significant differences between t1 and t2 of the study. The study tends to show that no matter the age of the speakers and their length of residence in a country, it is possible to improve a foreign accent.

The findings of this study will also bring light to the issue of Americans' misperception of Romanians as Russians. The study will address the questions, whether the misperception exists at all, why it is an issue for Romanians if it does exist, and what the implications of such a misidentification are.

1.6 Overview of methodology

The methodology is fully discussed in Chapter 3; the following is merely an overview.

For the purpose of this study, twenty native speakers of Romanian and thirty native speakers of American English and various Romance and Slavic languages were chosen to participate. These speakers read aloud a short paragraph in English and then filled out a questionnaire eliciting some personal, educational, and linguistic background information. All readings were recorded for analysis. Twenty-one native speakers of American English with little or no linguistic background listened to all the recordings and expressed their perceptions of the accents of the speakers.

1.7 Clarifications of new and ambiguous terms

Foreign language learners: learners of a foreign language in their home country

Second language learners: learners of a foreign language in the country where it is spoken

Accentedness: degree of foreign accent

Speakers: the Romanian participants who were recorded reading the paragraph in English

Comparison group: the Romance and Slavic language speakers recorded reading the paragraph in English

Control group: the native speakers of American English who also read the elicitation paragraph

Raters: the native speakers of American English who listened to all the recordings and expressed their perception with regards to the accents of the speakers

Romance languages: the Romance languages used in this study (Spanish, Italian, and Portuguese) excluding Romanian

Slavic languages: the Slavic languages used in this study (Russian, Polish, Czech, and Bulgarian).

1.8 Limitations

As is often the case with perceptual studies, this study contains some open-ended questions that have no "right" or "wrong" answers. Such questions tend to bring in an abundance of information but at the same time can present limitations. To a certain extent, the quality of the data depends on people's ability to accurately express their perceptions. It is very hard to track what motivates people's answers. As McDermott (1986) noted in a report of a similar study, different raters accorded different degrees of importance to the different factors used for analysis in his study. He also found that some raters used all factors for some speakers but only some factors when rating other speakers. On the one hand, this can cause disparities in the data and create inconsistencies. On the other hand, these "inconsistencies" might be a true reflection of people's perceptions. People are not always in the same mood, and they do not always apply the very same factors to everything in life.

Another limitation of the study is presented by what is known as the "cooperation bias." It could be that the very people who agreed to participate in the study did so because they do feel more confident about their abilities to speak English. It is my hope that, through a large enough sample size of participants and an accurate analysis of the data, these shortcomings of the nature of a perceptual study can be overcome.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter, I will first discuss what accented speech is and the implications of having a foreign accent. In addition to more general issues related to accented speech, I will elaborate upon the specific issues caused by speakers being misidentified due to their foreign accent. I will then review the two major frameworks within which many studies dealing with foreign accents have been written. Following this, I will discuss the numerous factors that affect the degree of perceived foreign accent. In order to create a theoretical basis for this study, I will briefly review the most important second language theories and approaches to foreign accent found in the literature. The last section of this chapter will consist of a presentation of the sound system of the Romanian language contrasted in parts with the American English sound system. This analysis will include both segmental and suprasegmental features.

2.2 Accented speech and its implications

Accents are more than just the difference between [təmeɪtoʊ] and [təmatoʊ]. Accents give away race, national and regional origin, class, and education, and in a way they are the "skin that we speak" (Delpit & Dowdy 2002). Accents are yet another way of judging people in gross categories. There is nothing inherently wrong with such categorizing, especially since it is hard or almost impossible not to think of the world in

categories to a certain extent. Both dialectal and foreign accents are subjected to people's subconscious reactions, which can, in turn, trigger a categorization based on prejudice, familiarity with the accent, and other criteria.

Numerous studies have shown that native speakers downgrade their opinions of non-native speakers simply because of their accent (Anisfeld et al. 1962, Brennan & Brennan 1981, Kalin & Rayko 1978, Lambert et al. 1960, Ryan & Carranza 1975). Problems resulting from such underestimations can arise for non-native speakers at job interviews (Sato 1991), in customer service settings, and generally when integrating into society. As a result, the interest in English as a second language (ESL) and accent reduction courses is high. The reasons people enroll in such classes can also vary a great deal, ranging from non-native speakers' responses to how their accent is perceived to their wish simply to speak the language better.

Alongside negative feelings, people and communities often show positive attitudes toward accented speech and diversity. In a world where monolingualism is rather the exception than the rule and in a world that has never been as mobile and globally oriented as it is today, diversity and multi-culture are becoming the norm. Although very insular communities where foreigners and foreign languages are an extreme rarity still exist, the number of multicultural communities is tremendous and constantly increasing. Multicultural communities will inevitably have various foreign accents and a high flow of cultural interaction.

As I have discussed above, accents can reveal information about the speaker, but listeners can also misperceive an accent's origin. Such misperceptions can affect the speaker's feelings just as well as the listener's. Fought's work (2003) examined the

misperception of Chicano English speakers to be speakers of Spanish, when in fact such individuals did not necessarily speak Spanish. The study's author also reports that, as a result of having a Chicano English accent, monolingual English-speaking children have been tested for "their limited English." This is not to say that English native speakers are making up the fact that the Chicano English speakers sound Spanish. But it is worrisome that such misperceptions can have such repercussions on the targeted people's lives. Native speakers of a language frequently label foreigners with a mistaken foreign identity based upon assumptions, ignorance, or innocent guesses. Telling an Austrian that s/he is German, referring to all Spanish speakers as "Mexicans," or addressing all Asians as Chinese, all seem innocent mistakes to someone outside those cultures. Such a misidentification, however, though rarely meant to offend, automatically triggers the processing and recollection of entire histories and politically sensitive issues. For many Romanians, this same effect takes place when they are misidentified as Russians.

It is common among non-native speakers of any foreign language and with any native-language background to report that native speakers only need hear one sentence or sometimes one word to pose them the question, “where are you from?” As it turns out, it can take as little as 30 milliseconds of a word for a native speaker to detect a foreign accent (Flege 1984).

Not only do foreign accents sound different from native speakers’ accents, but the processing time for accented speech is also longer than for accent-free speech (Schmid 1999). Furthermore, mispronunciations when pronounced with milder accents are detected more easily compared to mispronunciations pronounced with stronger accents. This difference in processing and perception is known as "talker normalization," and

Evans & Iverson (2004) define it as "the perceptual and cognitive adjustments that allow listeners to accommodate differences between speakers." Listeners automatically adapt their threshold of acceptability in response to the speaker's degree of foreign accent. The thicker the speaker's accent is, the more effort is needed to decode the message and the listeners do not have more resources available to detect mispronunciations.

Although degree of accent and comprehensibility are not always directly linked, a high correlation between the two often has been found. Depending on L1-L2 distance, the dominant linguistic feature that allows for comprehension problems varies. Gynan (1985) looked at the reactions of 186 native speakers of Spanish to the speech of English-speaking learners of Spanish. He found that phonological factors are more closely related to comprehension than morphosyntactic and lexical ones. Ensz (1982) found that native speakers of French, for example, show more intolerance for grammar mistakes than for pronunciation or vocabulary errors when listening to American speakers of French. Politzer (1978) found that native speakers of German show the lowest level of acceptability towards errors of vocabulary in German as produced by English native speakers. However, Albrechtsen et al. (1980) claim that it is useless to try to make such hierarchies of NNS errors because it is rather the frequency than the type of error made that determines degree of perceived foreign accent and comprehensibility. These studies, on the one hand, support the importance of a contrastive analysis of any two languages in discussion, since the reasons for native speaker intolerance of foreigner mistakes may vary among the different language combinations. On the other hand, it could also be concluded that different cultures (representing different languages) have different levels of tolerance for certain types of mistakes. Perhaps correct grammar is important to the

French, pronunciation to the Spanish, and vocabulary to the Germans. Therefore, researchers should be cautious when drawing conclusions based on their studies, and they should not overgeneralize their findings with regard to other languages.

2.3 Two frameworks

The investigation of native speakers' perception of foreign accent has been conducted within the confines of two broad linguistic frameworks. These are 1) language attitude and 2) pronunciation proficiency.

More sociolinguistic in nature, studies from the first category explore the relationship between perceived foreign accent and various socioeconomic, physiological, and other factors (e.g., level of income, race, height, etc.) as estimated by the listeners. Authors have used various methodologies, but a couple of them seem to have become more dominant among researchers. The matched guised test was developed in the early 1960s by Lambert and consists of one speaker, generally a bilingual or multilingual speaker, basically pretending to be two or several different people. Using one person to represent several speakers eliminates other factors that are hard to control for and narrows down the number of variables in the study. This matched guised technique used in various studies showed that people do have preferences or prejudice for and against certain accents (Cargile 1997, Dailey-O'Cain 2000, Hopper 1977, Luhman 1990, Seligman et al. 1972). Zahn & Hopper (1985) created the "Speech Evaluation Instrument," which has listeners judge the speakers' foreign accent based on the three categories superiority, attractiveness, and dynamism.

Other studies are set within a more applied linguistic framework of second language acquisition and tend to focus on second language phonology. These studies either look at the speakers' global accents (i.e., degree of perceived foreign accent) versus local accents (i.e., certain phonetic factors) or they look at how certain variables (e.g., age, L1 background, etc.) correlate with pronunciation proficiency.

Magen (1998), in her study on native speakers of Spanish learning English, looked at the effect of voice onset time (VOT), syllable structure, consonant manner of articulation, and word stress on the speakers' global accent, and found a high correlation between global accent and all features except VOT. Gonzales-Bueno (1997), on the other hand, found a high correlation between the VOT of the initial segment [k] in the Spanish word 'casa' [kasa] and global foreign accent ratings. In his study on Brazilian Portuguese speakers' production of /ae/ and /ɛ/, Major (1987) found that as global accent and the production of English /ae/ improved, the accuracy of /ɛ/ decreased. Major (1986) found that native speakers of Brazilian Portuguese who produce more epenthesis are found to have a stronger foreign accent. The relationship between liquids and global foreign accent was analyzed in several studies (Riney et al. 2000, Riney & Flege 1998). The results do not show any conclusive evidence for a close correlation between pronunciation of liquids by native speakers of Japanese and the perceived foreign accent.

Studies have also looked at the relationship between prosodic features and global accents, and their authors found that the degree of perceived foreign accent is more closely related to prosodic accuracy than to accuracy of segmental production. One such study that found the prosodic factors to be more important than segmental and syllable

structures was conducted by Anderson-Hsieh et al. (1992). The study looks at the English spoken by participants with various L1 backgrounds.

Magen (1998) edited the speech of the native speakers of Spanish adjusting certain elements correlated with perceived foreign accent. The results show that the highest effects were found in adjustments of syllable structure, consonant manner of articulation, and word stress. Little effects were found with voice onset timing.

In Munro (1995), all segmental features were removed from the speech of the native speakers of Mandarin learning English. The raters were still able to differentiate between the speech of native speakers and non-native speakers based on prosodic features. Furthermore, sentence-level intonation has been found to be significantly correlated with the degree of perceived foreign accent in the speech of native speakers of English learning German (Jilka 2000).

In the context of second language learning, which is different from foreign language learning, it is difficult to separate a speaker's linguistic proficiency from the listener's attitude toward that speaker's accent. Therefore, the present study, by addressing issues pertaining both to language attitude and to second language phonology, offers a more complete view of the realities of accented speech in modern, multicultural society. The first research question of this study (chapter 1, p. 6) investigates *how* the Romanian accent in English is perceived by native speakers of American English, and the second research question (chapter 1, p. 6) explores in detail *which* factors better predict degree of foreign accent. The first research question explores issues such as which accent the Romanian accent is similar to and how strongly it is perceived by various native speakers of American English. The second research question seeks to address how various

variables linked to the speaker's personal, educational, and linguistic background correlate with the perceived foreign accent. Since Romanian is a relatively understudied language, all these findings will be of value in the broader field of second language acquisition.

Moreover, most studies that have looked at foreign accents had, as their main purpose, the finding of support or of contradiction for the critical age hypothesis. The present study excludes the implications of the critical age period (CAP) (in the classical sense) by using participants who are all well beyond any of the disputed ages of CAP.

2.4 Factors affecting degree of perceived foreign accent

When discussing foreign accents, it is important to note that accents do not exist in a vacuum. More precisely, there are three different components of accented speech. These are the speakers' production, the listeners' perception, and speech-related variables. Furthermore, most studies that look at the degree of perceived foreign accent include variables regarding the listeners' and the speakers' background, speech-related variables, and various methodological factors. On the whole, studies on reactions of native speakers to non-native speakers' speech show a wide variety of results. This is to be expected, given the variety of cultural expectations, focuses, languages tested, groups of raters, and length and methodologies of these studies.

2.4.1 Listeners' background

Studies that look at the listeners' background often include factors such as the listeners' gender, first language, profession (teacher versus non-teacher), expertise

(experienced versus inexperienced raters[2]), degree of training, familiarity with the second language, and whether the listeners in the study are NSs or NNSs.

2.4.1.1 Native speaker versus non-native speaker raters

Fayer & Krasinski (1987) found that Spanish NNSs of English judge accented speech of Spanish learners of English harsher than do NSs of English. The study provides no information, however, about differences between groups of beginner, intermediate, and advanced learners. Elliot (1995) and Olson & Samuels (1973) used both native speakers and near-native speakers as raters in their studies on the pronunciation of native speakers of English in Spanish and German. There were no significant differences between the native and non-native speakers' ratings reported in either of these two studies. However, most studies use native speakers as their raters, and this seems more appropriate given the close relationship between production and perception of speech.

2.4.1.2 Age of listeners

Burda et al. (2003) found in a study of 72 native speakers of English who listened to utterances produced by native speakers of English, Taiwanese, and Spanish that older adults had more difficulty in understanding accented speech than younger individuals. Furthermore, comprehensibility was highly correlated with accentedness in this study.

[2] The terms listener, rater, and judge have been all used in studies to describe the category of people who express their opinions about the speakers' foreign accents.

2.4.1.3 Gender of listeners

Schairer (1992) found a significant difference between the male and female raters in her study. Female raters tended to be less tolerant with respect to comprehensibility, especially at lower levels of performance. Male raters, on the other hand, were marginally stricter at higher levels of performance. Neither male nor female raters judged speakers differently based upon their gender. The raters' ability to speak the language did not have a significant influence on the ratings either. However, a certain number of errors made by the non-native speakers might not prevent comprehension. In Schairer's study, the object of the conversation was just to communicate a message. In reality, successful communication often requires more than this. Some errors – be they grammatical, lexical, or phonological – can interfere in a successful social, cultural, or personal rapport between the interlocutors even if they do not prevent comprehension (Guntermann 1978).

2.4.1.4 Teacher versus non-teacher raters

Galloway (1980) and Ervin (1979) looked at teachers, non-teachers, NSs, and NNSs, and both authors found that native speaker, non-teachers show the most tolerance for NNS communication.

2.4.1.5 Self-perception

Whereas most studies look at the listeners' perception of foreign accent, great value and insight also comes from the speakers' self-evaluation. One example is Derwing's study (2003), in which the author looked at 100 ESL learners of various L1 backgrounds in Canada and their attitudes toward foreign accents. Most ESL students, all

of which were immigrants to Canada (and all of intermediary proficiency), wished to improve their accents and sound native-like. However, they did not consider the prospect of losing their foreign accent a threat to their identity. Rather, they considered their identity tied to their first language proficiency. Furthermore, more than half the 100 participants in this study blamed their communication problems on pronunciation. When asked to point out specific pronunciation problems, however, most ESL learners had a hard time naming any. The ones who did name some problems mentioned segmental features (e.g., certain vowels and consonants) and, in very few cases, prosodic features (e.g., intonation). This result shows that there is a significant lack of awareness of prosodic problems among NNSs. Numerous studies, however, show that prosodic features can affect communication more significantly than segmental features.

2.4.2 Speakers' background

As far as the speakers are concerned, as with the listeners, there are numerous factors that researchers have taken into consideration when conducting studies about foreign accents. Speaker background components include the speakers' first language (L1), age of arrival (AOA) or age of learning (AOL), length of residence (LOR), formal instruction, pronunciation training, motivation, and gender, among others.

2.4.2.1 L1s and L2s studied

The vast majority of studies have looked at the foreign accent of learners of English. The speakers come from a variety of L1 backgrounds including Spanish (Asher & Garcia 1969, Flege & Fletcher 1992), Arabic, Persian, Japanese, Thai (Suter 1976,

Purcell & Suter 1980), Italian (Oyama 1976, Missaglia 1999, Flege et al. 1995, Flege et al. 1977), Dutch (Bongaerts et al. 1995, Bongaerts et al. 1997), Russian (Thompson 1991), Swedish (Markham 1997), and Korean (Flege et al. 1999b). Other studies look at target languages other than English, and these include Spanish (Elliott 1995, Guion et al. 1999, 2000), Russian, Hebrew (Seliger et al. 1975), Chinese, German (Olson & Samuels 1973, Missaglia 1999, Moyer 1999), French (Neufeld 1979, 1980), Italian, Dutch (Snow & Hoefnagel-Höhle 1977), Thai (Wayland 1997), and Korean. Some studies included speakers from several L1 backgrounds (Suter 1976, Purcell & Suter 1980, Tahta et al. 1981, Piper & Cansin 1988). Suter (1976) and Purcell & Suter (1980) looked at the effect of L1 background on degree of foreign accent, and they found it to be the strongest predictor of degree of foreign accent. This means that L1-L2 distance is very important. The present study, by looking at the Americans' perception of the Romanian accent in English, fits well into the existing body of literature. On the one hand, along with numerous existing studies it looks at English as an L2, and on the other hand, it adds a new language –Romanian – to the L1s explored by researchers thus far.

2.4.2.2 Age of arrival

The one factor that has been cited the most in linguistic studies as being linked to degree of foreign accent is age. Tremendous work has been done on the critical age period and its relationship to the ability to attain native-like speech. However, its existence, definition, age limit, and explanation are still very much debated. Researchers have reached various conclusions as to when the critical period ends. Scovel (1988) suggested the age of 12, Patkowksi (1990) the age of 15, Long (1990), concluded that it

is the age of 6. Studies have not proven that all children under a certain age (be it puberty or the age of 6) are guaranteed to speak accent-free. For instance, Flege et al. (1997) found in their study on Italian immigrants to Canada that even the early bilinguals (mean AOL[3] 3.2 years) had a detectable foreign accent. Similarly, Thompson (1991) found that native speakers of Russian learning English who came at the age of four were detected with a foreign accent. At the same time, it has not been proven that it is impossible to speak accent-free after the age of puberty. Bongaerts (1997) found that five Dutch adult learners of English were given ratings within the native speaker range. Flege found that 6% out of 120 native speakers of Italian with AOAs between 12 and 16 were rated as native speakers. Moyer (1999) found one native speaker of English learning German with an AOL of 22 who was consistently rated as a native speaker. Singleton & Ryan (2004) conducted an exhaustive review of the literature and concluded that there is good support for the claim that in the long run younger children achieve higher levels of proficiency than those who begin later in life. Most studies found no sharp discontinuities, but rather a linear relationship between age and the perceived foreign accent (e.g., Asher & Garcia 1969, Flege & Fletcher 1992, Flege et al. 1995, Oyama 1976, Patkowski 1990, Thompson 1991, Piske et al. 2001, Moyer 1999). This linear relationship between age and language proficiency has caused researchers to adopt the term “sensitive period” in place of “critical period.” A sensitive period fits better the findings of numerous studies that it is “easier to learn a foreign language during a certain period” rather than “only possible during a certain period." Moreover, Seliger (1978) proposes that various

[3] Some studies use AOL (age of learning) and other studies use AOA (age of arrival) as a point of reference for the age factor. In some cases AOL and AOA coincide, in others they do not. The present study and most studies cited here use AOA. My main reason for using AOA instead of AOL is the fact that I am looking at the English learned by the speakers as a second language not a foreign language. However, formal instruction of English is included in the study.

sensitive periods apply to various aspects of the language (syntax, morphology, and phonology) and that the sensitive period for phonology ends the earliest. It should be noted that the two terms “critical” and “sensitive” period are often used interchangeably in the literature.

There are a few studies that are contrary to the findings that age is directly proportional to the degree of perceived foreign accent. Those that are can be divided into two broad categories: studies that look at learners enrolled in foreign language courses in their own country and studies that examine learners immersed in second language courses in the country where the target language is spoken. Kuusinen & Salin (1971), Locke (1969), Stapp (1999), and Politzer & Weiss (1969) looked at the correlation between age and a foreign language taught in school and found that the older learners performed better than the younger learners. However, all these studies considering the effects of age on perceived foreign accent also report that there are factors other than age that might contribute to the older children's better performance. In Politzer & Weiss’ study, the older children learning French were also learning Spanish as a foreign language. In Stapp’s analysis, the older children, who were native speakers of Japanese learning English, had been previously exposed to some English.

Other studies look at short-term foreign language immersion programs. Snow & Hoefnagel-Höhle (1977) found that older children and adult native speakers of English learning Dutch achieved better pronunciation than younger children when participating in such programs. However, this study only found that the older children and adults performed better than the younger children for a short period of time, at the early stages of acquisition. It and similar studies generally do not include in their conclusion and

major findings the fact that the younger children caught up and *surpassed* the older children before the end of the study.

2.4.2.3 Length of residence

Another factor that has been often found to have a statistically significant effect on the perceived foreign accent is the length of residence of the speakers. Studies generally show that the longer the speakers reside in the country of the language they are learning, the better their foreign accent is perceived by native speakers (e.g., Asher & Garcia 1969, Purcell & Suter 1980, Flege & Fletcher 1992, Flege et al. 1995, and Flege et al. 1999b). However, in many studies length of residence has been found not to be the sole predictor for success in L2 learning, and oftentimes this factor is relevant only when coupled with age of arrival. It often happens that children who have lived longer in an L2 environment also arrived at an earlier age. Still, there are also studies that have found no effect of LOR on the degree of foreign accent (e.g., Oyama 1976, Tahta et al. 1981, Flege 1988, Thompson 1991, Elliot 1995, and Moyer 1999). Although some studies looking at the correlation between LOR and foreign accent contain contradictory findings, the researchers all share the belief that LOR generally has an effect on inexperienced L2 learners but not on experienced learners.

2.4.2.4 Amount of language use

Amount of first language (L1) use versus second language (L2) use by non-native speakers has also yielded a positive correlation with the degree of foreign accent. The first authors to look at the relationship between language use patterns and degree of

foreign accent were Suter (1976) and Purcell & Suter (1980). These researchers asked their L2 learners to indicate the amount of time they speak English (L2) at home, at work, and with friends. Purcell & Suter found that a combined look at the length of a language learner's residence and her amount of L2 use at home provides a good indicator of degree of foreign accent. Amount of English spoken at work and with friends, however, was no indicator of degree of foreign accent. Tahta et al. (1981), in their study on 109 L2 learners of English in the UK having various L1 backgrounds, also found the amount of L2 use to be significantly correlated with the perceived foreign accent of the participants. The amount of English spoken at home was the second strongest indicator of foreign accent after age of learning. Similar were the findings in a study on four groups of Italians matched up by age and amount of L1 use that shows that age and L1 use are good predictors of how well the Italians speak English (Flege et al. 1997). A few studies nevertheless have found no effect of amount of L2 use on foreign accent (Flege & Fletcher 1992, Elliot 1995, Thompson 1991). Thompson (1991) speculated that high amounts of L1 use might have had an effect on the L2 foreign accent of certain native Russian learners of English. Similar were the findings in Guion et al. (2000) on native speakers of Quichua learning Spanish and the L1 and L2 effects on the two languages. The high L1 use speakers had significantly stronger foreign accents than the low L1 use speakers. However, the amount of L1 use had no effect on the speakers' native language.

2.4.2.5 Formal instruction

The term "formal instruction" has been used to refer to two different things in studies of second language acquisition. In some studies, it refers to the number of years

the learners have had instruction in the foreign language. In others, it refers to phonetic (i.e., segmental or suprasegmental) training during the study conducted by the researcher. I see these two things as two completely different variables, so for clarity purposes they will be treated differently. In the present study, "formal instruction" will refer to the number of years the learner had had foreign language instruction in his home country and/or in the new country of residence. If researchers include any form of phonetic training during the study, this will be called "pronunciation training."

Many studies have found that formal instruction has no effect on the degree of foreign accent (Thompson 1991, Elliott 1995, Flege et al. 1995, 1999b). Flege & Fletcher (1992) found a significant relationship between the numbers of years of English language instruction for the native speakers of Spanish, on the one hand, and perceived foreign accent by native speakers of English, on the other. However, Suter (1976) found the amount of formal classroom instruction to be inversely related to perceived foreign accent. These results may be surprising if we look at the overwhelmingly positive results from the effect of formal instruction on other aspects of second language acquisition (e.g., vocabulary, syntax, and morphology). In response, I suggest that an explanation for this negative correlation lies in the fact that foreign languages are mainly taught by non-native speakers and that students inevitably learn the foreign language with the corresponding L1 accent. The inverse correlation is a result of the fact that the longer learners spend in formal instruction, the longer certain nonnative sounds have time to fossilize in their pronunciation of the L2.

Pronunciation training, much more so than formal instruction, has proven a good predictor of foreign accent. Moyer (1999) found that a combination of both segmental

and suprasegmental training improved the perceived foreign accent of American speakers of German. However, segmental training alone had no effect. Derwing & Rossiter (2003) found that the perceived global accent of adult ESL students improved after global pronunciation training focusing on prosodic features. In Bongaerts et al. (1997), five out of eleven late Dutch learners of English were identified within native-speaker ranges. All participants had received intensive training in the production and perception of English sounds. Missaglia (1999) compared two groups of beginner native speakers of Italian learning German who differed in the type of training they received. The group that received prosodic training improved its pronunciation of German significantly more than the group that received segmental phonetic training. Furthermore, the first group performed better on both suprasegmental and segmental production.

2.4.2.6 Gender

Other factors, such as gender have sometimes been found to correlate significantly with the degree of perceived accent (Asher & Garcia 1969, Flege et al. 1995, Thompson 1991, Tahta et al. 1981). In these studies, females usually received higher scores than males. In Asher & Garcia (1969), for instance, differences between males and females were greatest for learners with an AOL between 1-6 years. In this study it was also found that such gender differences decreased as LOR increased. Thompson (1991), in her study on 36 Russian immigrants to the US found that gender (specifically, the fact that females performed better than males) accounted for 11% of the variance in degree of perceived foreign accent.

However, most studies have not found gender to be significantly correlated to the degree of perceived foreign accent (Suter 1976, Snow & Hoefnagel-Höhle 1977, Purcell & Suter 1980, Flege & Fletcher 1992, Elliot 1995).

2.4.2.7 Motivation

Numerous language acquisition studies have shown that students' motivation is a crucial factor in foreign language learning (Gardner & MacIntyre 1993, Gardner & Tremblay 1994, Lukmani 1972, Prawat 1989). Not only can motivation make up for certain lack of aptitude when it comes to foreign language learning, but a lack of motivation can also negatively affect some of the best students' performances. In terms of motivation as related to degree of foreign accent, studies have found mixed results. Suter (1976), Purcell & Suter (1980), and Elliot (1995) found a language learner's concern for good L2 pronunciation to be a very strong predictor of degree of foreign accent. Yet other studies found only some influence of motivation on foreign accent (Flege et al.1995, Flege et al. 1999b). Moyer (1999) found one of the 24 native English late learners of German to be rated within native speakers ranges. Bongaerts et al. (1997) examined 11 late Dutch learners of English and found that five were rated comparably to the native speaker control group. Other studies found no correlation between motivation and degree of perceived foreign accent (Oyama 1976, Thompson 1991).

2.4.2.8 Language learning aptitude

Some people are better than others at various activities, including such things as, sports, writing, drawing, cooking, etc. It would not be unfair to assume from this that

some people are better (i.e., are more talented, have a better aptitude) at learning and/or pronouncing foreign languages. Studies have used two methods to measure learners' language learning aptitude. These include the learners' music ability and their mimicry ability. Whereas music ability has not been found to correlate significantly with learners' foreign accent (Tahta et al. 1981, Thompson 1991, Flege et al. 1995), many studies found mimicry ability to affect degree of foreign accent. Suter & Purcell (1980) found the aptitude for oral mimicry to be a strong predictor of L2 foreign accent. Thompson (1991) and Flege et al. (1999b) also found mimicry ability to predict foreign accent. Ioup et al. (1994) conducted a case study on two native speakers of English learning Egyptian Arabic, one in a natural setting, the other with lengthy instruction before moving to Egypt. The first learner attained native-like speech after a relatively short amount of time, due to her special aptitude for languages, motivation, and hard work.

Piske et al. (2001) raise an important question and suggestion for further research regarding whether people are born with this so-called language aptitude or they develop it over time.

2.4.3 Speech-related variables

Speech rate has also been looked at in several studies. MacKay & Flege (2004) found that in their late Italian-English bilingual group shorter sentences were perceived less accented. Munro & Derwing (1998) found that a higher rate of speech was correlated with a better accent in the English speech of the Mandarin native speakers.

2.4.4 Methodological factors

As far as methodological factors, studies have varied in the number of NSs included. It has been found that the number of native speakers included in the study can have an effect on listeners' judgment of the perceived foreign accent. Flege & Fletcher's study (1992) shows that the more native speakers included as speakers in the study mixed in with the group of NNSs whose accents are evaluated, the lower are the scores given to non-native speakers. Native speakers are generally included in the studies to set the native-speaker norm. Another good reason to include native speakers is to verify the reliability of the listeners. If certain listeners fail to recognize native speakers, they are possibly inappropriate for the purposes of the study and should be excluded from any conclusive data analysis.

There are several methods of rating available in rating speakers' degree of foreign accents. In a comparative study on interval scaling versus direct magnitude estimation, Southwood & Flege (1999) found that interval scales for perceived foreign accent are reliable. On a seven-point scale, some ceiling effect might occur. Therefore, nine or eleven-point scales are optimal according to those researchers.

Degrees of foreign accents are, as we see, influenced by numerous factors. Some of these factors are easier to quantify than others, and there might even be some factors we cannot account for. However, the factors that have been found consistently significant when linked to non-native speakers' foreign accents are age, length of residence, L1 use, and formal instruction.

2.5 Second language theories

So far, I have elaborated on the existence of foreign accents, their effects on the listener, their consequences, and the factors that affect the degree of (perceived) foreign accent.

The issue of foreign accents has been discussed within a number of second language acquisition frameworks. I am going to briefly review the most relevant theories. These include the Contrastive Analysis approach (CA), Error Analysis (EA), Markedness Differential Hypothesis (MDH), Speech Learning Model (SLM), The Similarity Differential Rate Hypothesis (SDRH), and Ontogeny Phylogeny Model (OPM).

The Contrastive Analysis approach (Lado 1957) claims to explain and predict all errors made by second language learners as being due to transfer errors from L1. According to the CAH, the areas of the L2 which differ from the learner's L1 will be difficult. Although this approach has been around for a relatively long period of time, it is very easy to find counterevidence. Also, the degree of predictability of the CAH varies among the fields of phonology, syntax, and morphology. It has been found that more interference occurs in areas of phonology; therefore, the CAH in this area manages to predict more errors than in syntax and morphology. Let us consider, for example, learners of German and English when it comes to the acquisition and production of final obstruents in German and English. German has both voiced and voiceless obstruents, in initial and medial positions, but the voiced obstruents are devoiced in final position. English has voiced and voiceless obstruents in all positions – initial, medial, and final. According to the CAH, German learners of English should have problems voicing final obstruents, and English learners of German should have problems devoicing final

obstruents. It has been found, however, that English learners of German have no difficulties with the devoicing of final voiced obstruents; it is only the German learners of English who cannot produce voiced final obstruents.

Although many linguists rushed to completely discredit the CAH and replace it with new, yet still incomplete approaches, I think that when the CAH is extended or is considered in combination with other theories, this approach can still be a valid part of second language theory.

Error Analysis (Corder 1971) is a more recent approach to the CAH. It is quite successful at what it proposes to do. This approach compared to the CAH does not claim to predict any errors; it simply analyzes in depth the errors made by second language learners (SLL), and based on these errors, it tries to better understand the second language acquisition (SLA) processes. It gives us valuable insight into second language theories. However, Error Analysis has been criticized because it tends to ignore all the correct writing and production of learners. Eckman (1977) described it as simply a "heuristic for analyzing errors."

Since the CAH and the EA both proved to be insufficient theories in SLA, Eckman (1977) developed the Markedness Differential Hypothesis (MDH). This hypothesis is based on the fact that, in addition to interference, we also need to take into consideration the universal of markedness in order to better predict second language errors. Markedness means that phenomenon A is more marked than B if the existence of A implies the existence of B, but not vice versa.

The MDH claims that more marked sounds will be acquired after less marked sounds. In other words, marked sounds are more difficult to acquire than unmarked

sounds. One example of markedness would be the voicing contrast of obstruents across languages. Voicing contrast in initial position is less marked than in medial position, which in turn is less marked than this contrast in final position. Thus, the location of a voiced/voiceless contrast further to the right (i.e. toward the end of the word) necessarily implies the finding of such contrasts toward the left (the beginning of the word). This means that voicing in final position is very marked. The markedness rule establishes a directionality of difficulty which was very much missing from the CAH. If we look back at the example of final obstruents in German and English and add the markedness rule to the difference between the two languages, we find an explanation for why English learners of German will have no problems producing voiceless obstruents in final positions in German (since it already exists in their language and because voicelessness in final position is unmarked). However, the German learners of English will have trouble producing voiced obstruents in final position due to the fact that this contrast does not exist in their native language and this phenomenon is more marked.

Flege has extensively investigated the acquisition of similar versus dissimilar sounds. In his Speech Learning Model (SLM), Flege (1987) claims that the degree of success with which L2 sounds can be learned is largely dependent on the perceived phonetic similarity between L1 and L2 sounds. The SLM hypothesizes that category formation is more likely for L2 sounds that are very different from the closest L1 sound than for L2 sounds that resemble the closest L1 sound. If a new phonetic category is not formed for an L2 vowel or consonant, the phonetic properties of the L2 sound and the corresponding L1 sound will be merged into "a composite L1-L2 category" (36), which will result in an accented production of the L2 sound. The reason for this counterintuitive

phenomenon is that gross differences are more salient and more easily noticed, whereas very similar sounds will evade the learner's attention due to the equivalence classification. Learners do not perceive the slight differences in the similar sounds, and as a result they also produce these sounds inaccurately. Furthermore, the SLM claims that category formation increases linearly as perceived cross-language similarity decreases. One such example would be the acquisition of /u/ and /y/ in French by English speakers. Flege (1987) found that an accurate pronunciation of /y/ – a different L2 sound – is acquired faster than of /u/ – a similar sound to the English /u/.

In search of a more complete second language theory, Major & Kim (1996) designed the Similarity Differential Rate Hypothesis (SDRH) which comprises the similarity principle, markedness, and rate of acquisition. We saw that the CAH failed to predict numerous errors made by second language learners. Eckman's MDH brought the CAH one step further by including markedness in the theory of SLA, and thus having it predict the directionality of difficulty. Flege in his SLM talks about the acquisition of similar versus dissimilar sounds. While every one of these aspects is very important, they do not tell us too much about the way they interact with each other. Since learning a foreign language is a long and complex process and the learners' interlanguage is dynamic and always changing, it is not enough to look at their performance at certain points in time. Major points out that it is very important also to look at the rate of acquisition.

We have seen that according to the SLM, it is more difficult to acquire similar sounds than dissimilar sounds, and, as it turns out, markedness slows the rate of acquisition. Similarity and markedness can work with each other or against each other. A

similar and marked sound will be acquired at a very slow rate, whereas a dissimilar and unmarked sound will be acquired at a fast rate. If the two work against each other it depends from case to case to establish whether the markedness or similarity factor is stronger. In Flege's study of English speakers learning French /y/ and /u/, it was found that the dissimilar sound /y/ was acquired before the similar sound /u/. If at a point t1 in time the accuracy of /y/ is 10% and of /u/ is 40%, but at point t2 in time the accuracy of /y/ is 60% and of /u/ is 70%, we can conclude that the rate of acquisition for the dissimilar sound was greater than for the similar sound. If either /u/ or /y/ were more marked, this would result in a slower rate of acquisition for that specific sound.

After the SDRH, Major developed a new model, called the Ontogeny Phylogeny Model (OPM) (2001). Since, the phylogeny model is irrelevant to the topic of the present study, only the Ontogeny Model (OM) will be discussed. In the context of foreign language learning, ontogeny refers to the changes in the language learning process of an individual. Major's OM looks at the interaction of language transfer and developmental processes in the SLA process under the chronological, stylistic, similarity, and markedness corollaries.

In an idealized situation, under the chronological corollary, at the beginning of the learning process, the learner's interlanguage consists of 100% L1 and at the end of the learning process it consists of 100% L2. In between, there are various degrees of L1, L2, and Universal Grammar (UG). At the beginning of the learner's interlanguage, there is much language transfer, and this decreases over time. Developmental processes increase and then decrease over time. An example to illustrate this interlanguage dynamics can be found in Wode's German-English bilingual children (1978). At the beginning, the

children produced a uvular [R] transferred from German, and later they produced the [w] sound, which is also a common developmental process often found when English children learn to speak. Eventually, the children produced the American English retroflex [ɹ].

As far as the style corollary is concerned, as speech changes from informal to more formal, there are initially more transfer processes and they decrease over time, and the developmental processes increase and decrease. Again we have Wode's daughter who in informal, casual speech would produce the uvular [R] transferred from German, and in "imitation-games" – which would be more formal – she produced the [w] sound, a developmental error.

Under the corollary of similarity, more language transfer occurs for similar sounds, and more developmental processes for dissimilar sounds. For example, a native speaker of English learning Spanish replaces the Spanish unaspirated dental /t/ with the English alveolar aspirated /t/, because these two sounds are very similar. However, the same speaker might not transfer the English retroflex [ɹ] for the Spanish trilled [r], since these two sounds are very dissimilar, and s/he may use universal substitutions (Major 2001:101).

If we take markedness into consideration, there are more universals for more marked sounds, and there is more transfer for unmarked sounds. Major (1996) found that for initial and final consonants and consonant clusters, the more marked the environment, the more universals were used.

Each of the above-mentioned theories at one time or another seemed to be a breakthrough and intended (and often claimed) to make up for everything the previous

theories lacked. However, I feel that these theories are by no means mutually exclusive or, taken separately, comprehensive. Therefore, the analysis of the Romanian accent in English in this study will utilize aspects of all these theories, concentrating especially on the Contrastive Analysis approach, the relationship between perception and production, and the phenomena of markedness and similarity.

2.6 The Romanian sound system

Studies in Romanian phonology and especially English second language phonology for Romanians have been scarce.

One in-depth contrastive analysis study between Romanian and English (mainly British English but with numerous references to American English) is the book by Augerot et al. (1984) *The Sounds of English and Romanian*. Although published about two decades later than the classic contrastive analysis studies on Spanish (Stockwell & Bowen 1965), German (Moulton 1963), and Italian (Agard & DiPietro 1965), the theoretical framework places it in the same series. *The Sounds of English and Romanian* is a thorough analysis of the vowel and consonant systems, syllable structures, stress, and rhythm of English and Romanian. It also contains a brief chapter on intonation, which both points out the difficulties of analyzing and teaching intonation and offers suggestions for future research. The third chapter of the book deals with the frequency of English and Romanian sounds, an important but often overlooked aspect of language analysis when discussing foreign accents. Although the study is a clear contrastive analysis of the Romanian and English sound systems, the authors acknowledge the fact

that not all errors made by Romanian learners of English are due to the differences between the structures of the two languages.

Garnes (1980) looks at the ability of American students to perceive and produce unaspirated voiceless Romanian plosives in word-initial position. Although both English and Romanian have voiced and voiceless plosives in initial positions, the languages differ in terms of phonetic realization of these plosives. In Romanian, voiceless stops are unaspirated and voicing and articulation occur simultaneously, whereas in English voiceless stops are aspirated and voicing occurs after articulation. Voiced stops in Romanian are fully voiced, whereas English voiced stops are only partially voiced. There is no difference in the two languages, however, when it comes to voiceless stops following /s/, as in both Romanian and English the stops are unaspirated and voicing occurs simultaneously with articulation. The author of the study found that, as hypothesized, students' perception of the articulation of Romanian plosives precedes production. The author looked at factors such as the participants' knowledge of other languages that have unaspirated initial plosives, the participants' motivation (American students with Romanian background being expected to be more motivated), and the method of presentation of the material (e.g., presentations using word lists versus those using sentences). However, the factor that most influenced accuracy of perception was place of articulation. The further back the place of articulation occurs, the more accurate the students' perception of distinguishing unaspirated voiceless and (fully) voiced plosives in Romanian. It was also found that students were not able to correctly produce the initial voiceless unaspirated plosives, a finding that supports the hypothesis that perception precedes production.

Superficial contrastive analyses can be found in the introductory pages of dictionaries, Romanian language guides, and the pronunciation sections of textbooks for learning Romanian. Often, some of the sounds are incorrectly presented, and this can have unwanted results for a person who is trying to learn to correctly pronounce the English sounds.

In order to give the reader some background on the source of many of the pronunciation errors of Romanians in English, I will start by presenting a detailed contrastive analysis of the Romanian-English vowel and consonant systems. There are numerous distinctive features in the phonological inventories of Romanian and English which can cause difficulties for an adult speaker of Romanian learning English. Romanian compared to English has a relatively simple vowel and consonant system. Therefore, a Romanian adult learning English often has to learn to produce new sounds that do not exist in Romanian, but it is not the case the other way around. This presentation of segmental features in Romanian and English will be followed by a presentation of suprasegmental features in the two languages.

2.6.1 Segmental features

2.6.1.1 Vowels

The vowel inventory in Romanian consists of seven simple vowels, two diphthongs ([ea] and [oa]), and two semivowels ([j] and [w]) (Mallinson 1986:331).

The distinctive features for Romanian vowels are front-back and low-high.

	front	central	back
high	i	ɨ	u
mid	e	ə	o
low		a	

Fig. 2.1 Romanian vowel chart (adapted from Mallinson 1986:335)

The vowel chart for American English differs from the Romanian vowel chart in several ways, as can be seen below:

	front	central	back
high	i		u
mid-high	ɪ		ʊ
mid	e	ə	o
mid-low	ɛ	ʌ	ɔ
low	æ	a	ɑ

Fig. 2.2 English vowel chart (adapted from Ladefoged 2001:36)

Phonemic distinctions

When comparing the Romanian and American vowel charts, we notice a significant quantitative[4] difference between the two inventories. The American vowel chart has almost twice as many vowels as the Romanian vowel chart. That means that Romanians have to learn a relatively large number of new vowels. As far as Romanian

[4] Referring to the number of vowels, not their duration

vowels that have no close equivalent in English, there is one such vowel. It is the central close vowel [ɨ] in the Romanian vowel inventory which is absent from the American English one. The existence of the phoneme [ɨ] in Romanian presents no problems to Romanians speaking English. For Romanians, it is rather the vowels existent in the American English vowel inventory and absent from the Romanian that cause more problems. It should be noted that the vowel [ɨ] exists in some American speakers' speech. According to Augerot et al. (1984:29), [ɨ] is used in both British and American English as an allophone of /ɪ/, and in American English "it is fairly widely used in free variation with /ə/ in the unaccented forms of *but, just, such*, etc., particularly in rapid, familiar speech" (29). Another good example to illustrate the existence of [ɨ] is the phrase "hit'**e**m" [hɪtɨm].

Romanian, like all other Romance languages, does not have a tense/lax or short/long distinction. On an interesting historical side note, Latin had five pairs of long-short vowels (Posner 1996:106). Given the lack of this distinction in Romanian, the pairs [i:], [ɪ] and [u:], [ʊ] are somewhat problematic for Romanians. The Romanian vowel [i], as far as duration and acoustic features are concerned, is somewhere between the two English vowels but somewhat closer to the tense [i:] (Augerot et al. 1984:22). The authors of *The Sounds of Romanian and English* even claim that [ɪ] is one of the most difficult English vowels to be acquired by Romanians (25). My personal experience supports their claim. I have often heard Romanians, when talking about where they reside, to say "I live" pronounced [ai li:v]. I have had to pause to ask myself where they are leaving for. Furthermore, with regard to my own speech, I only realized that this

tense/lax distinction existed in English when I took a Phonetics/Phonology class during my Ph.D. course work. This was after eight years of English in grade school, four years in college, and one year of living in the United States.

Similarly, the Romanian [u] is between the English [u:] and [ʊ] but closer to the tense [u:]. Furthermore, many English speakers, both British and American, "diphthongize /u:/ towards [w], so that what they actually utter is either [uw] or [ʊw]: e.g. moon [muwn]" (Augerot et al. 1984:33). According to the same authors, Americans "use a very advanced, very slightly rounded variety of /ü/" (33). With both [i:], [ɪ] and [u:], [ʊ], the lack of contrast in Romanian often leads to miscommunication (e.g., [ship] instead of [shɪp], [hit] instead of [hɪt], etc) or merely to the production of non-words ([tip] instead of [tɪp], [put] instead of [pʊt], etc).

In addition to the pairs [i:], [ɪ] and [u:], [ʊ], there are other instances where there are two English vowels in the same phonetic space for one Romanian vowel. The Romanian [e] might be said to correspond to the English [ɛ] and [æ], and the Romanian [a] corresponds to the English [ɑ] and [ʌ].

According to Augerot et al. (1984), the Romanian [e] is a bit tenser and more open than the English [ɛ], but the difference is negligible. The absence of the vowel [æ] from the Romanian vowel inventory is more problematic. The low front vowel [æ] is often pronounced as [ɛ] (or Romanian [e]) by Romanians. Because in English there are numerous minimal pairs based on these two vowels, this can cause further miscommunication ([dɛd] – [dæd], [bɛd] – [bæd], [bɛt] – [bæt]). It should be mentioned that in the speech of some Transylvanians, we can find a vowel [ae] very similar to the

English [ae]. However, since the Romanians who have [ae] in their vowel inventory simply substitute this vowel for the vowel [e] or use the two vowels as allophones of the phoneme /e/, the question is whether and how they transfer [ae] into English. The existence of the vowel [ae] in their native language inventory will not automatically help these Romanians to make the proper distinction between the English phonemes [ɛ] and [ae].

As mentioned above, the Romanian vowel [a] occupies the phonetic space covered by the English vowels [ʌ] and [ɑ]. The low back vowel [ɑ] is similar to the Romanian [a], so no problems are expected with Romanians' production and perception of the English [ɑ]. However, the low but central vowel [ʌ] sounds quite different to Americans' ears from the vowel [ɑ], and Romanians' tendency to substitute the Romanian [a] (similar to [ɑ]) will be more problematic. For example, Romanians will pronounce the word “but” [bʌt] with the vowel [ɑ] like in “father.”

Use of the same symbol for the schwa [ə] in both Romanian and English can be misleading because the two sounds are produced differently in the two languages. In English the schwa is a reduced unstressed vowel, whereas in Romanian this vowel always carries some degree of stress. In addition to the stress distinction, the Romanian [ə] is "slightly lower (more open than English [ə]) and is articulated more to the front than the latter" (Augerot et al. 1984:30). At this point, it should be added that according to some linguists the only real difference between [ʌ] and [ə] is stress. If that were true, Romanians should have no problem using the stressed vowel [ə] as in the word "băţ" [bəts] (stick) in the pronunciation of the English word "but" [bʌt]. However, the English

[ʌ] is lower than the Romanian [ə], thus the two vowels are not interchangeable and I would argue that [ʌ] and [ə] differ in phonetic properties other than just stress.

Based on the above-described analysis of English and Romanian vowels, we can conclude that the main task of the Romanian learner of English is to learn new vowel contrasts. The task is all the more difficult due to the fact that English distinguishes between certain vowels by making use of additional features such as vowel quality (i.e., whether the vowel is tense or lax) and quantity (whether the vowel is long or short). There are roughly twice as many English vowels as Romanian. Romanians may learn to more accurately perceive and produce this greater vowel variety when their awareness about these features is raised and if they practice with minimal pairs.

Allophonic distinctions

So far, we have seen that a major problem for Romanians learning English is learning new phonemic contrasts. These errors might be overcome by more experienced learners. However, very advanced learners might have to overcome other, more subtle, problems. Based on Flege's Speech Learning Model we expect learners to find it easier to learn dissimilar sounds than similar sounds. Therefore, experienced Romanians may produce the dissimilar sounds [ɪ, ʊ, æ, ʌ] more accurately than the similar sounds [i, u, ɛ, ɑ].

In English, vowels are longer word-finally, somewhat shorter in syllables closed by voiced consonants, and shorter still in syllables closed by voiceless consonants (e.g., see, seed, and seat which in phonetic transcription are [si] > [sid] > [sit]) (Ladefoged 2001:83). In Romanian, this allophonic rule does not exist, and therefore these three vowels will probably have the same duration when pronounced by a Romanian.

Furthermore, Posner describes Romanian vowels as being clear, whereas English vowels are drawled and relax into diphthongs (1966:102).

2.6.1.2 Consonants

Phonemic distinctions

There are also numerous distinctions between English and Romanian consonants. Some of the more salient contrasts between the two languages are the lack of the phonemes [ɹ], [ð], [θ], and [ŋ] in the Romanian consonant inventory. Romanians will approximate these English sounds with the closest Romanian sound. Beginners often produce [d] or [z] for [ð] and [t] or [s] for [θ]. Moreover, sometimes Romanians, "trying to emphasize the fricative character of [θ ð], but sensing they are not [s, z]," will replace these two sounds with [f] and [v], respectively (Augerot et al. 1984:50).

Romanian has a trilled or flapped [r], whereas English has a retroflex [ɹ]. Augerot et al. (1984:53) describe the Romanian [r] as a "lingual, rather strongly rolled voiced sound, similar to the Scottish [r]." Given the fact the Romanian [r] and the English [ɹ] are so different from one another, they should be taught as two completely different sounds.

The velar nasal [ŋ] is a separate phoneme in English but just an allophone of [n] when followed by [k] or [g] in Romanian. The Romanian learner's difficulties in correctly pronouncing [ŋ] will arise from the very fact that "it is so perfectly welded with the following [k] and [g], that the Romanian student will find it quite difficult to separate the two" (Augerot et al. 1984:55). Romanians will most probably pronounce the word "sing" as [sing] or [siŋg] instead of [siŋ]. The notion that Romanians replace the English [ŋ] with [n] or [ŋg] is backed up by findings by Pârlog (1973) cited by Augerot et al.

(1984:55) of several tests regarding the production and perception of the velar nasal [ŋ] by Romanian speakers of English. Pârlog found that Romanians perceived the velar nasal [ŋ] mainly as [n], whereas they often produced it as [n/ŋ + k, g]. Similar results were found in Ulivi (1973) cited by Augerot et al. (1984:55) in a study of acoustic measurements on the production of [ŋ].

The mispronunciation of the sounds [ð], [θ] and [ɹ] stem principally from the fact that Romanians find these sounds odd and difficult or unnatural to pronounce. Many speakers overcome this hurdle, and many Romanians have problems with other sounds that present more subtle distinctions.

Allophonic distinctions

In English there are many allophonic rules that do not exist in Romanian. For example, in English the voiceless stops /p, t, k/ are aspirated word-initially, unaspirated after /s/, and unreleased word-finally (Ladefoged 2001:57). The Romanian voiceless stops /p, t, k/ correspond to the English unaspirated sounds when following /s/. Out of the three English allophones (/t/ actually has five), this unaspirated [t] is arguably the less frequent one. This means that positive transfer for Romanians only occurs in few cases. Aspiration is a very important feature in English voiceless plosives in word and syllable initial position. For purposes of distinguishing voiced and voiceless plosives in word and syllable initial position, aspiration is even more important than voicing. As Augerot et al. (1984: 48) point out, the most important difference between *pen* and *Ben* is not the voicing difference but the fact that the former word starts with an aspirated plosive and the latter with an unaspirated plosive. Moreover, final / p, t, k/, unreleased in English, are sometimes aspirated in Romanian.

Furthermore, in English, the consonants /t/, /d/, and /n/, when they occur in intervocalic position with the stress on the first vowel, are pronounced as a tap [ɾ] (Ladefoged 2001:59). Romanians will tend to pronounce these sounds as they are spelled.

English has two allophones for /l/, a clear (front) [l] in syllable-initial position and a velarized (back, dark) [ɬ] in syllable-final position. Moreover, in most American English dialects, all examples of /l/ are comparatively velarized (Ladefoged 2001:55). Romanian only has one [l], produced as a clear [l] in all environments. In addition to the quality of the liquid /l/ that differs between Romanian and the two English allophones, the place of articulation is different in English and Romanian. The English /l/ is produced in an alveolar position, whereas the Romanian /l/ is articulated dentally.

There are more distinctions between Romanian and English sounds in terms of place of articulation. In Romanian /t/ and /d/ are dental stops, whereas the English sounds are alveolar stops. English alveolar stops become dental only when followed by interdental fricatives (e.g., “width”) (Ladefoged 2001:59). As a matter of fact, Romanian contains no less than seven dental sounds /t d ts s z n l/, whereas English has either none or two, depending on whether we consider /ð/ and /θ/ to be dental fricatives (they are often described as interdental) (Augerot et al. 1984:50). If we compare the places of articulation of Romanian and English consonants we notice that English consonants tend to be more retracted in their place of articulation. As can be seen in the table below, there are eight consonants in Romanian that are more fronted than their English equivalents: /t d s z n l/ are dental in Romanian and alveolar in English; the Romanian [r] is alveolar whereas the English [ɹ] is postalveolar; and the /h/ is articulated as a velar sound in

Romanian but as a glottal sound in English. Although the symbol [x] would be a more accurate transcription for the Romanian sound, [h] is used in most cases.

		bilabial	labio-dental	dental	alveolar	post-alveolar	palato-alveolar	palatal	velar	glottal
Plosives	E	p b			t d				k g	
	R	p b		t d				(k' g')	k g	
Affricates	E						tʃ dʒ			
	R			ts			tʃ dʒ			
Fricatives	E		f v	θ ð	s z		ʃ ʒ			h
	R		f v	s z			ʃ ʒ		h	
Nasals	E	m			n				ŋ	
	R	m		n						
Laterals	E				l					
	R			l						
Frictionless continuant	E					ɹ				
Trills	R				r					
Semivowels	E	w						j	w	
	R	w						j	w	

Fig. 2.3 The place and manner of articulation of English and Romanian consonants (adapted from Augerot et al. 1984:44)

Little has been said about the [h] sounds in English and Romanian so far. In English, [h] is a glottal fricative that only occurs in syllable initial prevocalic positions (Augerot et al. 1984:56). In word initial position it can be viewed as a "strong voiceless start of the vowel" (56). When it occurs in medial position, like in the word *perhaps*, speakers may pronounce it as a voiced glottal fricative. In Romanian, depending on classification, /h/ has two or three allophones. Lombard (1935:112f) in Augerot et al. (1984:56) and Graur & Rosetti (1938:48) cited by Augerot et al. (1984:56) classify the /h/ as a voiceless velar fricative with a palatal allophone when preceding or following [i] or [e] (e.g., "architect" (architect), "tihnă" (quietude)). Puşcariu (1931-1933:22) cited by Augerot et al. (1984:56) "distinguishes among three allophones of /h/: a voiceless glottal fricative [h], in syllable initial position (e.g., "ham" (harness), "pahar" (glass)), a velar fricative [x], in final position or when followed by another consonant (e.g., "duh" (spirit), "hrană" (nourishment)), and a palatal [ç], when followed by [i] or [e] (e.g., "himeră" (chimera), "arheolog" (archeologist))."

2.6.2 Suprasegmental features

Suprasegmental features are much harder to quantify and describe than segmental features and they include stress, length, intonation, rhythm, and tone. Since neither Romanian nor English are tonal languages, tone will not be discussed here. Length can refer to syllable length which is, in turn, determined by the individual segments in the syllable. Since I have covered vowel length (e.g., [i] versus [ɪ]), in the section on segmental features, I will not discuss it again. Length can also refer to geminate consonants (e.g., "nonno" [nɔnno] (grandfather) versus "nono" [nɔno] (ninth) in Italian)

or to mora, a unit of timing (Ladefoged 2001:232-233). Length as a prosodic feature is more relevant in this study in the way it affects stressed and unstressed syllables. I will deal with length in greater detail under the heading of vowel reduction.

2.6.2.1 Stress

Stress is the emphasis on a word or syllable so that it stands out from other words or syllables (Dretzke 1998:71).

Prator & Robinett (1985:19) claim that stress is the key to pronunciation of an English word. If the wrong syllable is stressed, it might be difficult for listeners to understand what one is trying to say.

When comparing the stress patterns of English and Romanian, scholars have different opinions as to the degrees of predictability of stress in the two languages. According to Mallinson (1986:342), word stress is largely unpredictable in Romanian. In English, however, word stress is largely predictable, but a complex set of rules is necessary to describe stress patterns (Cruttenden 1997:15). We find opposing views in Augerot et al. (1984:85), who assert that "English stress seems more unpredictable than Romanian stress. While Romanian stress falls on one of the last three syllables of a word with a fairly high degree of regularity, English stress in words like photograph but photography, photographic, termite but polite, desirable but admirable, etc., seems to escape any generalization." Regardless of how predictable the stress patterns in English and Romanian are, some problems with stress might arise due to certain native language habits in the learners' speech. Both English and Romanian share a large number of words of Greek and Latin origin, and since the English stress patterns for such words often

differ from the Romanian stress patterns, learners will often transfer the accentuation from the native language into the target language.

The two languages differ not only in degree of predictability of stress and stress patterns, but also in degrees of stress itself. Romanian does not make use of secondary stress, whereas English distinguishes between as many as three degrees of stress. This differentiation of degrees of stress gives the Romanian listener the impression that English is "sung" when compared to Romanian (Augerot et al. 1984:98). This said, it should be also added that stressed syllables in Romanian are not as strongly stressed as primary-stressed syllables in English, and unstressed syllables in Romanian are never as reduced and unstressed as English unstressed syllables. Furthermore, English is not a very inflected language, and successful communication relies more heavily on stress (120).

Word stress in English differs considerably from word stress in Romanian when it comes to compounds. In English, two-word combinations often involve an adjective and a noun or a noun and a noun (e.g., "bìg cár", "tàll buílding"). These combinations are called "phrases," and unless there is the need for special emphasis, the primary stress is on the second element of the phrase. Another type of combination, known as a compound, is stricter in terms of the variation it allows. Examples of this latter type include "líghtning bùg" and "blúe bòok" (Cruttenden 1997:17). In Romanian, compounds are not affected by stress. If the compound consists of a noun and another noun or a noun and a past participle, the two words are linked by a preposition. Examples include "profésor de istórie" (history professor) and "maşínă de cusút" (sewing machine). If the compound is noun-plus-adjective (e.g., "matérie cenuşíe" (grey matter), "cárte vérde"

(green card)), the stress pattern is the same as in a noun phrase ("materiál cenuşíu" (grey material), "cárte vérde" (green book)).

A general description of stress rules and placement of prominence in English at the sentence level can be summed up as follows (Prator & Robinett 1985:21):

1. Some degree of sentence stress tends to fall on all content words within an utterance.

2. When any word receiving stress has more than one syllable, it is only the word's most strongly stressed syllable that carries the sentence stress.

3. Within an intonation unit, there may be several words receiving sentence stress but only one main idea or prominent element (if contrastive, then two).

4. New information tends to receive prominence and generally occurs toward the end of an utterance.

5. When contrast between two elements in an intonation unit is signaled, both of these elements tend to receive contrastive stress.

In English, on the sentence level, articles, pronouns, auxiliary verbs, prepositions, and conjunctions typically occur without a stress, whereas main verbs, nouns, adjectives, and adverbs are typically stressed. Furthermore, unstressed syllables usually have a reduced vowel.

Contrastive analysis of English and Romanian yields different stress patterns in interrogative sentences containing a "*wh*" question word. In English, the last important word in a sentence carries the sentence stress, whereas in Romanian it is the "*wh*" word itself that carries the stress (Augerot et al. 1984:118). Romanians speaking English will tend to automatically stress the "*wh*" word in English.

Stress patterns also determine the rhythm of a language. The fact that Romanian has only one degree of stress compared to three degrees in English contributes to the "rat-a-tat" rhythm of Romanian (or of the Romanian accent in English).

2.6.2.2 Rhythm

According to Prator & Robinett (1985:31), acquiring good English speech rhythm involves:

1. Giving proper emphasis to stressed syllables, and making them recur rather regularly within a thought group.

2. Weakening unstressed words and syllables, and obscuring the vowels in most of them.

3. Organizing words properly into thought groups by means of pauses.

4. Blending the final sound of each word and syllable with the initial sound of the one following within the same thought group.

5. Fitting the entire sentence into a normal intonation pattern.

The major difference between English and Romanian rhythm is the fact that English is a stress-timed language, whereas Romanian is a syllable-timed language. In English, the sequence from one stressed syllable to the next is a rhythm group (RG) (Cruttenden 1997:20) (also known as a foot or stress group (Major 2001). It is important to note that if one rhythm group has five syllables and another one has one, the five-syllable RG will be neither five times as long as the one syllable RG, nor necessarily equally short. The long RG will be reduced as to create the impression of stress-timing in

English (Cruttenden 1997:21). In syllable-timed languages, like Romanian, "syllables tend to recur at regular intervals of time" (Ladefoged 2001:231).

Dauer (1983), cited by Dalton & Seidlhofer (1994:42), claims that stressed-timed and syllable-timed languages should not be viewed as diametrically opposed. This is because all languages have the tendency to reduce vowels in unstressed positions. Some languages reduce them more than others, and English exploits this tendency greatly. In other words, English maximizes the difference between stressed and unstressed syllables.

Vowel reduction

In English, as opposed to Romanian, vowel reduction is much more prominent. Due to the reduction process, in English we deal with both weak and strong forms of vowels which correspond to stressed and unstressed positions. Function words which are relatively limited in number, but have a high frequency in the language best mirror vowel reduction in English. When standing alone or in stressed positions, the vowel quality of function words is strong. When in a sentence, and there is no special emphasis on the function word, the vowel quality is weak. The most common reduced vowels are [ə], [ɪ], and [i], the latter vowel being reduced only in word-final positions.

Romanian, as opposed to the other Romance languages, has more consonants than vowels, more consonant clusters, and more words with consonantal endings (Posner 1966:102), and "spoken Rumanian gives a liquid, palatal impression that makes it sound like some of its Slavic neighbours" (118).

2.6.2.3 Intonation

According to Cruttenden (1997), intonation involves the recurring pitch patterns used to express "a set of relatively consistent meanings" (7). Intonation-groups (also called breath-groups, sense-groups, prosodic phrases, phonological clauses, intonational phrases, intonation units, tone-groups, or tone-units) generally correspond to syntactic constituents. However, many researchers argue that intonation-groups are semantically or pragmatically determined. Further elements important to describe intonation, according to Cruttenden, are the nucleus and the nuclear tone. The nucleus is used to describe the pitch accent which stands out as the most prominent in an intonation group. As to the nuclear tone, there are three basic factors to consider:

1. The initial movement from the nucleus: fall or rise or level.

2. The beginning point of this initial movement: high or low; if there are syllables preceding the nucleus, a step-up will often signal high and a step-down will often signal low.

3. A second change of pitch direction following the nucleus: this produces complex tones such as rise-fall and fall-rise (and even rise-fall-rise).

Hirst & Cristo (1998) describe intonation as being paradoxically at the same time one of the most universal and one of the most language-specific features.

Hirst & Cristo's survey of intonation systems is maybe the first work to compare and contrast ten languages in terms of intonation. Furthermore, the authors developed their own transcription system of intonation that can be applied to any language. Previous transcription systems lacked the ability to be used for other languages than the ones they

were developed for. For instance, ToBI (Silverman et al. 1992) is suitable for transcribing American English intonation but proves inadequate for other languages.

Studies have shown that speakers are able to distinguish the language spoken based on its prosody alone (Ohala & Gilbert 1981, Maidment 1983). Although the present study focuses on second language acquisition and foreign accents, it is worth looking a little bit into the acquisition of prosody in first language acquisition. According to Mehler et al. (1988), as early as four days after birth, babies are capable of distinguishing the prosody of their native language from that of another language. Moreover, several studies point to the fact that prosodic features of a language are the first ones acquired by a child (Kaplan 1970, Crystal 1973, Lieberman 1986, Levitt 1993). However, prosodic characteristics are the last ones to be lost through aphasia (Caplan 1987) and during the acquisition of another foreign language or dialect (Cruz-Ferreira 1984, Bruce & Touati 1990).

Within intonation groups, various stress groups can be distinguished. These stress groups contain one stressed syllable and a number of unstressed syllables. Depending whether the stressed syllable is followed or preceded by the unstressed syllables, these stress groups can be described as left-headed or right-headed, respectively. One major finding as a result of the analysis of a number of different languages is that Germanic languages are left-headed and Romance languages are right-headed. This distinction between right-headed and left-headed stress groups is closely linked to that between “syllable-timed” and “stressed-timed” languages.

Intonation patterns in Romanian can be broadly divided into final rise and final fall. Unmarked statements and "*wh*" questions are both characterized by a final fall

pattern. A falling pattern is also associated with commands. Yes/no questions, however, have a final rise pattern (Mallinson 1986:343-344).

English intonation patterns are more complex. According to Poldauf (1984:17),

> "The general intonation contour of a sentence in English is a melody descending from a relatively high-pitched first stress peak, down to the melodeme. If the sentence is long, the descent may be resumed by re-starting from another fairly high-pitched syllable."

Augerot et al. (1984:134) also agree that English intonation patterns are more complex than Romanian ones. O'Connor & Arnold (1961) cited by Augerot et al. (1984:134) make the observation that rise-fall intonation is characteristic to English and difficult to learn for Romanians.

Furthermore, Romanian, like German, makes use of modal particles to express emotions, whereas English uses intonation for this. Another source for differences in intonation patterns in English and Romanian can be found if we look at word order. English has a more rigid word order than Romanian. It is also for this reason that English does rely more on intonation cues to compensate for the lack of a free word order.

Some questions that can bring insightful information are whether some languages are spoken on a higher overall pitch than others, what is the range of pitch variations used in different languages, and whether declination is present or absent in utterances. J. ‘t Hart (1990) found that two pitch levels are sufficient to describe Dutch intonation, whereas three levels are necessary for English intonation patterns.

A horizontal and vertical analysis of the intonation patterns of the two languages offers a framework for comparison. On a vertical level, English and Romanian vary in the

dimensions of pitch lows and highs. The distance between the low and high levels of pitch in American English is greater than the distance in Romanian. In addition to pitch height, English also uses an intonation contour pattern not found in Romanian. The Romanian pitch pattern is a straightforward rise or fall movement from one syllable to another. In English, there is abundant rise and fall within syllables. Due to these patterns, Romanian sounds more abrupt and English more mellow and melodious. On a horizontal level, we have to look at stress patterns, which in English are stress-timed and in Romanian syllable-timed. Vowel reduction in English is a central element in the rhythm of the American English language. Romanian does not reduce unstressed syllables, whereas English does.

I have listed numerous distinctions between Romanian and English. I would suggest that these are potential problematic areas, and by no means obligatory sources of error. Not all people make all these errors, and some of these errors are easier to overcome than others. As mentioned before, it is often the more subtle distinctions that evade the learner's attention due to interlingual identification. Furthermore, a contrastive analysis of Romanian and English can only explain a part of the errors produced by Romanians learning English. In addition to these errors, we can also expect to find developmental errors and other idiosyncratic errors in the learning process.

CHAPTER 3

METHODOLOGY

This methodology chapter includes a description of the several groups of participants in this study, the materials used, and details about the way the data was collected and analyzed.

3.1 Participants

3.1.1 Speakers

3.1.1.1 Target group

I recorded twenty Romanians living in Georgia for the purpose of this study. All participants had their permanent residence in the United States. The study thus excluded exchange students or temporary visitors.

People's attitude toward the target language and culture along with their motivation to speak English fluently can vary considerably depending on the purpose of their presence in the United States. People's motivation to learn the target language and culture can be broadly divided into instrumental and integrative motivation (Gardner & Lambert 1972). Instrumental motivation refers to the learner's desire to learn a new language in order to gain some social and economic reward through better L2 performance, whereas integrative motivation refers to the learner's desire to integrate into the culture represented by a new language group. A group of immigrants (including

people who do not necessarily think of themselves as immigrants but plan on living in the United States) is likely to be motivated in at least one of these ways.

In order to exclude any possibility of the influence of the "sensitive period," only people with an age of arrival greater than 23 were invited to participate in this study. The participants moved to the United States between the ages of 23 and 59, and they had lived in the United States between 5 and 15 years at the time of the study. They came from various parts of Romania, representing a cross-section of the country. Out of the 20 Romanians recorded, 6 were from Transylvania, 8 from Walachia, and 6 from Moldova. There were 6 male (30%) and 14 female (70%) speakers.

About half (55%) the speakers had English instruction in Romania, and some of them (35%) had English instruction in the United States. Some of the speakers (25%) spoke a third language, but they all spoke primarily English and Romanian on a daily basis. Romanian speakers who spoke or had some knowledge of a third language all knew French. This is not surprising, considering that French has been a very popular foreign language taught in Romanian schools. All of the Romanian speakers thought they had a foreign accent that they would all like to improve, and most of them (70%) were "working" on improving their foreign accent. The degree of assimilation into American culture reported by the speakers covered the whole range from 1 (totally assimilated) to 9 (not at all assimilated), and the degree of self-reported foreign accent varied between 3 and 9 on a scale from 1 (native speaker) to 9 (very thick accent).

Table 3.1. Demographic and linguistic background information of the Romanian speakers

Key	Gen	DOB	LOR	AOA	Instr hm	Yrs hm	Instr US	Mths US	Oth lang	Use of L1	Use of Engl	Want impr	Work on impr	Assim	How assim	Rate f.a.
adpo	f	1971	5	29	y	2	y	10	n	50%	50%	y	y	n	4	4
capo	f	1967	9	28	n	0	n	0	n	65%	35%	y	y	y	4	3
crsv	f	1970	11	24	n	0	n	0	n	70%	30%	y	y	y	5	4
doga	m	1960	15	31	y	5	y	18	n	45%	55%	y	y	n	9	7
elga	f	1975	6	24	y	13	n	0	y	55%	45%	y	n	y	3	5
elni	f	1955	5	45	y	12	y	3	n	35%	65%	y	y	y	3	6
fltu	m	1968	10	26	y	8	n	0	y	45%	55%	y	n	y	2	5
gesto	f	1944	6	53	y	1	y	15	n	5%	95%	y	y	y	3	3
legu	f	1968	7	29	y	15	n	0	n	70%	30%	y	n	n	6	4
libi	f	1970	7	27	y	11	y	24	n	50%	50%	y	y	y	1	6
limo	f	1968	7	30	n	0	n	0	y	25%	75%	y	y	y	6	6
luho	m	1948	15	41	n	0	n	0	n	80%	20%	y	n	n	7	8
miil	m	1958	9	38	y	5	n	0	n	65%	35%	y	n	y	3	7
moho	f	1954	15	35	n	0	n	0	n	30%	70%	y	y	y	5	8
nini	m	1957	5	43	y	4	n	0	n	35%	65%	y	y	y	7	7
olva	f	1957	13	34	n	0	y	3	n	30%	70%	y	y	y	6	8
reis	f	1965	15	25	n	0	y	12	y	30%	70%	y	y	n	6	4
sepo	m	1969	9	26	n	0	n	0	n	50%	50%	y	n	y	3	3
viil	f	1959	9	36	y	4	n	0	y	50%	50%	y	y	y	3	5
vine	f	1957	11	37	n	0	y	5	n	50%	50%	y	y	n	8	9

3.1.1.2 Comparison group

Twenty-five speakers of various Slavic and Romance languages were also recorded for this study. Like the Romanian group, participants in the non-Romanian group also had their permanent residence in the United States. Seven languages were represented, with the number of speakers per language as follows: Russian (6), Polish (3), Czech (2), Bulgarian (2), Italian (3), Portuguese (4), and Spanish (5).

Among the Romance language speakers, I originally had one French speaker, a native of Burkina Faso. I decided to exclude him from the study for two reasons. First, since he was a true bilingual of French and Dioula, and his African "accent" could be readily perceived, my statement to the raters that they would be hearing speakers of European languages would have been inaccurate. Second, whereas the Romanian accent is sometimes confused with that of Spanish, Italian, and Portuguese, it is seldom confused with the French accent.

These participants were between the ages 23 and 69 when they moved to the United States, and they had lived in the United States between 5 and 38 years at the time of the study. Among the thirteen Slavic language speakers, there were 3 male (23%) and 10 female (77%) speakers. Among the twelve Romance language speakers, there were 3 male (25%) and 9 female (75%) speakers.

All but one Slavic language speaker (92%) had English instruction in his or her home country. Some speakers (46%) had English instruction in the United States, whereas others (54%) had not had any US English instruction. Most of the Slavic language speakers (62%) spoke a third language (German, Russian, or Spanish), but like the Romanians, they mostly used their native language and English on a daily basis. The one exception was a Ukrainian-Russian bilingual who, based on her estimation, speaks 30% Russian, 20% Ukrainian, and 50% English in her daily life. She considered both Ukrainian and Russian her "first languages," and for the purpose of this study I referred to her as a native speaker of Russian. Two of the speakers reported knowledge of four languages. One speaker, a native speaker of Bulgarian, speaks both German and Russian in addition to English and Bulgarian, but hardly ever uses them on a daily basis. The

second speaker, the Ukrainian-Russian bilingual, also reported knowledge of Polish (but low usage). All Slavic language speakers reported that they have a foreign accent. However, only 69% (compared to 100% of the Romanians) would like to improve it, and fewer yet (38%) reported that they were working on improving their accent. The range of self-perceived assimilation of the Slavic language speakers fell between 1 and 7 on a scale from 1 (totally assimilated) to 9 (not at all assimilated), and the speakers rated their own accent in English between 3 and 8 on a scale from 1 (native speaker) to 9 (very thick accent).

Table 3.2 Demographic and linguistic background information of the Slavic language speakers

Key	Gen	DOB	Country	LOR	AOA	Instr hm	Yrs hm	Instr US	Mths US	Oth lang	Use of L1	Use of Engl	Want impr	Work on impr	Assim	How assim	Rate f.a.
alko	m	1961	russia	8	35	y	9	n	0	y	40%	60%	n	n	n	3	3
anmi	f	1957	poland	19	29	y	2	y	48	n	50%	50%	y	n	y	3	6
baga	f	1966	poland	14	25	y	0.3	y	2	n	30%	70%	n	y	y	3	5
beko	f	1959	poland	21	25	y	12	n	0	y	25%	75%	y	n	y	2	4
duky	m	1963	czech	14	27	y	0.5	y	24	y	10%	90%	n	n	y	3	5
elkra	f	1934	russia	17	53	y	3	n	0	n	70%	30%	n	n	y	2	8
frma	m	1974	czech	6	25	y	4	y	12	y	5%	95%	y	n	n	4	8
kraan	f	1949	bulg	13	43	y	8	n	0	y	30%	70%	y	n	n	3	6
olgla	f	1961	russia	5	38	y	11	n	0	n	70%	30%	y	y	n	7	5
oltsyu	f	1973	russia	6	25	y	0.5	y	3	y	10%	90%	y	y	y	4	8
taka	f	1954	ukr	11	40	n	0	y	36	y	50%	50%	y	y	y	4	5
vade	f	1967	bulg	11	27	y	0.3	n	0	y	40%	60%	y	y	y	3	5
zhara	f	1937	russia	32	36	y	14	n	0	y	50%	50%	y	n	y	1	3

Almost all Romance language speakers (83%) had English instruction in their home country, and half the speakers had English instruction in the United States. Some of

them (33%) spoke a third language (Spanish, French, or Catalan), and all but one spoke mostly their first language and English on a daily basis. Despite being a native speaker of Italian, one woman reported speaking 80% Spanish, only 15% Italian, and 5% English in a typical day. The reason is that she is a teacher of Spanish and her husband a native-speaker of Spanish. Since both Italian and Spanish are Romance languages, and because of her native-like command of Spanish and high use of it, I treated both Italian and Spanish as this speaker's "first languages." As far as participants who speak four languages, one speaker reported that she was fluent in two languages in addition to Portuguese (her native language) and English. These languages were Spanish, which she reported to use approximately 8% of the time and French, which had a 2% reported usage. Like the Romanians and the Slavic language speakers, all Romance language speakers thought they had a foreign accent. Most of them (75%) would like to improve it, and half of the speakers were working on improving it. The range of self-reported assimilation into the American culture fell between 1 and 8 on a scale from 1 (totally assimilated) to 9 (not at all assimilated), and the speakers rated their foreign accent in English between 2 and 8 on a scale from 1 (native speaker) to 9 (very thick accent).

Table 3.3 Demographic and linguistic background information of the Romance language speakers

Key	Gen	DOB	Country	LOR	AOA	Instr hm	Yrs hm	Instr US	Mth US	Oth lang	Use of L1	Use of Engl	Want impr	Work on impr	Assim	How assim	Rate f.a.
alca	f	1974	brazil	7	24	n	0	y	48	n	60%	40%	n	n	y	5	8
amhu	f	1949	portug	9	27	y	11	n	0	n	20%	80%	n	y	y	2	2
anme	f	1968	brazil	9	26	y	4	y	5	y	60%	40%	y	y	y	6	7
anze	m	1946	italy	17	42	y	5	y	3	n	5%	95%	y	n	y	2	7
cana	f	1977	spain	5	23	y	13	n	0	y	70%	30%	y	y	n	4	5
copi	f	1954	italy	26	25	y	9	n	0	n	40%	60%	n	n	n	5	5
dame	f	1963	italy	15	28	y	7	n	0	y	95%	5%	y	n	n	8	8
elad	f	1971	spain	9	25	y	12	y	26	n	85%	15%	y	n	y	5	7
hesi	m	1961	brazil	14	30	y	8.5	y	12	y	20%	80%	y	y	y	2	5
jogo	m	1943	spain	38	27	n	0	n	0	n	90%	10%	y	n	y	1	3
masa	f	1964	spain	11	30	y	10	n	0	n	70%	30%	y	n	y	3	6
sabu	f	1950	peru	28	27	y	9	y	36	n	50%	50%	y	y	y	3	6

3.1.1.3 Control group

Five native speakers of American English – three males (60%) and two females (40%) – were used as a control group. All five lived in Georgia at the time of the recording. Three were born and lived most their lives in Georgia, one participant was born and lived most of his life in North Carolina, and one participant was born and lived most of her life in West Virginia. The inclusion of native speakers in this study had a dual purpose. On the one hand, the native speakers represented a clear standard, in relationship to which all other foreign accents were rated. On the other hand, it helped verify the validity of the raters' judgment.

The native speakers' ages at the time of the study ranged between 22 and 55 (with an average of 37.6). One of the four speakers has lived abroad and was fluent in a language other than English. He had lived in Germany and speaks German.

Table 3.4 Demographic and linguistic background information of the American native speakers

Key	DOB	Place	Lived	Lived abroad	Other lang
drede	1983	GA	GA	n	n
bele	1979	GA	GA	n	n
lion	1955	WV	WV	n	n
rova	1969	NC	NC	y	y
nebu	1950	GA	GA	n	n

3.1.2 Raters

Twenty-one native speakers of American English with very little or no scholarly linguistic background (but who may have been exposed to foreign accented speech) were chosen to listen to all NNSs' recordings. My choice of raters was based on findings in studies of foreign accents. Brennan et al. (1975) have found that listeners who are not linguistically trained give reliable judgments of the accentedness of speech samples. Furthermore, studies have shown that people who are familiar with a wider variety of foreign accents are slightly more sensitive in correctly detecting foreign accents (Flege et al. 1997). There were both monolingual and multilingual speakers among the raters, but none of them spoke Romanian. My choice of naïve raters who did not speak Romanian is justified by the fact that such a group would represent a better cross-section of the native

U.S. population. That is to say, Romanian immigrants do not encounter very many professional linguists who also happen to speak Romanian. Most of the people they come across in everyday life are non-linguistically trained, non-speakers of Romanian.

There were 12 male (57%) and 9 female (43%) raters, and their ages at the time of the study ranged between 21 and 51. Eight of the raters (38%) lived most of their lives in Georgia, six (29%) lived somewhere else in the South, and seven (33%) lived in a state other than in the South. Eleven raters (52%) have lived abroad for an extended period (i.e., longer than two months), and 14 raters (66%) had some knowledge of a foreign language. I am aware of the fact that this group of raters was better educated, spoke more foreign languages, and had traveled more than the "average American." While I do *not* think that the raters' education and greater exposure to foreign languages skews the data, I feel that my choice of raters helped in conducting the study in a more efficient manner. I was able to obtain more accurate responses without having the raters go through extensive training in order to be able to perform the tasks required of them.

Table 3.5 Demographic and linguistic background information of the raters

Key	DOB	Gen	Place OB	Education	Lived most	Abroad	Mth	For. lang
anat	1978	f	GA	BA	GA	y	4	n
bacha	1980	m	NC	BA	GA	y	30	y
cripe	1977	m	GA	BA	GA	n	0	n
dawa	1961	m	MD	PhD	else	y	20	y
gahu	1972	m	GA	HS	GA	n	0	n
gefe	1967	m	OH	PhD	else	n	0	y
greto	1970	m	SC	BA	south	n	0	n
heha	1975	f	MI	BS	else	n	0	n
jaha	1977	m	MO	BA	south	n	0	y
jeja	1977	f	LA	MA	south	n	0	y
jopa	1975	f	IL	BA	else	y	2	y
juro	1969	f	VA	MA	GA	y	13	y
mahu	1976	f	Ga	MA	GA	y	20	y
majo	1955	m	NY	MA	south	y	3	y
mawy	1978	f	CA	MA	else	n	0	y
memo	1974	f	FL	PhD	south	y	10	y
mien	1971	m	NC	BA	GA	n	0	n
pawi	1970	m	TN	PhD	south	y	24	y
phide	1981	m	PA	BA	else	n	0	y
rapra	1984	f	UK	HS	GA	y	4	y
roca	1974	m	ME	BA	else	y	9	n

3.2 Materials

When conducting a study on foreign language accents, the choices of material for assessment can range from paragraph reading and picture-based storytelling to free

interviews. In order to control for variability in the degree of difficulty of the speakers' production, I had all speakers in this study read the same short passage, which included a variety of difficult sounds. In a study on native Mandarin speakers, Munro & Derwing (1995) measured speakers' accents both when reading a passage and in extemporaneous narratives. The authors found no significant differences in speakers' accents depending on the method of assessment.

The elicitation paragraph used in this study was obtained from the Speech Accent Archive. This is a web site that presents the accented speech of speakers from many different native language backgrounds. The paragraph I used contained common words in English and practically all of the consonants, vowels, and clusters of Standard American English. It reads as follows:

> "Please call Stella. Ask her to bring these things with her from the store:
> Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe
> a snack for her brother Bob. We also need a small plastic snake and a big
> toy frog for the kids. She can scoop these things into three red bags, and
> we will go meet her Wednesday at the train station."

The speakers completed a questionnaire so that I could gather personal and linguistic information about them. I asked questions about their current age, age of arrival to the United States (AOA), length of residence in the United States (LOR), educational background, L2 instruction (in both their home country and the United States), amount of L1 and L2 use on a daily basis, other foreign languages spoken, motivation to integrate into the American culture, and motivation to improve their accent.

3.3 Equipment

All speakers were recorded with a Sony mini-disc MZ-R70 recorder and a Sony ECM2 microphone. Once all recordings were completed, I transferred the data from the mini-discs to a computer using fiber optic digital cable and the software Audacity.

3.4 Procedure

3.4.1 Data collection of speakers

The data collection turned out to be the most unpredictable, interesting, and challenging part of this dissertation. People's reactions to my invitation to participate in the study covered a wide range from ignoring my request, to confused and suspicious looks, to very excited dinner invitations.

Conditions for participation

There were two conditions all speakers had to fulfill in order to be included in the study. The age of arrival to the United States had to be equal to or older than 23, and the length of residence had to be equal to or longer than 5 years.

Selection of speakers

My selection process consisted generally of contacting people that I either knew personally or knew through friends. First, I made a list of all the people whom I knew personally and who I thought would qualify for my study and would be happy to participate. Then, I made another list of people through whom I could reach still more participants.

Method of contact of speakers

The method of contact ranged from calling people, emailing directly to people, emailing to list serves, or simply walking up to people at social events and inviting them to participate. I called, emailed or approached the people I knew personally. I then told them about my project and set up an appointment at a time convenient for both of us. Then, I started contacting the people who could help me find more participants. Sometimes these people (friends or acquaintances of mine) gave me phone numbers of potential participants. My friends would then contact the potential participants first and made sure first that they were willing to participate in the study. The fact that these new (to me) participants were first contacted by common friends served another purpose. Because of their familiarity with our mutual friend, they felt a connection with me and were resultantly more comfortable meeting for the interviews. At other times, my friends helped me contact people who themselves would not qualify for an interview but who could help me find further participants. Such referrals involved contacts through an email list serve, a church, or an academic department where certain languages I was looking for were taught. Often, participants whom I met through friends or friends of friends provided me with yet further participants. Finally, I contacted some people without being recommended through anybody. Given the nature of their work, I knew that they would qualify for my study, and then I simply approached them personally or via email with an invitation to participate.

With most participants, I had an initial contact when I invited them to participate in the study and set up an appointment, followed by the second meeting when the data collection itself took place. With some participants, however, there was only one meeting

altogether. This consisted of the initial contact in which I introduced myself and the project and an invitation to participate in the study. Then, subject to their approval, the data collection itself would begin.

During the initial contact, regardless whether it was a separate interaction or part of the data collection session, I first verified that the participants fulfilled the requirements of the study, then I invited them to participate and finally, I provided them with a brief description of the study and what was expected of them as participants.

Factors in willingness to participate

I noticed that there were a few factors that played an important role in my success in getting people to agree to participate. These factors included the participants' education, their cultural background, and the method by which I contacted them. I found that, all things being equal, the more educated people were, the more familiar and comfortable they were with surveys. As to cultural background, Eastern-Europeans seemed to be more stand-offish and suspicious when asked to participate in a study. This might be explained in part by the fact that, during communism, surveys of this kind were all but unheard of. Although this was not a language “test,” some people also did not feel comfortable participating because they were embarrassed about their English. Finally, the existence of a common acquaintance and that acquaintance's recommendation of me to the speakers prior to my contacting them made it easier to contact participants in a successful manner.

Once I met with the participants for the purposes of the study, everything tended to go very smoothly. Most participants thought the study was very interesting and asked me questions about it. Many of them were eager to share with me their observations and

struggles with the English language. When meeting with the speakers, I briefly presented them the content of the study and told them about what the data collection would consist of. In a typical content explanation, I tried to give my participants enough information to make them feel comfortable participating but not so much information that they would become too self-conscious during the study or be overwhelmed with the amount of information. I told the Romanian participants that I was conducting a linguistic study about Romanians in the United States. More specifically, I was interested in Americans' perceptions of their accent, and after finishing all the recordings I would have native speakers of American English listen to all the recordings and guess where the speakers were from. I told the Slavic and Romance language speakers that I was conducting a linguistic study on Romanians in the United States and that, for my comparison group I wanted to include speakers of other languages as well. By telling the Romanians that I was only interested in the Americans' opinions about the origin of their accent and by telling the comparison group that it was the Romanian accent I was mostly interested in, I feel that I took away some pressure from their participation. That is, they did not feel that their performance was being "tested" but that their participation merely provided the necessary data for the completion of this study. Then, I also told them specifically what their participation involved. First, they were going to read and sign the letter of invitation and consent form; then, they would read a short paragraph in English which I would record; and lastly, they would fill out a questionnaire with some background information.

Letter of consent

Once they were familiar with the content of the study, I gave my participants the letter of invitation and a consent form and told them that they could contact me via email

or phone if they had any questions later. I had two copies prepared for every participant. I kept one signed and dated copy, and they were given another signed and dated copy. The letter of invitation and consent form can be found in Appendix A.

Recording of the elicitation paragraph

I gave the participants the elicitation paragraph to look over and asked them to let me know when they were ready to read it out loud. While they were looking over the text, I prepared the recording equipment, and, as soon as they were ready, I started recording their reading of the elicitation paragraph.

Questionnaire

Once the recording was over, I gave the participants the questionnaire and asked them to fill it out. The questionnaire included questions regarding their personal, educational, and linguistic background. More specifically, these targeted variables included gender, age of arrival (AOA), length of residence (LOR), first language (L1) and second language (L2) use, length of instruction in the home country, length of instruction in the United States, knowledge of a third or fourth language, motivation to improve foreign accent, efforts to improve foreign accent, self-perceived assimilation in the United States, and self-perceived foreign accent.

The questionnaire furthermore included linguistic questions, which gathered information such as what people think their accent sounds like, specific pronunciation problems they think they have, and specific pronunciation problems with the elicitation paragraph (which was included in the questionnaire). The reason I had participants read the paragraph first and then complete the questionnaire was to allow for a more spontaneous reading of the paragraph. If they had read the paragraph after completing the

questionnaire, the linguistic questions could have raised their awareness about certain pronunciation issues to which they otherwise would not have paid attention.

The names included in the questionnaires and the consent forms are being kept secret. Throughout the study, I used code names that I assigned to every speaker.

Meeting times varied between 10 minutes and two hours, but the data collection itself did not exceed 30 minutes. Often, speakers wanted to discuss things more or less tangential to the study so that the data collection itself was not done in a continuous block of time. If I sensed that a speaker had minimal time to devote to my study, I very much respected that and conducted the data collection as efficiently as possible.

For example, I contacted one participant on somebody's recommendation and briefly described the study. He emailed back with an interest in participating and to discuss possible meeting times. We decided upon one, and during the meeting, I went over the procedure of the study. He then signed the letter of consent, read the paragraph, and completed the questionnaire. Other than the data collection, our conversation was limited to courtesies, and we exchanged no outside information. As soon as he was done completing the questionnaire and assured me he had no further questions, I thanked him for participating and left. The meeting lasted approximately 10 minutes.

By contrast, when speakers wished to spend more time talking about the study, I was happy to be at their disposal. I considered such tangential conversations part of the data collection process and deemed it my job to make speakers feel comfortable. One such meeting was with a lady whom I had also contacted on somebody's recommendation. She was friendly and helpful and had a lot of questions related directly or indirectly to the study as well as questions and stories unrelated to the study. She

stopped very often during the completion of the questionnaire and was completely done about two hours after our meeting.

Another long meeting was one with a couple and a friend of theirs, all of whom had agreed to be participants. This friend came to the couple's house to make it more convenient for me. I contacted the couple after a friend of mine put me in touch with them. As it turned out, I had also met their daughter before. During our initial phone conversation, the woman apologized for not being able to meet on a particular date because she was too busy to both have me over for dinner and to participate in the study. We therefore made an appointment for the following weekend. When my husband and I got to their house, they were expecting us with a huge meal. They were very hospitable and happy to be able to help me with my project. I spent a couple of hours at their place, but individual meeting times with the three speakers lasted between 15-30 minutes each.

3.4.2 Sound editing

After the data collection was completed for all fifty participants, the recordings were transferred from the mini-discs onto a CD, edited with the phonetic analysis software Praat 4.3.02, and saved in separate sound files. All recordings had been saved in one long sound file. During the editing process, I opened the long sound file and marked the beginning and end of each recording, extracted the selection, renamed it using the code I assigned to that speaker, and wrote it as a WAV file. I repeated this process for all fifty recordings.

3.4.3 Rating process

The native speaker raters performed the rating process during individual meetings. They all used a computer on which I had saved the recordings and listened to the recordings through headphones. Not only did the headphones improve the quality of the sound, but they also prevented the raters from being distracted by random noises or movements.

The rating procedure included several steps:

1. Every rater filled out a form with background information and read the instructions for the rating process.

2. Then, I explained the procedures again to make sure that everything was clear and every rater understood the directions.

3. Next, there was a first listening that was more superficial in nature and had the purpose of acquainting the listeners with the range of accents they would encounter. The raters were asked not to write anything down during this phase but to simply listen to the different speakers. Short excerpts (ranging between 3 and 6 seconds) were played from the recordings of the speakers. These sample recordings were chosen so as to represent each language included in this study. The degrees of accents in the samples were mixed, ranging from mild to very thick.

4. Once these short samplings were played through, the actual rating process began. Raters were told that they would hear speakers from various countries, representing eight different European languages and having various degrees of accentedness. They were told that, in addition to non-native speakers of English, there were also several native speakers of American English, but the number of speakers per

language was not divulged. All speakers had read the same text, and the duration of a given recording lasted between 19 and 43 seconds (with an average of 26.8 seconds). The recordings were presented in a randomized order, such that every rater started with a different speaker. The listeners received an evaluation sheet for each speaker, and they were asked to perform three tasks for every speaker. First, raters were asked to guess the origin (country, region, native language, or language type) of the speakers by being as specific as possible. Then, the raters evaluated each speaker's accent on a Likert scale form 1 (native speaker) to 9 (very strong accent). Finally, the evaluation sheet also contained an open-ended question regarding the speakers' accent. Listeners were prompted to specify what made them think that the speaker had a specific accent and what sounds sounded accented to them.

The duration of the rating process ranged between 40 and 75 minutes. In order to make the process as efficient and distraction-free as possible, I played, stopped, and replayed the recordings as necessary. That way, the raters could concentrate exclusively on the rating process, without having to worry about clicking the mouse every 30 seconds or at even shorter intervals of time. All raters were told that they could listen to every recording at most twice and were asked to let me know through head or verbal signals what they would like me to do. These signals included nodding when ready to move on or short verbal signals, such as "stop," "next," "again," and "ok."

The confident raters

Many raters were initially very confident and asserted that they should do very well on "this test" because they were pretty good at guessing accents. As early as after listening to the short sample recordings, but sometimes toward the middle or end of the

rating process, most such raters confessed that it was much more difficult to guess the accents than they thought.

The "I hope I can be of some help" raters

Other raters, before they started at all, told me that they hoped they would be helpful because they are probably not very good at guessing accents. Some of them were concerned that they would get a “low score.” I assured them all that their performance would not be graded and that it did not in fact matter how many accents they guessed right or wrong. I explained that my study had a descriptive purpose and that their answers, whatever they were, represented great and insightful material for my study.

3.5 Data analysis

Once I had all data collected from both speakers and raters, I organized the data in several Excel charts and ran analyses on the speakers' origins, degree of foreign accent, and salient accented features in the speakers’ speech based on the raters' guesses. Before doing any analysis, I calculated inter-rater reliability coefficients for the raters to make sure there were no outliers among them.

3.5.1 Language guess

Categorization of accents

In order to be able to address the first research question of how Americans perceive the Romanian accent in English, the raters' guesses as to accent type were codified into six categories. These were Slavic (Slav), Romance (Romc), Germanic

(Grmn), Romanian (Romn), American English (AmEng), Unknown, and Other (non-Slavic, non-Romance, non-Germanic languages).

The variety of responses given by the raters is presented in the table below:

Table 3.6 The answers given by the raters to describe the speakers' origins

Slavic	Romance	Germanic	American English	Other
Balkan	Brazilian	Austrian	American	African
Central European	Brazilian Portuguese	Central European[5].	Arizona	Greek
Cyrillic	French	German	English	Jewish
Czech	Italian	Germanic	Georgian	Middle East
Eastern European	Latin American	Northern European	Midwest	
Northeast European	Latino	Norwegian	Southern	
Russian	Mediterranean	Scandinavian	South Carolinian	
Slavic	Mexican	Swedish		
Slovakian	Portuguese			
Soviet	Spanish			
Ukrainian	Southern European			
	Western European			

Once I had clear categories of language types, I calculated percentages of language guesses as adjusted to the number of speakers in the categories Romanian, Romance, and Slavic.

All Americans were accurately guessed as native speakers of American English, and no non-native speaker of English was mistaken for a native speaker. This shows that the raters could accurately distinguish between native and non-native speakers. I did not have to exclude any of the raters from the study.

[5] Most speakers used the term "Central European" for Slavic language speakers. However, one rater used this term to refer to speakers of Germanic languages. I checked separately with all raters to clarify the meaning of this and other ambiguous terms they used.

3.5.2 Degree of perceived foreign accent

All twenty-one raters rated all fifty speakers' degree of foreign accent on a scale from 1 (native speaker) to 9 (very heavy accent). I calculated the average of the twenty-one foreign accent ratings for every speaker, and rounded the score assigned to every speaker to two decimal places.

Degree of foreign accent predicted by demographic information

I established correlations between perceived foreign accent and variables related to the speakers' linguistic and personal background. Using these correlations alongside demographic information of the speakers and raters, I created models of speakers with the best and the worst foreign accents as perceived by the native speakers of English.

3.5.3 Foreign accent features salient to the ears of the native speaker raters

The answers to the question "what makes this speaker sound non-native like" were abundant. These included general terms, such as vowels, consonants, intonation, and stress as well as very specific terms, such as “rolled [r],” “[th] sounds like [t],” “words are not linked,” etc. In order to deliver a fair and comprehensive analysis of the data, I grouped the gathered information in several different ways.

First, I looked at only the Romanians who were guessed as being speakers of a Romance language or a Slavic language. Every time a speaker mentioned one feature, I added a token under the corresponding language type. Then, I added up the number of tokens for all mentioned foreign accented features within the two language types and listed them in decreasing order. The list I am basing my analysis on includes features that were mentioned four times or more by one or several raters. From this list, I extracted the

features that were unique to Romanians who were guessed to be native speakers of either Romance languages or Slavic languages. For the comprehensive list, please see Appendix C.

Second, I grouped all speakers based on their native language or native language type into the following four language groups: Romanian (Romn), Romance (Romc), Slavic (Slav), and American English (AmEng). Again, I counted the foreign accented features mentioned by the raters and grouped them in decreasing order. As in the previous analysis, only features that were mentioned at least four times are included in this list. A comprehensive list of the features can be found in Appendix D.

Third, I organized the foreign accented features per speaker, and for each speaker I grouped the salient features into vowels, consonants, and suprasegmental features. This last organization allowed me to see characteristics of certain speakers' speech. Furthermore, I contrasted the data collected for every speaker from all raters with the way in which the speakers themselves described their own accents. The speakers' own perceptions were elicited in three different ways. First, speakers were asked to report what they thought their problematic areas in English pronunciation were. Second, they were given a list of vowels, consonants, and terms referring to suprasegmental information and were asked to point to personally problematic areas. Third, they were given the elicitation paragraph (after they had read it aloud and had been recorded) and asked to circle the places that in their opinion they pronounce in a non-native way. A complete list of salient features for every speaker separately can be found in Appendix E.

CHAPTER 4

FINDINGS AND DISCUSSIONS

In this chapter, I present the study's findings in light of its research questions and hypotheses. The first and second points of the first research question will be dealt with in section 4.1.1, "Language guess" and the third point fall under section 4.1.2, "Feature analysis." The findings of the second research question will be detailed under the section 4.1.3, "Correlation between degree of foreign accent and background variables." A discussion of the findings will immediately follow the various sections.

The first research question, *how do Americans perceive the Romanian accent in English*?, has a threefold purpose. First, through this question I tried to find out whether Americans recognize the Romanian accent at all. For this task, the accuracy of the raters' linguistic responses is somewhat tied to their knowledge of geography: if one is not aware of the existence of Romania as a country, one could not possibly identify a Romanian accent. Second, if found that raters do not recognize the Romanian accent as such, the question becomes what the Romanian accent sounds like to Americans. Do Americans identify the accent within a certain language family? Third, what are some of the salient features in the speakers' production that makes them sound one way or another?

The second research question searched for correlations between certain linguistic and personal variables of the speakers and the degree of foreign accent as perceived by native speakers of American English.

4.1 Language guesses

4.1.1 Findings of the language guesses

When asked what the Romanian speakers' origin or native language might be, raters answered "unknown" more often than any other language or language type. The high percentage (35%) of answers in the "unknown" category is followed by 28% of the guesses deeming Romanians to be speakers of a Romance language and 25% of the guesses indicating that Romanians sound like speakers of a Slavic language. The percentages of the guesses falling in the language categories Romanian, German, and other languages are very small.

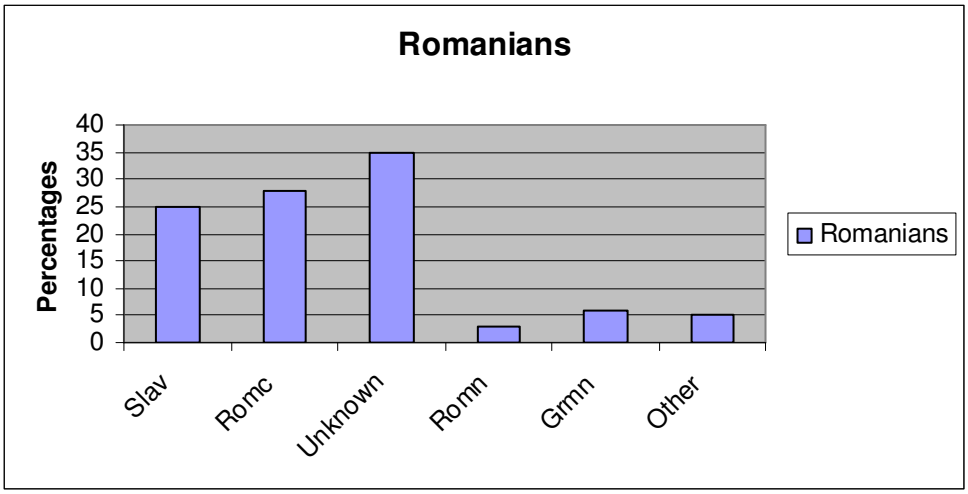

Fig. 4.1 Language guesses for the Romanian speakers

In contrast, both Romance and Slavic language speakers were frequently correctly identified as speakers of their respective language groups. The Romance language speakers were guessed to be speakers of a Romance language 46% of the time, of an "unknown" language 26% of the time, and of a Slavic language only 14% of the time. As with the Romanians, the Romance language speakers in general were only infrequently guessed to fall in the language categories Romanian, German, and "other languages."

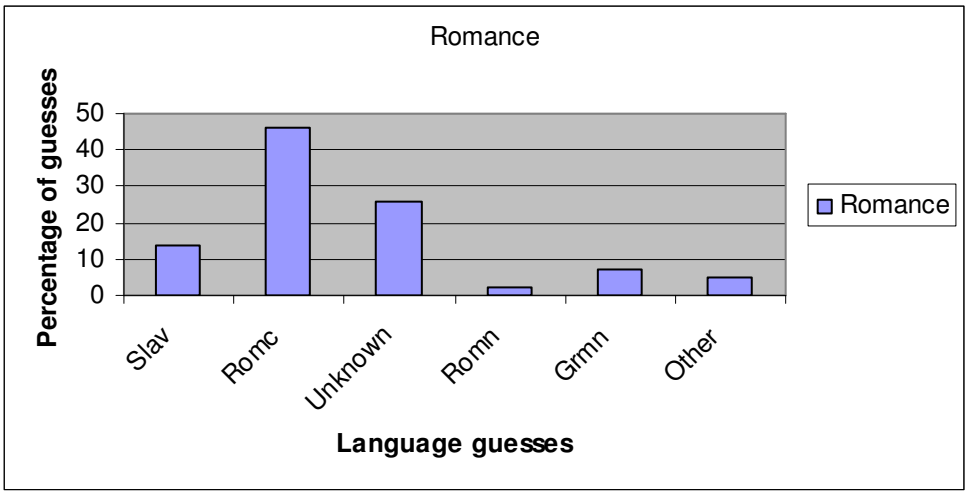

Fig. 4.2 Language guesses for the Romance language speakers

The Slavic language speakers were correctly guessed to be speakers of a Slavic language 38% of the time, whereas 29% of the guesses fell in the "unknown" category, and 15% of the guesses were of a Romance language. We notice a somewhat different pattern for the Slavic language speakers when it comes to the percentage of guesses supposing them to be native speakers of a Germanic language. This number, 13%, is very close to the percentage of guesses that assumed these speakers to be native speakers of a Romance language (15%). In contrast, for Romanians and Romance language speakers

the percentages of guesses that the speakers were German speakers were only 6% and 7%, respectively.

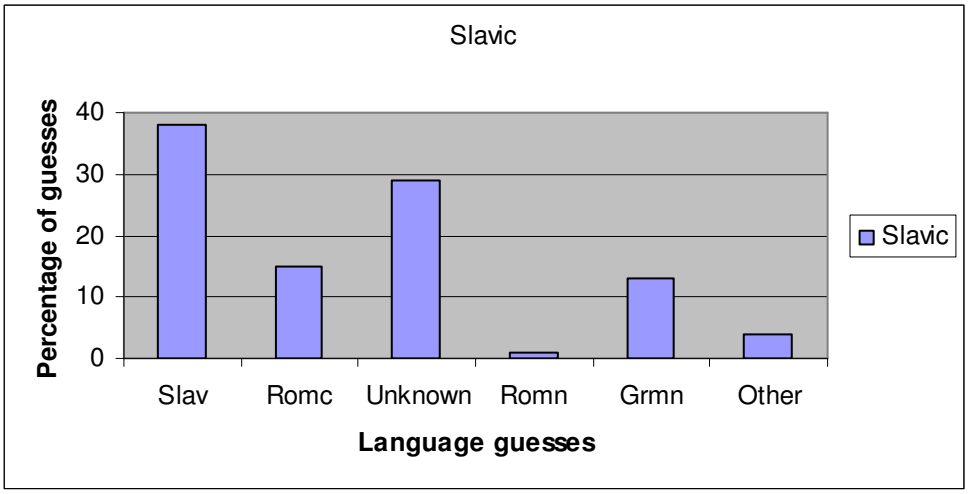

Fig. 4.3 Language guesses for the Slavic language speakers

For purposes of overview and comparison, I am including the information presented in the three different charts above in a synthesized form in the chart below.

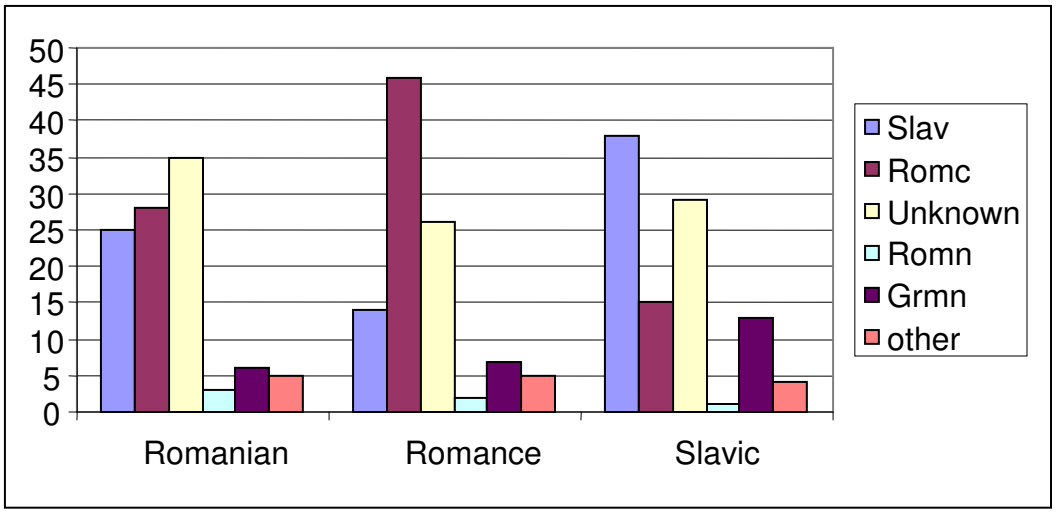

Fig. 4.4 Language guesses for Romanian, Romance, and Slavic language speakers

4.1.2 A discussion of the language guesses

The findings regarding the raters' guesses about the origins of the speakers answer two important questions concerning Americans' perception of the Romanian accent in English. On the one hand, they answer the question whether or to what extent Americans recognize the Romanian accent in English. On the other hand, the findings show whether Americans perceive the Romanian accent as a Romance accent, a Slavic accent, neither, or both.

The high percentage for "unknown" (35%) for the Romanian speakers shows that Americans are less familiar with the Romanian accent in English than with the accent of certain other Romance languages and Slavic languages. This could also be an indication of the raters' familiarity with and awareness of Romania as a country (or more precisely lack thereof). Furthermore, even if raters are familiar with the existence and geographic location of Romania, it is hard to tell whether their immediate association when hearing a Romanian accent is with Romania. The few raters who guessed Romanians to be Romanian (3% of guesses for Romanians) had all been exposed to the Romanian accent in the past. Of course, even these raters did not recognize most Romanian accents. Therefore, the answer to the first part of the first research question – whether Americans recognize the Romanian accent – is “no.”

As the chart in Fig. 4.1 shows, the guesses of language type for the Romanians are markedly different from the guesses for the Slavic and other Romance language speakers. Also, the guesses for Slavic and Romance language speakers show similar patterns to one another. Whereas, the highest percentage of guesses for Romanians falls in the "unknown" category, both the Slavic and Romance language speaker groups were most

often correctly identified to be speakers of a Slavic or Romance language. Furthermore, for both groups, the second-highest percentage of guesses was "unknown." While the patterns for the two groups of speakers are similar, the percentage of accurate guesses for Romance language speakers (46%) is higher than for Slavic language speakers (38%). This could be attributable to the fact that Americans are more familiar with the Spanish accent in English than with the various Slavic language accents. This finding corroborates results in several studies on foreign accents. Flege et al. (1997) compared ratings given to the accentedness of Italian learners of English who were living in Canada by native speakers of English from Canada and Alabama. More accuracy was found in the ratings by the Canadian native speakers, because they were more familiar with the Italian accent in English.

As it turns out, the findings for all three groups support the findings of studies that have concluded that people guess origins of foreign accents better if they are familiar with those specific accents.

Following the large number of guesses that could not identify Romanians as part of a specific language group, are guesses identifying Romanians as speakers of a Romance language (28%) and of a Slavic language (25%). Thus, Romanian, a Romance language with Slavic influences, did not sound significantly more Romance or Slavic to the American raters. However, the close and relatively high percentages for these two language type guesses are meaningful. The high percentage for Romance guesses (28%) could mean that Romance features are perceived strongly in the Romanian accent in English. At the same time, the relatively high percentage of Slavic (i.e., 25%) shows that the Romanian accent may also be perceived as Slavic since the Romanian language itself

contains Slavic features. Furthermore, this latter finding partially corroborates the responses of Romanians in the questionnaires when asked what native speakers perceive their native language to be. Many Romanians report that, based on their accent in English, most people have concluded that they are Russian. As the second hypothesis of my first research question, I posited that the Romanian accent sounds more Slavic than Romance to Americans. The findings of this study do not support this hypothesis, and the answer to the question "what does Romanian sound like to Americans" is that Americans are split in perceiving either Romance or Slavic accents in Romanians.

4.1.3 Romanians' reports of native speakers' guesses as to language origin

As I mentioned in the introductory chapter of this dissertation, my desire to investigate the Romanian accent in English was triggered by the fact that so many people told me and other Romanians that we Romanians sound Russian. My experience is backed up by the numbers reported by Romanians in the background questionnaires. The data show that 42% of Romanians say that native speakers of English, when they hear them (the Romanians) speak English, think that they are Russians or Eastern Europeans. According to the Romanians' reports, the Romanian accent in English sounds like a Romance language to only 15% of the native speakers of American English. What is even more interesting is that more Romanians claim to sound Russian or Slavic to American English native speakers than Slavic language speakers themselves (42% Romanians compared to 40% Slavic language speakers). Slavic language speakers, furthermore, reported that people frequently think that they sound German (35%). Romance language speakers, for their part, are usually correctly identified as native

speakers of a Romance language (60%) and only sometimes mischaracterized as Slavic language speakers (27%).

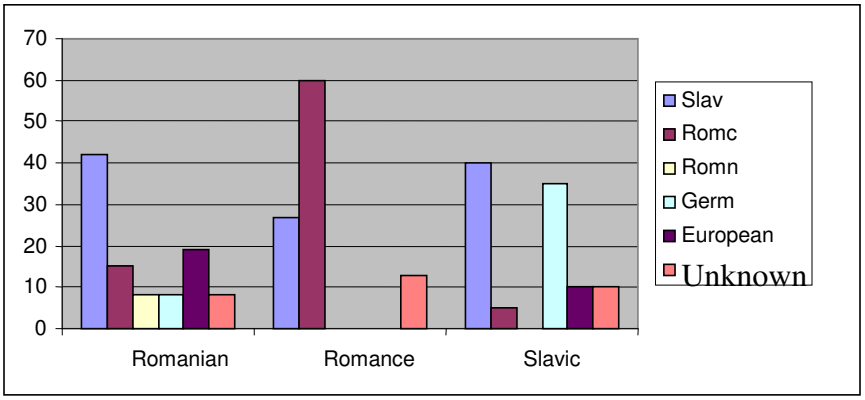

Fig. 4.5 Language guesses as perceived by native speakers reported by Romanian, Romance, and Slavic language speakers

When comparing the language guesses of the American raters with the language guesses reported by the speakers, we notice different patterns. Romance language speakers report and are, indeed, guessed by the raters in this study, to be native speakers of a Romance language. Romanians were not identified as speakers of any certain language group by most raters (35%) in this study, and about as many guesses pointed to a Slavic (25%) as to a Romance (28%) accent. However, when looking at what the Romanians in this study reported about their experiences with native speakers' perceptions, we see that a Slavic accent is reported most often. Regarding the Slavic language speakers, both the raters' guesses and the self-reported experiences of Slavic language speakers with American native speakers point to perceptions of Slavic language

speakers as Slavic. While "unknown" was the next highest category in the raters' guesses for Slavs, the Slavic speakers themselves reported "German" as coming in a close second.

The discrepancies outlined above between the sets of data (for Slavic language speakers as well as for Romanians) can be due to two facts:

First, we need to keep in mind that all of the non-native speakers surveyed have lived in the United States for more than five years, some of them as long as 30 years (the average being 12 years). Their reports are based on numerous encounters with a large number of people and possibly hours-long conversations. In this study, by contrast, the raters heard, once or twice, artificially constructed speech samples approximately half a minute long. That said, it is still important to notice that the raters' judgments are often more accurate as to the speakers' origins than what the speakers themselves report to having heard.

Second, the language guesses reported by the speakers might have been skewed by "unexpected" answers such as "Slavic" for Romanians and "German" for the Slavic language speakers. Romanians probably *expect* people to say that they sound Romance and not Slavic. As a result, they might not register the expected guesses as strongly as the unexpected ones, hence the disproportionate number of reported Slavic guesses. The same can be said with regard to Slavic language speakers being perceived as Germans. Where we have languages from two totally different language groups, it must be surprising to Slavic language speakers when someone tells them that they sound "German." Again since being German is an unexpected guess, Slavic language speakers might register these guesses more often than the expected Slavic language guess, and as a result they report them more often. Also, the most salient characteristics of a Slavic

accent are the replacing of [w] with [v], devoicing of voiced final consonants, and replacement of [ð] with [z]. These patterns also happen to be typical in Germans' accents in English.

4.1.4 Misidentification

The issue of misidentification was introduced above in the review of literature. This study's findings show that 25% of the native speakers' guesses "misidentified" the Romanians as Slavic language speakers compared to 28% of the guesses that indicate a perception of the Romanians as being Romance language speakers. Furthermore, during data collection, when Romanians were asked where native speakers think they come from, 42% reported being perceived as Russian or Slavic. None of these people reported this information by saying words to the effect that "yes, they heard my Slavic accent" or "wow, isn't it cool that they think I'm Russian?" By contrast, many Portuguese speakers, who have also reported that they are perceived as sounding Slavic, talk about the perception as though it were a random coincidence. The two different reactions are explained by the fact that the identities of the native speakers of Portuguese are not equated to their accent. Portugal has little in common with Slavic regions geographically, historically, and politically. However, when Romanians are told that they sound Slavic, they may well feel as though their Romanian or Romance identity is threatened.

4.2 Feature analysis

An analysis of the salient features in the speakers' speech will answer the third part of the first research question concerning salient features characteristic of specific

foreign accents. In addition to guessing where the speakers were from and rating their foreign accent, the raters also wrote down what in the speakers' speech sounded accented. Again, they were asked to be as specific as possible. In order to avoid discrepancies and bias in the raters' answers due to different levels of acquaintance with terms describing foreign accented speech, a few suggestions were included in parentheses. These suggestions included terms intended to describe the accented speech, such as "vowels," "consonants," "intonation," "stress," "certain words," "speed," and "nasality." The number and variety of answers gathered from all raters is impressive. The answers from all 21 raters to all 50 speakers amounted to 1012 tokens of accented speech out of which 470 (46%) referred to consonants, 171 (17%) to vowels, and 371 (37%) to suprasegmental features. These percentages per language group can be seen in Table 4.1 below.

Table 4.1 Vowels, consonants, and suprasegmentals for the Romanians, Americans, Romance and Slavic language speakers, and all speakers together

	Romanians	Slavic	Romance	Americans	All
Consonants	226 (53%)	150 (54%)	93 (35%)	1 (2%)	470 (46%)
Vowels	70 (17%)	44 (16%)	42 (16%)	15 (33%)	171 (17%)
Suprasegmentals	128 (30%)	86 (30%)	128 (49%)	29 (64%)	371 (37%)

In order to gain more insight into what accented features were most salient to the ears of the American raters, I looked more closely at the accented features written down by all raters. Furthermore, I was interested in finding any patterns that would show what makes Americans perceive the Romanian accent in English as either Romance or Slavic.

As it turns out, all speakers, regardless of their language background, share a large number of accented features. The most common ones are rolled [r], [ð], [θ], [ɪ]→[i], intonation, stress, vowels, consonants, and strongly aspirated [h]. According to the raters, many speakers pronounced the words "her", "snake", and "scoop" in a non-native-like fashion. Although the eight foreign languages included in the study vary a great deal one from the other and are part of two different language families, they are nonetheless all Indo-European languages, and the L1-L2 distance between any of these languages and English may be comparable. Therefore, one might expect to find many of the same accented features in the production of the speakers of these languages. Furthermore, the most salient sounds to the listeners were marked sounds and very difficult to acquire for non-native speakers of English.

Further insight into the distinctive characteristics of the Romanian accent in English as well as the Slavic and Romance accents in English can be drawn from the features that are not shared by all language groups.

4.2.1.1 Romanians identified as Slavic or Romance language speakers

As mentioned in the Language guess section, the number of Romanian speakers who were guessed by the raters to be speakers of Slavic languages (25%) was very close to the number of such speakers who were guessed to be speakers of Romance languages (28%).

The raters wrote down similar patterns of accented features in both the speech of Romanians who were deemed Slavic language speakers and those guessed to be Romance language speakers. Speakers in both groups roll their [r]s and had problems

with the [ð] and [θ] sounds. Their vowels, intonation, and stress sounded non-native, and they failed to make the tense-lax distinction between [i] and [ɪ]. Furthermore, the analysis shows that Romanians who were guessed to be speakers of a Romance language tended to speak faster and have a "sing-song" intonation to their speech. Romanians who were guessed to be native-speakers of a Slavic language tended to pronounce their [s] sounds in a non-native like fashion, replace the diphthong [eɪ] with the monophthong [æ], and drop the final [s] in words. Their speech was also generally perceived as more nasal. The table below includes the salient features for the two groups in decreasing order of number of tokens.

Table 4.2 Salient features for Romanians guessed to be speakers of a Romance or Slavic language

Romance		**Slavic**	
Tokens	**Feature**	**Tokens**	**Feature**
21	[ɹ] → [r]	19	[ɹ] → [r]
18	vowels	16	[θ]→[t]
12	intonation	13	[ð]→[d]
12	[θ]→[t]	12	vowels
10	fast	9	slow
10	consonants	8	intonation
9	[ɪ]→[i]	8	problems with [th]
8	problems with [th]	7	[ɪ]→[i]

8	stress	7	fricative [h]
7	sing-song	7	stress
7	[ð]→[d]	6	consonants
6	her	4	[s]
6	slow	4	[ei]→[æ]
4	[h] → [x] or [ç]	4	no final [s]
4	fluidity	4	nasal
4	intonation flat	4	intonation flat

4.2.1.2 A discussion of the Romanians identified as Slavic or Romance language speakers

Even though the speed of one's reading does not always predict one's fluency in a foreign language, it's worth pointing out that one of the salient features of Romanians perceived as Romance language speakers is "fast."

Overall, a significant correlation was found between duration of reading and degree of perceived foreign accent. One of the raters considered it worth mentioning to me once she completed the rating process that she might have subconsciously used a personal stereotype while rating the speakers. She said that she assumed that people who had more trouble with the English language were coming from "poorer" parts of Europe (i.e., Eastern European countries). This assumption, which might or might not be shared by other raters, shows how guesses as to a person's native language are influenced by factors unrelated to the sound of his or her accent.

Americans who perceived the Romanians to be native speakers of a Romance language characterized the Romanian accent as "sing-songy." As can be seen in Table 4.2, Romance language speakers' accents are characterized as sing-songy more often than the accents of Slavic language speakers and Romanians.

Features that characterize the accent of Romanians perceived as native speakers of Slavic languages include the pronunciation of the alveolar fricative [s], the replacement of the diphthong [eɪ] with the front low vowel [æ], nasality, and dropping of the final [s]. Since all these features were detected by raters in relatively low numbers, I will talk about them only briefly and will not make any concluding remarks based upon them.

Although raters sometimes said that the [s] sound was too long or too short, other times they only wrote down [s] as sounding “accented.” In English, [s] is an alveolar fricative, but in both Romanian and most Slavic languages it is a dental fricative. The fricative [s] is dental in Russian, Polish, and Bulgarian, and alveolar in Czech. This could explain why the pronunciation of [s] would make some raters think that Romanians sounded Slavic. In Romance languages, [s] is dental in Italian, but alveolar in most dialects of Spanish and Portuguese.

The word "snake" posed a lot of trouble for many speakers. The replacement of [eɪ] with [æ] might be explained both by the fact that diphthongs in Romanian are represented by two letters and never by only one and the fact that speakers might have simply misread the word "snake" and read "snack."

It is interesting that nasality in the accent of Romanians is perceived as a Slavic feature whereas nasality was not a salient feature detected by the raters in the speech of native speakers of Slavic languages.

The dropping of the final [s] can probably best be explained by a lack of mastery of the plural in English and hence the dropping of the morphological plural marker. There are no phonotactic constraints in Romanian that would prevent the pronunciation of the [s] when preceded by another consonant.

4.2.2.1 Romanians, speakers of other Romance languages, Slavic languages, and native speakers of American English

This analysis looks at the features mentioned by all raters for all speakers grouped together based on their *actual* native languages or language types, regardless of where the raters guessed them to be from. Although the distinctions among the four groups of speakers are not overwhelming, there are some features unique to certain language groups and yet other features shared by only two of the language groups.

One feature unique to the Romanian accent is clear pronunciation of the lateral liquid [l]. That is to say, Romanians pronounced a clear [l] even in positions where native speakers of American English produce a velarized [ɬ]. Slavic language speakers were often heard to replace the [w] sound with the [v] sound, devoice final voiced consonants, and replace the interdental [ð] with the alveolar or dental [z]. Romance language speakers' accents are characterized by vowel epenthesis and trouble with the [s] sound in the initial position when it was followed by a consonant.

Both Romanians and Slavic language speakers were perceived to be more monotonic and tended to replace the [θ] sound with an [s] sound. Both Romanians and Romance language speakers pronounced their [t] sound "too strongly" and tended to put too much emphasis on their vowels.

Table 4.3 Salient features characteristic of the speech of the Romanians, Slavic and Romance language speakers, and native speakers of American English

Tok	Romanians	Tok	Slavs	Tok	Romance	Tok	Americans
57	[ɹ] → [r]	42	[ɹ] → [r]	42	Vowel epenthesis	10	vowels
56	[θ]→[t]	26	intonation	28	intonation	9	Intonation
50	intonation	23	too slow	27	[ɹ] → [r]	5	vowels elongated
33	[ð]→[d]	20	vowels	22	stress	5	“spoon”, “scoop”
28	[ɪ]→[i]	18	[th]	16	sing-songy	4	[faiv]→[fav]
28	too slow	17	stress	15	[sn]	4	stress
27	stress	16	Nasal	14	her	4	strong fluency
27	hard consonants	16	hard consonants	12	emphasized vowels	2	slow
26	vowels	15	her	12	[ɪ]→[i]	2	cons
20	[th]	15	final devoicing	11	vowels	2	fast
19	too fast	14	[w]→[v]	11	slow	2	nasal
15	[h] → [x] or [ç]	11	[ɪ]→[i]	10	rhythm	1	snow peas
12	nasal	11	[ð]→[d]	8	nasal	1	[th]
12	stressed vowels	10	[θ]→[t]	7	[th]	1	joining of words

12	no final [s]	9	[θ]→[s]	7	[θ]→[t]	1	words drawn out
11	[eɪ]→[æ]	9	[h] → [x] or [ç]	7	long vowels	1	rhythm
11	effort	8	[o]	6	[ð]→[d]	1	..[dei]→..[di]
10	her	6	[ð]→[z]	6	[h] → [x] or [ç]	1	reduced vowels
10	monotone	5	long s's	6	cons	1	compound stress
7	awkward pauses	5	fast	6	no final cons		
7	[s]	5	snake→sneeak	5	compounds stress		
6	[ɬ]→ [l]	4	[s]	5	[s]		
6	[t] too strong	4	pauses	4	[t]		
5	[θ]→[s]	4	rhythm	4	short vowels		
6	sing-song	4	sing song				
4	rhythm	4	monotone				
4	compound stress	4	vowels short				
4	vowels short						
4	[o]						

4.2.2.2 A discussion of the Romanians, speakers of other Romance languages, Slavic languages, and native speakers of American English

Table 4.4 Salient features characteristic of the speech of one group or shared by two groups consisting of Romanians and speakers of either Romance or Slavic languages

Romanian	Slavic	Romance
stressed vowels 12	final devoicing 15	Vowel epenthesis 42

monotone 10	[w]→[v] 14	[sn] 15
[l] 6	[θ]→[s] 9	too much emphasis on vowels 12
[t] too strong 6	[ð]→[z] 6	[t] 4
[θ]→[s] 5	monotone 4	

There are several salient features in the accents of the various speakers that are unique to one language or language group or are shared by two language groups.

Unique features of the Romanian accent

One feature that was not as salient in the other accents but was perceived as non-native in the Romanians' accent was the [l] sound. Romanian only has a clear [l], whereas American English has both a clear [l] and a back velarized [ɬ]. Both Slavic and Romance languages have a palatal lateral approximant [ʎ]. Although the palatal lateral approximant is different from the velarized English [ɬ], the existence of this sound in the consonant inventory of Slavic and Romance languages (except for Romanian) raises these speakers' awareness about the English velarized [ɬ]. This heightened awareness could have led to a more accurate acquisition of the dark [ɬ] in English.

Unique features of Slavic accents

One phonological rule characteristic of all Slavic languages considered in this study is final devoicing of voiced consonants. Raters remarked on the pronunciation of [bɪg] as [bɪk] or [θɪŋg] as [θɪŋk]. Another "stamp" of the Slavic foreign accent in English is the confusion of [w] and [v]. The "th," when pronounced both as [ð] and [θ], is a fairly marked sound. It is replaced by different sounds depending on the native language of the

speaker. Romance language speakers usually replace [ð] with [d] and [θ] with [t]. However, Slavic language speakers often replace [ð] with [z] and [θ] with [s]. In this study, the replacement of [ð] with [z] in the Slavic language speakers' speech was more salient to the raters. Before moving on to the features unique to speakers of Romance languages, I will make a few remarks regarding the salient features of Slavic language speakers. All three features unique to the accents of Slavic language speakers also happen to be typical in the accents of German native speakers. Slavic language speakers were thus guessed to be German more often than Romanians or the speakers of other Romance languages.

Unique features of the Romance accents

Vowel epenthesis is such a typical feature of Romance languages and ranked number one among the features deemed characteristic of the accent of Romance language speakers. Another feature picked up by the raters was the trouble Romance language speakers had with the consonant cluster [sn]. Speakers would replace [sn] with [shn] or with [zn].

Salient features shared by Romanians and Slavic language speakers

As mentioned above, Slavic language speakers often replace the [θ] with [s]. Although most Romanians replace [ð] with [d] and [θ] with [t], enough speakers probably pronounced the [θ] as an [s] for this (mis)pronunciation to contribute to their accents' being perceived as Slavic.

Salient features shared by Romanians and Romance languages speakers

Salient features shared between Romanians and native speakers of other Romance languages include "strong" /t/s and the placing of too much emphasis on vowels.

American English and the Romance languages (including Romanian) differ considerably when it comes to the /t/ sound. The phoneme /t/ in American English has five allophones: aspirated in syllable-initial position, unaspirated when following [s], unreleased in word-final position, pronounced as a flap in intervocalic position (when the stress is on the preceding syllable), and pronounced as a glottal stop when followed by a syllabic nasal. Raters, however, did not detect "strong" /t/s in the accents of Slavic language speakers, even though Slavic languages do not have the allophones found in English either.

According to the raters, Romanians and speakers of other Romance languages put too much “emphasis” on vowels. This observation may be a reflection of the fact that Romance languages (including Romanian) are syllable-timed languages whereas English (and Slavic languages) are stress-timed languages. Syllable-timed languages do not reduce vowels and do not use unstressed syllables as much as stress-timed languages[6] do. Therefore, vowels that a native speaker of English would pronounce in a reduced manner come across as being too emphasized when pronounced by a Romance language speaker.

4.2.2.3 Suprasegmental features

Raters made numerous remarks concerning suprasegmental features in the speech of all speakers. These ranged from general terms such as “intonation,” “stress,” and “rhythm” to more specific terms such as “sing-song intonation,” “flat intonation,” “lively,” “compound stress,” “pitch goes up at the ends of words,” etc. Terms pointing to suprasegmental features represent 30% of all salient features characteristic to the Romanians' speech as perceived by the raters.

[6] Czech and Polish do not have significant vowel reduction.

Intonation

Dalton & Seidlhofer (1994) emphasize the importance and role of intonation in any given language by referring to it as "vocal gesture." This study yielded no less than fifty tokens indicating that the Romanian speakers' intonation sounded non-native. Based on analyses of intonation patterns in English and Romanian, we know that those in English are more complex than in Romanian (Poldauf 1984, Augerot et al. 1984). For one thing, English makes use of three levels of pitch. Furthermore, rise-fall intonation, which is characteristic of English, is hard for Romanian learners to imitate, and English also uses intonation cues to compensate for the lack of modal particles and a more rigid word order, such as that found in Romanian. In addition to the vague term "intonation", there are ten "ratings" specifying a *monotone intonation* in the speech of the Romanians. This finding adds further support to the observation that Romanian intonation patterns are not as complex as English ones.

Stress

English is a stress-timed language and Romanian is a syllable-timed language. Furthermore, Romanian and English differ in degree of stress. English makes use of three degrees of stress but Romanian only of one. We can say that the Romanians' stress patterns in English were perceived by the American raters as non-native, as there were 27 tokens involving stress in the native speakers' ratings. Some raters were more specific and noticed non-native pronunciation of compound stress.

Vowel reduction

English makes use of vowel reduction to a much larger extent than Romanian, and this was also noted by the native speakers. There were a total of 12 tokens indicating "stressed vowels" in the speech of the Romanians.

Rhythm

The stress patterns and degree of reduction of vowels largely make up the rhythm of a language. As mentioned above, English and Romanian differ significantly in their stress patterns and the degree to which they use vowel reduction. The syllable-timing of Romanian and its lack of vowel reduction can be said to contribute to listeners' impression of the Romanian accent in English as sounding sing-songy. There were a few raters who remarked upon the non-native-like sound of Romanians' rhythm in English and/or stated that they had a sing-song rhythm.

Suprasegmental features are not only hard to acquire and teach, but they are also hard to talk about. One of the reasons for this difficulty is the fact that the different suprasegmental features are not completely distinct one from another. As we have seen above, stress patterns and the degree to which a language reduces its vowels determine the rhythm of a language. These non-clear boundaries make it even more challenging for non-linguist raters to describe non-native speakers' speech.

We can conclude that native-speakers' perception of suprasegmental features is one aspect of foreign accented speech that needs to be further analyzed. This is useful information even though the data gathered from the speakers does not offer a rich description of speakers' intonation and stress patterns. We can conclude also that segmental features salient to the raters are not so overwhelming in number as to clearly

distinguish one language or language group from another. Finally, different patterns among suprasegmental features can further explain the raters' classification of speakers into different language groups.

4.2.3.1 Characteristics of the Romanians' accent as described by the Romanians themselves and as contrasted with Americans' perceptions

The raters described most speakers' accents by specifying certain vowels, consonants, or suprasegmental features. The features found in most Romanian speakers' speech included the rolled [r] and problems with the "th" sound and intonation. A complete list of all accented features as perceived by the native raters can be found in Appendix D.

Some of the more interesting errors found in some of the Romanians' speech include the lack of an [h], final obstruent devoicing, and the mispronunciation of certain words. The word "her" was often perceived as "hair," "thick" was sometimes pronounced as "stick," and "snake" was sometimes confused with "snack."

When looking at Romanians' descriptions of their own accent in English, we find that the amount of information they provided varies depending on the type of elicitation they were presented with. Overall, like the raters, most Romanians described their own accent in terms of vowels, consonants, and suprasegmental features. Even though the Romanians were given a list, the elicitation paragraph, and open-ended questions regarding their accent, the range of salient features reported by them is not as wide as that found in the native speakers' feedback. A complete list of all features reported by every speaker can be found in Appendix E.

The Romanian native speakers gave the smallest amount of information when asked the open-ended question of what in their speech sounded accented. They were able to provide more information when looking at the elicitation paragraph, but more information was collected when the speakers were given a list of specific sounds accompanied by examples.

As mentioned above, although the Romanians were given several opportunities to describe their accents, there are several features that the American raters noted and that cannot be found in the Romanians' answers (or that at most can be found in one Romanian's answers). From this data, we see that no Romanian seems to be aware of the different pronunciation of [h] in the two languages. Nor did any Romanian say anything about stressed or reduced vowels. Furthermore, only one Romanian said something about strong pronunciation of consonants and the different pronunciation of [l].

When combining all features as reported by all Romanians, we find that 39% of the reported features refer to vowels, 34% refer to consonants, and 24% refer to suprasegmental features.

4.2.3.2 A discussion of the characteristics of the Romanians' accent as described by the Romanians themselves and as contrasted with Americans' perceptions

The comparison of native speakers' descriptions of the foreign speakers' accents with the foreign speakers' own perceptions of their English pronunciation problems reveals a few differences. It was found, for example, that Romanians are not aware of the pronunciation differences between the [h] sound in English and Romanian. The terms most Americans used to describe Romanians' [h] were "aspirated," "hard," or "strong."

One rater even remarked at the end of the rating process that he had not realized how much difficulty "these poor people" had with the [h] sound when speaking English. The native-speakers' perception of non-native pronunciation of the [h] sound is explained by the fact that English has only a glottal fricative [h], whereas Romanian /h/ has as many as three allophones [h], [x], and [ç]. The Romanians' lack of awareness could be partly owing to the fact that, at least to my knowledge, when Romanians are taught English, the English [h] is not introduced as a different sound or as one of the allophones of the Romanian /h/. The English /h/ is simply taught as being the same as the Romanian /h/.

Another feature that was salient to the American raters and that Romanians did not seem to be aware of was vowel reduction. Romanian is a syllable-timed language and, unlike in English, every syllable in Romanian carries a certain degree of stress. Reducing vowels in Romanian is often equated with sloppy speech. The native language habit of not reducing vowels and the negative association with reducing vowels might explain why vowel reduction is absent in the Romanians' speech. Also, the reading task was a more formal task.

Only one person out of the twenty Romanians in this study mentioned "strong pronunciation of consonants." Although this observation seems fairly vague in terms of phonetic description, the native raters listed no fewer than 27 observations of "hard or strong consonants." This perception of the pronunciation of consonants can be attributed to several things. In English, the intervocalic [t] changes into a flap, and voiceless plosives are aspirated in syllable initial position and are unreleased in word final position. Furthermore, these English plosives' voiced counterparts are only partially voiced, whereas in Romanian, the sounds /b d g/ are fully voiced.

Only one person remarked upon the difference between the American velarized [ɬ] and the Romanian clear [l]. Not only does this study show that Romanians are not aware that American /l/ is pronounced differently from the Romanian /l/, but when compared to the other speakers' accents, a non-native-like pronunciation of the /l/ was only perceived in the Romanians' speech.

Romanians made the majority of their references to suprasegmental features when faced with a list of possible pronunciation issues. There were fewer such references when Romanians were asked to describe their accent in general and hardly any when they were asked to point to problematic areas in the elicitation paragraph. Although we can hardly claim that Romanians are unaware of suprasegmental issues in English pronunciation, they are so to a much lesser degree than native speakers of American English listening to the Romanians.

4.2.4 Salient features and theoretical frameworks

Markedness

As mentioned in the literature review section, one theory of Second Language Acquisition does not suffice to describe all of the Romanians' mispronunciations in English. The most salient pronunciation errors of Romanians as perceived by the native speaker raters in this study were the retroflex [ɹ], [ð], and [θ]. These three sounds are marked sounds and are supposed to be more difficult to learn than other unmarked sounds such as [m], [n], or [f]. The universal nature of markedness is furthermore supported by the fact that all speakers of the eight different languages (Romanian, Polish, Czech, Bulgarian, Russian, Spanish, Portuguese, and Italian) have similar difficulties with these

sounds. The Markedness Differential Hypothesis which was developed by Eckman (1977) explains these difficulties. In addition to being a marked sound, [ð], as Dalton & Seidlhofer (1994) report, is the most frequent consonant in English.

Another major difficulty in Romanians' pronunciation of English is the tense/lax distinctions between [i] and [ɪ], [u] and [ʊ], as well as the distinctions between [æ] and [ɛ] and [ʌ] and [ɑ]. For all these pairs, Romanian has one only vowel corresponding to the two distinct phonemes in English. Romanians have to create two separate phonemes in the vowel space occupied by only one in their native language. By contrast, native speakers of English, when learning Romanian, would have only to suppress the distinction between the two English phonemes. As predicted by markedness, making new distinctions is more difficult than suppressing existing contrasts.

Similar versus dissimilar sounds

As detailed in Flege's (1987) Speech Learning Model, similar sounds are more difficult to learn than dissimilar sounds. The lax vowel [ɪ] is similar enough to the tense vowel [i] (which is not identical to the Romanian [i], but closer) so that Romanians will perceive the two as the same phoneme. The tense/lax pair [ɪ] and [i] was noted 28 times, whereas contrasts like [u] and [ʊ] were not. One explanation for this is the fact that the elicitation paragraph did contain more instances of [ɪ] and [i] than [u] and [ʊ]. This is furthermore supported by Catford's (1987:88) observation that "the opposition [i/ɪ] has a high functional load. In contrast, the opposition [u/ʊ] in (for example) fool/full distinguishes few pairs of words and therefore has a low functional load."

Not only does the Speech Learning Model use similarity as a predictor of difficulty, but it also links production to perception. This model postulates that L1 and L2

sounds are related perceptually at the allophonic rather than phonemic level and that a new phonetic category can be established if the learners can discern at least some of the phonetic differences between the two sounds (Major 2001). In addition to the above-mentioned phonemic contrasts of vowels in English, which learners perceive as one sound, the model also explained why learners do not perceive and produce the dark [ɬ], the different allophones of /t/, and the [h] correctly.

4.3.1 Correlation between degree of foreign accent and background variables

4.3.1.1 All speakers

The second research question deals with the relationship between perceived foreign accent and variables concerning the speakers' background. Before presenting the results concerning the Romanian speakers only, I will present the results for all speakers. Biographic and linguistic background information from the questionnaires of all non-native speakers was analyzed and linked to the degree of foreign accent perceived by the native speaker raters.

The speakers were rated between 3.3 and 7.9 on the Likert scale from 1 (native speaker) to 9 (very thick accent).

A speaker's score is the average score over the 21 raters who rated him/her. The scores were correlated with 10 variables regarding the speaker's personal, educational, and linguistic background. Four of these 10 variables are class variables (GEND = gender, INSTRHM = instruction at home, INSTRUS = instruction in the United States, OTHLANG = other languages spoken). The six remaining variables are continuous variables (DOB = date of birth, LOR = length of residence, AOA = age of arrival,

USEOFENG = use of English, HOWASSIM= how assimilated speakers feel, RATEFA = rate own foreign accent).

Upon completion of 1-way ANOVA, the separate P-values for all 10 variables are:

GEND = .5384

INSTRHM = .2289

INSTRUS = .0440

OTHLANG = .0076

DOB = .1134

LOR - not significant

AOA = .0057

USEOFENG = .2745

HOWASSIM = .6655

RATEFA = .0560

These results are for univariate analyses, and they explain the speakers' score (degree of perceived foreign accent) as related to each of the ten variables. The three variables that appeared significant at $p < .05$ were INSTRUS, OTHLANG, and AOA. These variables were used in a General Linear Model to simultaneously predict the speakers' degree of perceived foreign accent. Two of the variables are class variables with two levels (Y= yes and N = no), and one variable is continuous. AOA was measured in years. The model has an R-square of .3559 and an RMSE (Root Mean Square Error) of 0.94.

Based on this model, I found that the later one arrives to the United States, the higher one's score will be (i.e., the worse one's foreign accent). The model also shows that each additional year will add 0.5 to a speaker's expected score.

One variable that was found only marginally significant was RATEFA, and it was measured on a scale from 1 to 9. Regarding the self-rated foreign accent, for each 1 unit increase in RATEFA, the score can be expected to rise 0.8. However, after including the other three variables, the speakers' rating of their own foreign accent does not appear to be significant.

Furthermore, the model shows that one's perceived foreign accent score is better if one has not had instruction in the United States. Lastly, a speaker's score is better if s/he speaks yet another foreign language (in addition to English).

Based on these findings, the model shows that a speaker' accent will be best if s/he comes to the United States at the age of 23, rates his/her foreign accent a 2, has no formal language instruction in the United States, and speaks another language in addition to English and his/her native language. Based on this model, such a person would be predicted to be rated with an accent of 4.31 on a scale from 1 to 9. At the same time, a speaker's accent will be worst if s/he comes to the United States at the age of 53, rates his/her foreign accent a 9, has instruction in the United States, and speaks only English and his/her native language. Also, based on this model, such a person would be predicted to have an accent of 7.84 on a scale from 1 to 9.

In addition to the above-mentioned background variables, I looked at the relationship between speed of reading and perceived foreign accent. As found in other studies (Riggenbach 1991), speed of reading significantly correlates with degree of

perceived foreign accent in this study. Speakers who read faster were rated with a better foreign accent than speakers who read more slowly. The average duration of the reading for all speakers was 26.8 seconds. The averages per speaker group can be seen in Table 4.2.

Table 4.5 Speed of reading per speaker group

Speaker group	**Average duration (sec)**
All speakers	26.8
Romanians	26.9
Romance	28
Slavic	27.3
Americans	22.2

4.3.1.2 Romanian speakers

The same analysis drawing correlations between degree of perceived foreign accent and variables concerning the speakers' background was performed separately for the 20 Romanians.

The Romanian speakers were rated between 3.9 and 7.4 on the Likert scale from 1 (native speaker) to 9 (very thick accent).

The scores (indicating the degree of perceived foreign accent) were correlated with the same 10 variables as for all speakers.

Upon completion of a 1-way ANOVA test, the separate P-values for all 10 variables are:

GEND = .3296

INSTRHM = .6926

INSTRUS = .0348

OTHLANG = .0280

DOB = .3547

LOR = .3969

AOA = .5885

USEOFENG = .6356

HOWASSIM = .8604

RATEFA = .6700

These results are for univariate analyses, and they explain the speakers' score (degree of perceived foreign accent) by each of the 10 variables. As opposed to the set of all speakers, for the Romanians only two variables appeared significant. These were INSTRUS (instruction in the United States) and OTHLANG (other languages spoken). These variables were used in a General Linear Model to simultaneously predict the speakers' degree of perceived foreign accent. Both these significant variables are class variables with two levels (Y= yes and N = no). The model has an R-square of .1500 and an RMSE (Root Mean Square Error) of 1.04.

The model shows that one's score of perceived foreign accent is better if one has not had instruction in the United States. Furthermore, one's score is better if one speaks another foreign language in addition to English. At the same time, a speaker's accent will be worst if s/he has instruction in the United States and speaks no other language. However, the predictability of these two variables of one's foreign accent is weak. The

predicted score for a best accent is 5.01 and for a worse accent 6.48. This variation is not very big.

4.3.2 A discussion of the correlation between degree of foreign accent and background variables

4.3.2.1 All speakers

Statistical analysis shows that the strongest correlation can be found between the raters' perception of a speaker's foreign accent and that speaker's AOA (age of arrival). This supports findings in numerous previous studies that claim that AOA is a strong predictor of one's foreign accent. Furthermore, the linear relationship between AOA and degree of perceived foreign accent corroborates the results of Asher & Garcia (1969), Flege & Fletcher (1992), Flege et al. (1995), Oyama (1976), Patkowski (1990), Thompson (1991) Piske et al. (2001), and Moyer (1999). In this study, there were no foreign-born speakers rated as a "native speaker" by any rater, and since the youngest foreign speaker was 23 years old, this was also not expected.

Speakers who speak a third language received better scores on their English accent. Unfortunately, this study did not include information on the *order* in which the speakers learned their foreign languages. Some might have learned English before another foreign language, and others might have learned another foreign language before English. We could nevertheless posit that, regardless of order, the more foreign languages a speaker speaks, the more his/her awareness of foreign languages is raised. Such awareness could be heightened by, for example, different teaching and learning methods for the respective foreign languages or simply by the exposure to larger varieties of new

sounds. Another such factor could simply be the speaker's motivation. When a person sees that s/he *can* speak a foreign language, s/he may become more confident and face the challenge of a yet another foreign language with greater courage than someone who has never learned or mastered a foreign language before. On the other hand, a person who has never studied a foreign language before generally has less insight into how to learn a foreign language. This is in part because the skills necessary to learn a second language are different from the skills necessary to learn one's first language(s), whereas the skills necessary for a third language are very similar to the ones used for the second language.

In addition to the participants who *speak* a third language, several of the participants in this study have also studied or simply been exposed to a foreign language other than English. However, studying and/or being exposed to a foreign language do not necessarily mean that one speaks the language. When collecting the data, I made it clear to the speakers that they should mention other foreign languages only if they are somewhat conversant in that language. Now, if a person has studied a foreign language for several years but is not able to communicate in that language, s/he might conclude that s/he is "not good with foreign languages." Perhaps this “attitude of failure” also explains why certain of the merely bilingual speakers did not have as good a foreign accent (as perceived by native speakers) as many of the speakers who were tri-lingual or better.

One surprising finding of this study was that people who had English instruction in the United States were found to have a *worse* accent in English than those who did not. An explanation for this correlation is that it was probably the people with a poor accent in the first place who decided to enroll in English classes in the United States. Furthermore,

these classes were probably not pronunciation classes as such. Only one participant (a native speaker of Polish) reported that she took an accent reduction course for a month. All other participants' instruction consisted of general ESL classes, conversation courses, or ALP (the American Language Program at the University of Georgia) courses.

4.3.2.2 The Romanians

The two variables found to significantly predict the Romanians' foreign accent as perceived by native speakers of English were instruction in the United States and knowledge of a third language. Romanians who speak a third language tend to have a better accent in English. While I am not familiar with every individual speaker's background in this study, I am aware that in Romania every student must study at least two foreign languages in school. This means that every speaker studied at least another language but might not have reported it in the "other languages spoken" category. As mentioned above, taking a foreign language in school is not the same as speaking the language. However, speaking more than one foreign language may indicate a heightened awareness of foreign language learning. Furthermore, success in learning one foreign language may increase motivation in learning subsequent foreign languages.

The second variable that was found significant for the Romanian group was whether a speaker had received ESL instruction in the United States. Romanians who had instruction in the United States were rated with lower scores than the Romanians who did not have any. As with "all speakers," it could be that the Romanians who have learned very little or no English at home felt that it was necessary to enroll in an English course to make a better life in the United States. Romanians who could speak English when they

came to the United States were probably more comfortable interacting with the native speakers. This in turn may have improved their English. For someone who lacks at least some knowledge of English, it is much harder to integrate in the community.

One reason why so few significant correlations were found between the various linguistic and background variables and degree of perceived foreign accent (and why those correlations that were found are relatively weak) is the fact that the range of accents of the speakers was not very wide. The Romanian speakers' accents were rated between 3.9 and 7.4. An explanation for this might be the fact that all participants in this study were older than 23 when they moved to the United States. As found in numerous studies, AOA is the strongest predictor of degree of foreign accent, and major differences between speakers' accents can be found between speakers with AOAs falling before puberty and after puberty, respectively.

4.3.3 Discussion of results addressing other research hypotheses

No correlation was found between speakers' accents and their length of residence. In my data collection process, I met many people with different backgrounds and living styles. It is not uncommon among Romanian immigrants to live a fairly insulated life, and in fact many Romanians live comfortably in the United States with little daily English use. The speaker with the highest score (worst accent) had lived in the United States for seven years. She was 27 when she moved here and works as a cashier in a place where she does not have to speak much English. She has two daughters, ages 7 and 10, and she often relies on them when she needs to carry on a conversation in English. The speaker with the lowest score (best foreign accent) had also lived in the United States for 7 years.

She is also married and has two children. She is a real estate agent and uses English at work.

Instruction in the speaker's home country showed no effect on his/her foreign accent. Studies have even found instruction at home to have an inverse relationship with foreign accent. A reasonable explanation for this is that foreign languages are often taught by non-native speakers in a speaker's home country, and the longer a learner is exposed to the language spoken with the non-native teacher's accent, the more time s/he has to fossilize L1 features in the target language pronunciation. Another factor that can contribute to the lack of correlation between home-country instruction and foreign accent is the scant emphasis put on foreign language teaching before 1989 in Romania. Since most Romanians in this study finished school before 1989, they probably studied English under such circumstances.

No correlation was found between amount of L2 spoken and degree of perceived foreign accent. A lack of correlation between these two variables has also been found in many other studies (Flege & Fletcher 1992, Elliot 1995, Thompson 1991).

All Romanians reported that they wish to improve their accent in English. As a matter of fact, the speakers' reaction to this survey question was typically an eager "of course" accompanied by a tone of voice that evoked surprise that I would ask a question with such an obvious answer. Among both Slavic and Romance language speakers, however, there were several people who answered this question in the negative. They also often added something to the effect that they are not ashamed of their accent and they do not want to hide the fact that they are, for example, Russians or Italians. This is not to say that the Romanians wanted to hide their Romanian identity; on the contrary, all

Romanians I met through this study have close ties to other Romanians in their area. Although they tend to make an effort to integrate into American culture, they also preserve Romanian customs and traditions, and they all speak Romanian with native fluency. This shows that the Romanians separate their Romanian identity from their foreign accent in English, whereas some of the other non-native speakers of English in the study do not. Support for linking one's identity to one's L1 skills rather than L2 skills (or more specifically the L2 accent) can be also found in Derwing's (2003) study on immigrants to Canada who were asked to self-evaluate their communication problems with native speakers of English. The immigrant speakers did not consider their L2 accent to be linked to their identity. However, they strongly believed that maintaining native fluency in their L1 was closely related to their identity.

CHAPTER 5

CONCLUSIONS

5.1. General conclusions

This study started as a quest to find out what Americans think about the Romanian accent in English. The answer to this relatively broad question comes in several forms, depending upon the focus of the question. In this dissertation, I have focused on recognizability, language identification, misperception, linguistic features characteristic of the Romanian accent, and degree of perceived foreign accent.

As I had expected, Americans do not recognize the Romanian accent as such. Several explanations have been given for this. Romania and Romanians have not had a great impact on the United States compared to other national minorities. Also, when compared to other "foreign" images, Romanian speakers have only had a minimal presence in the media. This lack of awareness and exposure to the Romanian accent in English was reflected in the small percentage (3%) of the raters' guesses that labeled the Romanian accent specifically as “Romanian.” This indicated that Romanian was not among the primary European languages the raters considered when asked to label European accents.

Aside from the degree of recognizability of the Romanian accent, I was interested in finding out how Americans perceived the Romanian accent in English in terms of identifying it within a broader language family. For this task, Americans did not need to

be familiar with Romanians or the Romanian accent. And yet, most people could not categorize this accent as well as they did other Romance language and Slavic language accents. A combination of factors could be at play in causing this. On the one hand, the sound of an unfamiliar accent (and, on top of it, an accent different from the familiar Spanish or Italian accents) might have made the majority of raters automatically discount the Romance language category. On the other hand, the Romanian language, and consequently the Romanian accent in English, *does have* Slavic influences. This hybrid of Romance and Slavic was probably what prevented many raters from placing the accent in either of those two categories and caused them rather to pick the "unknown" category.

Although many raters could not identify the Romanian accent as such and could not place it in a specific language category, a significant number of guesses indicate that Americans perceive the Romanian accent as either Romance (28%) or Slavic (25%). Paradoxically, I found the need to explain both why these numbers are so low and why they are so high.

Considering that Romanian is a Romance language, one could have expected a higher percentage of guesses indicating that Americans perceive the Romanian accent as Romance. However, as explained above, factors such as the fact that Americans may have a well-established idea of the sound of a Romance language (e.g., a Spanish or Italian accent), and the Slavic influences that might come through more strongly in the foreign accent, led to this result. If we shift our attention to the research hypothesis that states that Americans perceive the Romanian accent as Slavic, then 28% is indeed a higher number than expected for guesses of “Romance.” This hypothesis was posited based on my experience as a Romanian speaking English with an accent and based upon

what other Romanian friends have reported to me. My impression was further confirmed in the questionnaires of Romanians included in this study. When asked what Americans usually say when they (Americans) hear Romanians speak English, 42% said "Russian" or "Slavic" compared to only 15% who said "Romance."

The percentage of guesses of Romanians as being speakers of a Slavic language (25%) may seem high if we consider the fact that Romanian is a Romance language with *some* Slavic influences. But it could very well be that those same influences come across more strongly in the Romanian accent in English. Some of the features that the Romanian accent shares with Slavic accents are the replacement of the voiceless interdental fricative [θ] with the voiceless dental (or possibly alveolar) fricative [s] and a monotone rhythm. Indeed, the raters themselves made many references to stress, rhythm, and intonation. These references were made in very general terms, which is understandable given the raters' non-linguistic background and the difficulty of describing suprasegmental features even for linguists. Investigation of suprasegmental features is an area on which future research can shed some light.

Another important factor to consider is the raters' background and the fact that this study was not attempting to verify some objective fact but to see how Americans subjectively perceive the Romanian accent in English. Raters' placement of the Romanian accent in the "Slavic" category could also be a result of a process of elimination on the part of the raters. The Romanian accent sounds different from Spanish and Italian, and it does not sound Germanic, so what remains? Slavic. At the same time, the number 25% seems low if our initial hypothesis is that *most* Americans perceive the accent as Slavic. Confronted with such a low number, we might be forced to conclude

that the Romanian accent does not sound so Slavic after all. Perhaps the high percentage reported by the Romanian speakers in the questionnaires was a result of their disproportionately remembering and reporting an "unexpected" reaction of native speakers.

The question of misperception is an interesting and complex one. Americans' perception becomes misperception when they tell the Romanians what they (Romanians) sound like and, more specifically, when people (both Americans and Romanians) superimpose the sound of the accent onto the national identity of the Romanian people. While it is unquestionable that, due to language contact, Romanian has been influenced by Slavic languages, Romanians are nevertheless sensitive, for historical and political reasons, to being identified with the Slavic world. This sensitivity becomes clear when we compare a Portuguese and a Romanian being told that they sound Slavic (not an infrequent occurrence for natives of either country). The Portuguese native speaker attaches no identity information to this perception. Portuguese speakers may see such misidentification as either a random occurrence or purely a linguistic coincidence. Romanian native speakers, however, equate the sentence "you sound Slavic" with "you *are* Slavic" which may fly in the face of the Latin heritage of which many Romanians are so proud.

The American raters in this study who, we must keep in mind, had little or no linguistic background, did a commendable job of describing the speakers' accents. Some of the more salient features they heard in the Romanians' speech include a rolled [r], difficulties with the [th] sound, a strongly aspirated [h], a clear [l] in all positions, and no tense/lax distinction between [i] and [ɪ], as well as distinct stress, rhythm, and intonation

patterns. Although the raters usually referred to suprasegmental features in general terms, they did so in very high numbers. Knowing the specifics of the prosodies of the different languages considered in this study, it may be fair to assume that Americans' perception of the Romanian accent in English is in large part a reflection of the prosody of the language rather than the segmental features.

The Romanians in this study had various degrees of foreign accent in English. As this study and other studies have shown, speakers' degree of foreign accent is the result of a number of factors. The speakers I considered were all older than 23 when they moved to the United States and had all lived for at least 5 years in the United States at the time of the study. In addition to age of arrival and length of residence, factors such as amount of L1 and L2 use, L2 instruction in the home country and United States, fluency in other languages, and motivation to improve their foreign accent were taken into consideration. Significant correlations, although low, were found between degree of perceived foreign accent and fluency in a third language and instruction in the United States. The relationship between degree of perceived foreign accent and instruction in the United States was an inverse one (i.e., a speaker's foreign accent was worse if s/he had instruction in the United States). This inverse correlation is probably not a reflection of the fact that instruction in the United States might worsen speakers' accents, but rather that the speakers whose English initially was not very good decided to enroll in English classes.

5.2 Pedagogical implications

This study reveals several things that can be used to improve the teaching of English to Romanians. There are a variety of segmental and suprasegmental features that Romanians pronounce in a non-native-like fashion. There are different explanations as to why Romanians have difficulties with some of these features.

Many Romanians roll their [r]s and have difficulties with both [θ] and [ð]. These sounds are very marked, and most speakers in this study (native speakers of seven other European languages) have difficulties with these sounds. Native-like acquisition of these sounds should be expected to take a relatively long time, and teachers should spend time on teaching these sounds to Romanians. In addition to the above-mentioned consonants, there are also vowels that create difficulties for Romanians. The most frequently mentioned problem in this study was the tense/lax distinction between [i] and [ɪ]. Romanians also have difficulties correctly perceiving and producing the pairs [ʊ]/[u], [æ]/[ɛ], and [ʌ]/[a], although such sounds may not be as problematic as [i] and [ɪ]. With regard to each of these pairs, there is but one vowel in Romanian that covers the phonetic space of both vowels in English. Unlike with [ɹ], [θ], and [ð], where Romanians can recognize the distinct sounds, with vowel pairs the challenge stems from the fact that Romanians perceive the two American English vowels as one vowel. From a theoretical standpoint, the learners' difficulties can be explained within the framework of Flege's Speech Learning Model. Exercises with minimal pairs targeting both perception and production can help in the learning of these sounds.

One sound that was found to be rather typical of the Romanian accent was the pronunciation of a clear [l] in all positions. Yet teaching Romanians the velarized [ɬ]

should not be particularly hard. The problem seems to be more the fact that Romanians are not very aware of the two allophones of the American English /l/. This lack of awareness also stems from the fact that the velarized [ɬ] is so similar to the clear [l] that learners do not perceive them as two different sounds.

Romanians were perceived to pronounce the [h] in a fairly non-native way, but at the same time, no Romanian seems to be aware that the English [h] is distinct from the Romanian [h]. It should be particularly easy for Romanians to acquire the American [h], since, with this sound at least, Romanians need only suppress a distinction in their native language and use but one of the Romanian allophones for this English phoneme. The differences in pronunciation are difficult to perceive because the different [h] sounds are relatively similar. Furthermore, there is no clear consensus as to how many allophones the Romanian [h] has. This might be due to the fact that there are regional differences, and the different allophones are also used in free variation.

Much of the Romanians' foreign accent is due to non-native use of suprasegmental features. In particular, intonation, stress, and a lack of reduced vowels were noted by the native raters. But the challenge of teaching suprasegmental features is much bigger than that of segmental features. Since only segmental elements are reflected in writing and suprasegmental features are not, both learners and teachers put a disproportionate amount of emphasis on segmental features.

Among the Romanians in this study, there was a good deal of transfer of L1 suprasegmental features into English. English and Romanian differ in terms of compound stress, and Romanians tended to use Romanian compound stress patterns in English. Many Romanians also reported having problems with words such as *conjunctivitis,*

hippopotamus, unsympathetic, etc. These words are cognates with the Romanian translations, and the speakers' L1 habits often interfered with the pronunciation of these polysyllabic words of Greek and Latin origin. It is especially the stress patterns (syllable-stress) and lack of reduced vowels that are transferred from Romanian.

5.3 Limitations and suggestions for further research

In this, as in almost all perceptual studies, the researcher depends to a certain extent on the participants' ability to express their perceptions accurately. The data in this study relied on information given by both the speakers and the raters, which information was not always easy for them to quantify or reflect in the answers required of them. Such information included the speakers' amount of L1 and L2 use on a daily basis, the question of what other people think of their accent, and the degree of their assimilation in the American culture. The raters' challenge was to describe foreign accents in more than just vague and general terms. The large number of references to suprasegmental features indicates that Americans' perception of the Romanian accent in English is influenced by these features. The main purpose of this study was not to investigate suprasegmental features of the Romanian accent in English; however, it appears that an in-depth analysis of such features can give us important insights in future research.

The low recognizability of the Romanian accent in English is due both to the fact that Americans have not been exposed much to the Romanian accent and to the fact that Romanian has both Romance and Slavic elements. In this study, I did not have the raters go through training before the rating process. Future research could include a training

session for the listeners and could examine whether the accuracy of language guesses increases as a result of this training.

Another limitation of the study is the fact that I grouped together several different languages under the categories “Romance” and “Slavic.” I collected data on four different Romance and four different Slavic languages for the purpose of giving a more comprehensive account of these language groups. Of course, on the one hand, comparing Romanian to only, for example, Italian and Russian would have led nowhere. On the other hand, however, the outcome of the study may have been influenced by the inevitable drawing of conclusions about several languages from one language group without a separate analysis of each individual language in that group.

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APPENDIX A

LETTER OF INVITATION AND CONSENT FOR PARTICIPANTS

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I _____ agree to take part in a research study titled "Americans' Perception of the Romanian Accent in English," which is being conducted by Iulia Pittman (Linguistics Program, University of Georgia, Athens (706) 542-7170) under the direction of Dr. Don McCreary (Linguistics Program, 542-2238).

This study investigates the perception of American to the Romanian speech.

If I agree to take part in this study, Iulia Pittman will request that I fill out a questionnaire regarding my educational and linguistic background and read a short passage in English. The reading will be audio-taped. On a separate occasion, I will be also required to listen to 25 recording and evaluate them.

No discomfort or stress is expected as a result of this study.

No risks are foreseen.

The results of my participation in this study will be confidential. If any identifiable information regarding me will be used, I will be assigned a pseudonym and my name will not appear in any data for the study or in any results reported. Any information I give to

Iulia Pittman in this study will not be released in any individually identifiable form without my prior consent, unless otherwise required by law. One name-pseudonym key will be kept, and all data and the key will be kept by Iulia Pittman in a secured, limited access location. Only Iulia Pittman will have access to the data and the key. The "pseudonym key" will be destroyed after the analysis of the data. The tapes will be kept for an indefinite time, since they could serve for future projects.

I do not have to take part in this study; I can stop taking part at any time without giving any reason, and without penalty. I can ask to have information related to me returned to me, removed from the research records, or destroyed.

The researcher, Iulia Pittman, will answer any further questions about the research, now or during the course of the project and can be reached by phone at (706) 389-6581 or by email at iuliab@hotmail.com.

My signature below indicates that the researcher has answered all my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

_____

Name of Researcher Signature of Researcher Date

(706)-389-6581 iuliab@hotmail.com

_____

Name of Participant Signature of Participant Date

Please sign both copies, keep one and return one to the researcher.

Additional questions or problems regarding your rights as a research participant should be addressed to Chris A. Joseph, Ph.D. Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

APPENDIX B

QUESTIONNAIRE

1. Name _____

2. Date of birth _____

3. Country of birth _____ City _____

4. How long have you lived in the United States? _____ years _____months

5. How old were you when you moved to the United States? _____

6. Have you had any instruction in English before you came to the United States?

□ yes □ no

If yes, from what grade to what grade _____? How many years in college

_____?

Other _____.

8. Have you had any instruction in English in the United States?

If yes, specify type and number of years _____ .

9. Are you fluent in any other language than Romanian and English?

What language(s) _____

10. How often do you use the following languages on a daily basis?

	Romanian	English	L3_____	L4_____
0-10%				
10-20%				

20-30%				
30-40%				
40-50%				
50-60%				
60-70%				
70-80%				
80-90%				
90-100%				

11. Do you think you have a foreign accent in English?

□yes □ no

12. If yes, would you like to improve your accent?

□yes □ no

13. Are you working on improving your accent?

□yes □ no

14. Do you feel that you assimilated into the American culture?

□yes □ no

How assimilated do you feel?

1 2 3 4 5 6 7 8 9

(totally assimilated) (not at all assimilated)

15. How would you rate your own accent in English? Be honest!

1 2 3 4 5 6 7 8 9

(native-like) (very heavy accent)

16. When people hear you speak what accent do they think you have?

_____

17. What do you think are the biggest problems for you with English pronunciation?

_____

_____

_____

_____

_____

Circle the letters that you think you pronounce non-native-like.

- [r] like in the words *row, three, tree, board, bar*

-[th] like in *these, that, bother*

-[th] like in *thin, thing, bath, something*

-words like *leave* versus *live* or *pull* versus *pool*

-words like *bed* versus *bad* or *dead* versus *dad*

-[t] in *water, later, better*

-[o] in *hot, lost*

-[a] in *hall, all*

-[s] in *these, those*

-words like: hippopotamus, compartment, unsympathetic, conjunctivitis, locomotive, hepatitis.

-word compounds like: snow bunny, post office, central heating, blue flower, central station, bluebook.

-overall intonation and speech melody.

-other

_____

_____

_____.

Read the following text and mark the places where you think you'll have trouble with your pronunciation.

Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.

APPENDIX C

ROMANIANS PERCEIVED AS SPEAKERS OF

A ROMANCE OR SLAVIC LANGUAGE

Romance (117)	Slavic (101)
rlld [r] 21	rlld [r] 19
vowels 18	[th]→[t] 16
int 12	[th]→[d] 13
[th]→[t] 12	vowels 12
fast 10	slow 9
[I]→[i] 9	int 8
[th] 8	[th] 8
sing song 7	[I]→[i] 7
stress 8	asp [h] 7
[th]→[d] 7	stress 7
her 6	cons 6
cons 5	flat int 4
slow 6	[ei]→[ae] 4
initial cons 5	nasal 4
flat int 4	no final [s] 3
fluidity 4	[s] 4
asp [h] 4	fast 2
no pause 2	pauses 2
final cons devoicing 2	[e]→[ae] 2
[th]→[s] 2	frog 2
pauses 2	sing song
[th]→[f] 2	her
[s] 2	fluidity
final cons	final cons devoicing
[ei]→[ae]	[ow]→[oo]
[ow]→[oo]	[o]
no [h]	[u:]→[u]
[schwa]→[a]	words not linked
store, frog	these→this
nasal	[th]→[z]
no final [s]	[l]
[t]	
these→this	

APPENDIX D

SALIENT FEATURES FOR ROMANIANS, NATIVE SPEAKERS OF SLAVIC LANGUAGES, ROMANCE LANGUAGES, AND AMERICAN ENGLISH

Romanians	Slavs	Romance	Americans
rolled [r] 57	rolled [r] 42	Vowel epenthesis 42	vowels 10
[th]→[t] 56	intonation 26	intonation 28	Intonation 9
intonation 50	too slow 23	rolled [r] 27	vowels elongated 5
[th]→[d] 33	vowels 20	stress 22	"spoon", "scoop" 5
[I]→[i] 28	[th] 18	sing-songy 16	monophthongization in
too slow 28	stress 17	[sn] 15	"five" 4
stress 27	Nasal 16	her 14	stress 4
hard consonants 27	hard consonants 16	too much emphasis	strong fluency 4
vowels 26	her 15	on vowels 12	slow 2
[th] 20	final devoicing 15	[I]→[i] 12	cons 2
too fast 19	[w]→[v] 14	vowels 11	fast 2
hard [h] 15	[I]→[i] 11	slow 11	nasal 2
nasal 12	[th]→[d] 11	rhythm 10	snow peas 1
stressed vowels 12	[th]→[t] 10	nasal 8	[th] 1
no final [s] 12	[th]→[s] 9	[th] 7	joining of words easily,
[ei]→[ae] 11	hard [h] 9	[th]→[t] 7	smoothly 1
effort 11	[o] 8	long vowels 7	words drawn out 1
her 10	[th]→[z] 6	[th]→[d] 6	rhythm 1
monotone 10	long s's 5	[h] breathing 6	wndday→wnddee 1
awkward pauses 7	fast 5	cons 6	reduced vowels 1
[s] 7	snake→sneeak 5	no final cons 6	compound stress 1
[l] 6	[s] 4	compounds stress 5	
[t] too strong 6	pauses 4	[s] 5	
[th]→[s] 5	rhythm 4	[t] 4	
sing-song 6	sing song 4	short vowels 4	
rhythm 4	monotone 4	[schwa]→[e] 3	
stress in compounds 4	vowels short 4	no [h] 3	
vowels short 4	effort 3	[ae]→[a] 3	
[o] 4	[u] strange 3	[ow]→[o] 3	
too exact 3	"ow" 3	snake→sneeak 3	
[schwa[→[a] 3	strong vowels 3	trying to pronounce	
red bags [e]→[ae] 3	[l] 3	all words 3	
	[ae]→[e] 3	[ng]→[nk] 2	

vowels elongated 3 store, frog 3 [ow]→[o] 2 words ended abruptly 2 [th]→[f] 2 scoop→scup 2 no [h] 2 these→this 2 [ae]→[e] 2 [ae]→[a] 2 [ng]→[nk] 2 no pause 2 [sn] 2 six _poons 1 [th]→[z] 1 scoop-pitch up in wrong area 1 [r]→[d] 1 [t]→[d] 1 [a]→[o] 1	abrupt 3 [ae]→[a] 2 [r]→[d] 2 no [h] 2 no final [s] 2 vowels longer 2 short s 2 [sh] 1 [e]→[ae] 1 compound stress 1 [sn] 1 slabs, plastic 1 with 1	these→this 2 Wednesday 2 strange pauses 2 scoop→scup 2 [schwa]→[a] 1 [tsch]→[sh] 1 [u]→[u:] 1 [l] 1 [z]→[s] 1 [o]→[a] 1 [l]→[w] 1 fast 1 [a]→[o] 1 [e] 1 [th]→[s] 1 [ae]→[e] 1 bob 1	

APPENDIX E

SALIENT FEATURES FOR ROMANIAN SPEAKERS

Raters' perception	Self-perception
Speaker 1 adpo	**Speaker 1 adpo**
Vowels	**Vowels**
Consonants	**Consonants**
[ɹ] → [r] 2	
[ð]→ [d] 2	
[θ]→ [t] 2	
[h] → [x] or [ç]	
[ð]-->[z]	
initial consonants	
Suprasegmentals	**Suprasegmentals**
intonation 3	
fast 2	
sing-song	
no pause	
monotone 2	
Speaker 2 capo	
Vowels	**Speaker 2 capo**
vowels 2	**Vowels**
[oʊ]→ [o]	[ɪ]→ [i]
[ɪ]→ [i]	[ʊ]→[u]
[ei]→ [æ]	[æ] [ɛ] merger
Consonants	vowels
[θ]→ [t] 3	**Consonants**
[ɹ] → [r] 3	[ɹ] → [r]
[ð]→ [d] 2	[th]
[th]	
Suprasegmentals	
intonation	**Suprasegmentals**
initial and final consonants	stress
consonants	
six _poons	
fluidity	

Speaker 3 crsv **Vowels** elongated vowels vowels **Consonants** [ɹ] → [r] [ng]→ [nk] or [ŋg]→ [ŋk] [h] → [x] or [ç] no [h] **Suprasegmentals** stress vowel stress intonation fast 5	**Speaker 3 crsv** **Vowels** [ɪ]→ [i] [ʊ]→[u] **Consonants** [ɹ] → [r] **Suprasegmentals** stress vowel stress intonation
Speaker 4 doga **Vowels** [ɪ]→ [i] 3 [ə]→ [a] [oʊ]→ [o] vowels **Consonants** [θ]→ [t] 5 [ɹ] → [r] 4 [bɪg]→ [bɪk] [t]→ [d] [th] [h] → [x] or [ç] [ð]→ [d] **Suprasegmentals** pauses intonation slow initial consonant stress	**Speaker 4 doga** **Vowels** [ɪ]→ [i] [ɔ]→ [o] **Consonants** [ɹ] → [r] [th] [z]→[s] (devoicing of final obstruents) **Suprasegmentals**
Speaker 5 elga **Vowels** vowels **Consonants** [ð]→ [d] [θ]→ [t] [th] [ðiz]→ [ðɪs] **Suprasegmentals** stress 2	**Speaker 5 elga** **Vowels** [ɪ]→ [i] [ʊ]→[u] **Consonants** [ɹ] → [r] [th] [z]→[s] (devoicing of final obstruents) **Suprasegmentals** stress

intonation 2 initial consonant stress slow nasal monotone	intonation
Speaker 6 elni **Vowels** pure vowels vowels **Consonants** [ɹ] → [r] **Suprasegmentals** rhythm up&down 3 intonation 3 fluency pauses	**Speaker 6 elni** **Vowels** [ɪ]→ [i] [ʊ]→[u] [ɔ]→ [o] [ɛ]–[æ] merger **Consonants** [ɹ] → [r] [θ] [ɾ]→ [t] **Suprasegmentals** intonation
Speaker 7 fltu **Vowels** vowels **Consonants** [ɹ] → [r] 2 [b] [ð]→ [d] [h] → [x] or [ç] **Suprasegmentals** compound stress intonation hesitant general pronunciation	**Speaker 7 fltu** **Vowels** [ɛ]–[æ] merger [ɔ]→ [o] **Consonants** [ɹ] → [r] [ɾ]→ [t] [z]→[s] (devoicing of final obstruents) non-aspirated /p, t, k/ **Suprasegmentals** intonation
Speaker 8 gesto **Vowels** pure vowels vowels [ɪ]→ [i] **Consonants** [ɹ] → [r] 5	**Speaker 8 gesto** **Vowels** **Consonants**

no final [s] 2 [h] → [x] or [ç] [ð]→ [θ] [θ]→ [s] consonants word final [r] long [s] [th] [sn] **Suprasegmentals** slow 2 snake drawn out intonation nasal	**Suprasegmentals** stress reduced vowels
Speaker 9 legu **Vowels** [ɪ]→ [i] 3 vowels **Consonants** [ð]→ [d] 3 [th] 2 consonants [s] [θ]→ [s] [ɻ] → [r] 2 [h] → [x] or [ç] 2 **Suprasegmentals** intonation too slow compound stress	**Speaker 9 legu** **Vowels** [ɪ]→ [i] [ɔ]→ [o] [ɛ]–[æ] merger **Consonants** [ɾ]→ [t] strong consonants [ɻ] → [r] **Suprasegmentals** argumentative tone compound stress not linking words
Speaker 10 libi **Vowels** vowels 3 **Consonants** [θick]→ [stɪk] 2 [ɻ] → [r] 3 [θ]→ [t] [ð]→ [d] [h] → [x] or [ç] **Suprasegmentals** slow 3 intonation is flat 2	**Speaker 10 libi** **Vowels** [ɛ]–[æ] merger **Consonants** **Suprasegmentals** stress

nasal fluidity bad overemphasized **Speaker 11 limo** **Vowels** [ɔ]→ [o] 2 **Consonants** [s] consonants no final [s] [ɹ] → [r] 2 **Suprasegmentals** stress 2 fast scoop pitch up in odd area **Speaker 12 luho** **Vowels** [ɪ]→ [i] 3 vowels pronounced her→ hair **Consonants** [θ]→ [t] 4 [ð]→ [d] 2 [t] [z]→ [s] [ɹ] → [r] consonants [th] **Suprasegmentals** slow nasal **Speaker 13 miil** **Vowels** [ɪ]→ [i] 2 [ə]→[ei] **Consonants** [s] too long	**Speaker 11 limo** **Vowels** [ɛ]-[æ] merger [ɪ]→ [i] [ʊ]→[u] **Consonants** [th] [ɹ] → [r] [ɬ]→[l] **Suprasegmentals** intonation **Speaker 12 luho** **Vowels** [ɪ]→ [i] [ʊ]→[u] [ɔ]→ [o] **Consonants** [ɾ]→[t] [th] [ɹ] → [r] **Suprasegmentals** word stress compound stress intonation **Speaker 13 miil** **Vowels** [ɪ]→ [i] [ʊ]→[u] [ɔ]→ [o] [ɛ]-[æ] merger **Consonants**

[θ]→ [f] 2 [th] [ɹ] → [r] biG 2 [θ]→ [t] [k] **Suprasegmentals** intonation 3 too slow 3 stress 2 intonation is flat stress on initial consonants **Speaker 14 moho** **Vowels** Vowels [ɔ]→ [o] vowels nasal **Consonants** [ɹ] → [r] 3 **Suprasegmentals** too slow pauses **Speaker 15 nini** **Vowels** [ɪ]-->[i] 2 emphasized vowels **Consonants** [ɹ] → [r] 4 [ð]→ [d] 2 [θ]→ [t] 3 [s] too long [ɬ]→ [l] **Suprasegmentals** too slow 2 intonation 2 lively fast stress initial consonants stress	**Suprasegmentals** intonation stress **Speaker 14 moho** **Vowels** [ɪ]-->[i] [ʊ]→[u] **Consonants** [ɹ] → [r] [ɾ]→[t] **Suprasegmentals** word stress intonation **Speaker 15 nini** **Vowels** [ɪ]→ [i] [ʊ]→[u] [ɔ]→ [o] [ɛ]-[æ] merger **Consonants** [th] [ɹ] → [r] **Suprasegmentals** intonation

Speaker 16 olva **Vowels** [sneik]→ [snæk] 2 vowels romance [ɛ]–[æ] merger [u:]→[u] **Consonants** [ɹ] → [r] 5 [θ]→ [t] [th] 2 [h] → [x] or [ç] no final [s] **Suprasegmentals** intonation intonation flat pausing words not linked	**Speaker 16 olva** **Vowels** [u:]→[u] [ɔ]→ [o] **Consonants** [ɹ] → [r] [θ]→ [t] [th] [ɾ]→[t] **Suprasegmentals** stress
Speaker 17 reis **Vowels** [sneik]→ [snæk] 2 [ɪ]→ [i] vowels sound romance **Consonants** [h] → [x] or [ç] 3 [θɪk]→ [stɪk] [ð]→ [d] [θ]→ [t] **Suprasegmentals** fast 3 intonation initial consonant stress no pausing stress 2	**Speaker 17 reis** **Vowels** [ʊ]→[u] [ɔ]→ [o] **Consonants** [ɹ] → [r] [th] [ɾ]→[t] final devoicing of obstruents **Suprasegmentals**
Speaker 18 sepo **Vowels** vowels [ʊein]→[ʊen] **Consonants** [th] [ð]→ [d] [ɹ] → [r] [h] → [x] or [ç] [θ]→ [t] 3	**Speaker 18 sepo** **Vowels** reduced vowels [ɔ]→ [o] **Consonants** [th] [ɾ]→[t]

Suprasegmentals stress **Speaker 19 viil** **Vowels** vowels romance "her" elongated vowels [ɛ]–[æ] merger **Consonants** [h] → [x] or [ç] **Suprasegmentals**	**Suprasegmentals** stress **Speaker 19 viil** **Vowels** [ɪ]→ [i] [ʊ]→[u] [ɛ]–[æ] merger **Consonants** [th] [ɹ] → [r] **Suprasegmentals** word stress compound stress intonation
Speaker 20 vine **Vowels** romance vowels vowels 2 [æ]→ [a] [ɪ]→ [i] **Consonants** [h] → [x] or [ç] 4 [θ]→ [t] 3 [ð]→ [d] 2 [th] **Suprasegmentals** intonation 2 no fluidity intonation flat consonants consonant stress	**Speaker 20 vine** **Vowels** [ɪ]→ [i] [ʊ]→[u] [ɛ]–[æ] merger **Consonants** [th] [ɾ]→[t] devoicing of final obstruents **Suprasegmentals** stress