

**A Contrastive Analysis
of
French and American English**

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Linguistics Thesis

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Les poissons, les poissons
How I love les poissons
Love to chuck
And to serve les cafish
Firzt I cut off zheir heads
Zhen I puuull out zheir bones
Ah mais oui
Ça c'est toujours delish
-Cook from "The Little Mermaid"

0. Introduction

When Americans hear the above passage and others like it, they equate this type of speech with that of a native French speaker. Although portrayed in a stereotypical manner in the movies, this accent does demonstrate some of the difficulties French have when speaking American English as a second language. For anyone who has tried to learn a second language, it is possible to be fluent, to understand what others say and be able to communicate one's thoughts with others, but to have a native-like pronunciation is often the most difficult task. One way that linguists and teachers have found to help students of English as a second language with their pronunciation is to use the results of a contrastive analysis of the two languages involved. A contrastive analysis looks at the similarities and differences of the native language and the target language, to see where potential

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problems may arise. It is important to note that both similarities *and* differences in the two languages can positively *and* negatively affect learning.

For example, French has the same palato-alveolar fricatives as English, so a French speaker should not have trouble pronouncing the [ʃ] and [ʒ] sounds in English, as in the words sheep and leisure. This is an example of how similarities can positively affect learning. However, Koutsoudas and Koutsoudas (1962: 54) point out that “the more closely associated a foreign sound is with the student’s native phoneme, the harder it will be for the student not to substitute the native phoneme for the foreign sound.” For example, French has a [ʁ] sound while English has a [r] sound. These two sounds are written in the same way as “r” in prose, but are pronounced differently and according to Koutsoudas and Koutsoudas, French speakers would want to substitute their [ʁ] sound for the English [r] sound after seeing a written word such as red. This demonstrates how similarities can negatively affect learning. Differences would positively affect language learning when the sound is so different that the speaker has to make a conscious effort to learn to pronounce it correctly, having no prior notions about how it should be pronounced. French does not have the affricates [tʃ] and [dʒ] that English has, so in theory, French speakers should be able to produce the sounds in words like much and jog because they have made the conscious effort to pronounce these new sounds.

I will be focusing my attention in this paper on how differences between the native language and the target language can negatively affect pronunciation. I will

perform a contrastive analysis of French and American English. First, I will compare the phoneme inventories of the two languages, focusing on the differences in consonant phonemes. According to this theory, the most difficult sounds are those that the target language has but the native language lacks. The most typical examples of this for French speakers are the [θ] and [ð] sounds. French does not have these sounds and therefore, native French speakers have difficulty producing words such as think and this.

Next, I will compare the syllable structures of French and English. Although French and English may have the same phonemes in a certain word or phrase, the syllable structure, or the order of consonants and vowels in words may be different. These ordering differences can lead to difficulties in the pronunciation of the words. After examining these differences, I will predict the difficulties that a native French speaker could have speaking American English according to the preceding stipulations.

In the third section, I will consider the differences between French and American English phonological rules. For example, both French and English have the voiceless stops /p t k/, but in English these voiceless stops become aspirated at the beginning of a word or stressed syllable, whereas in French, these sounds are unaspirated in the same positions. Differences in phonological rules like the example above, can lead to difficulties for French speakers of American English.

In section four, I will discuss the results from a pilot study which tested these phoneme, syllable and phonological predictions on a native French speaker.

Finally, I will give possible ways to improve the pilot study and discuss some of the benefits and limitations of contrastive analysis.

1.0 Phoneme Inventory

A phoneme inventory includes all the distinct sounds, consonants and vowels, in a given language. In table 1.0 below, the consonant phoneme inventory for French is given in the first column and the consonant phoneme inventory for English is given in the second column. Table 1.1 gives the vowel phonemes of French and American English (Campbell 1991; 417 & 469).

<u>Manner of Articulation:</u>	<u>French Consonants:</u>	<u>English Consonants:</u>
Stops:	p, b, t, d, k, g	p, b, t, d, k, g
Nasals:	m, n, ŋ	m, n, ŋ
Fricatives:	f, v, s, z, ʃ, ʒ, ʁ	f, v, θ, ð, s, z, ʃ, ʒ, h, (ʌ)
Central Approximants:	j, w, ɥ	j, ɹ, w
Lateral Approximants:	l	l
Affricates:		tʃ, dʒ

Table 1.0 Consonant phoneme inventories for French and English.

	<u>French Vowels:</u>	<u>English Vowels:</u>
Orals:	i, y, e, ø, œ, ε, a, ə, ɔ, o, u	i, ɪ, ε, æ, ə, ʌ, ʊ, ʊ, ɔ, ɑ
Nasals:	ɛ̃, ɔ̃, ɑ̃, œ̃	
Diphthongs:	many diphthongs/ triphthongs involving j, w, ɥ	aɪ, ɔɪ, aʊ, eɪ, oʊ

Table 1.1 Vowel phoneme inventories for French and English.

Since I am looking at the difficulties a native French speaker has when speaking English, I thought that they would have particular trouble pronouncing sounds that are present in the English inventory but are not present in the French inventory. For this study, I decided to focus primarily on pronunciation problems with consonants rather than vowels since I thought differences in consonant sounds would be easier to hear than differences in vowel sounds. As Ladefoged says (1993: 29),

“the transcription of contrasting vowels in English is more difficult than the transcription of consonants for two reasons. First, dialects of English differ more in their use of vowels than in their use of consonants. Second, authorities differ widely in their view of what constitutes an appropriate description of vowels.”

Table 1.3 lists the consonant phonemes present in English but not in French.

<u>Consonants:</u>
θ
ð
h
ŋ
(ɹ)
ʃ
ʒ
ɹ

Table 1.3 Consonant phonemes in English but not in French

The [ɹ] phoneme is in parentheses because some English speakers do not pronounce it and use [w] instead. French speakers do have the [ŋ] sound as an

allophone of /n/ but not as its own phoneme. Therefore, there are between six and eight consonant phonemes that are in English but are not present in French. That is not very many differences and, in theory, French speakers should not have that many difficulties pronouncing the majority of English consonants. Contrastive analysis predicts that the troubles French speakers will have will be because they do not have these particular sounds in their own language. Therefore, words like think, that, help, sing, which, hitch, jog and red should be difficult for French speakers because they are unaccustomed to these sounds, regardless of where the sounds are located in the words.

2.0 Syllable Structure

Kenstowicz (1996; 250) explains that a syllable is a difficult concept to explain because, "it is not a sound, but an abstract unit of prosodic organization through which a language expresses much of its phonology. Furthermore, the exact shape of the syllable varies from one language to another." Although the term syllable is not clearly defined, there is a better understanding of syllable structure and its effect on language. Traditionally, the syllable has "been seen as containing an obligatory *nucleus* preceded by an optional consonantal *onset* and followed by an optional consonantal *coda*" (Kenstowicz 1996; 252). Together, the nucleus and coda form the rime, and the rime and onset form the syllable. Figure 2.0 illustrates the traditional syllable structure.

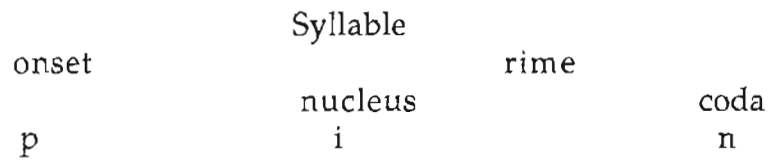


Figure 2.0 Constituents of a traditional syllable structure

In French, a syllable is defined as a nucleus which may or may not have an onset or coda. French is characterized by open syllabification or in other words, syllables generally end in a vowel. Table 2.1 gives the relative proportion of syllable types in a random sample of spoken French. (Valdman 1976; 87)

Syllable Type:	Frequency Percentage:
CV	55%
CVC	17%
CCV	14%
V	6%
VC	2%
CCSV	1%
CVCCC	1%

C=consonant, S=semivowel, V=vowel

Table 2.1 Syllable type and frequency percentage in a random sample of spoken French

Unlike French, English syllables, according to Valdman (1976; 86), usually end with a consonant rather than a vowel.

Contrastive analysis would predict that French speakers may have trouble pronouncing syllables or words that ended in consonants because most of their words end in vowels. Although they do have syllables that end in consonants, this

pattern is less common than in English and therefore, it may be a problem for French speakers. French speakers may also have difficulty with CCCV patterns like in the word street, because the CCCV syllable structure does not occur in French.

In addition, most languages follow the Sonority Sequencing Principle (SSP). Ladefoged (1993; 296) defines sonority as “the loudness of a sound relative to that of other sounds with the same length, stress and pitch.” Therefore, the less obstructed the sound, the more sonorous it is, with the most sonorous sounds being the vowels. The SSP requires “onsets to rise in sonority toward the nucleus and codas to fall in sonority from the nucleus.” (Kenstowicz 1996; 254). Therefore, the Sonority Hierarchy follows the pattern below from least sonorous to most sonorous:

(1) voiceless stops, voiced stops, voiceless fricatives, voiced fricatives, nasals, liquids, glides, high vowels, mid-high vowels, mid vowels, mid-low vowels, low vowels

For example, in English, there are certain sequences of sounds that are acceptable and others that are not because they violate the SSP. Consider the examples in (2) and (3).

(2) blue [bɪu]

(3) bulb [bʊlb]

The “b” in (2) comes before the “l” because voiced stops precede liquids in onsets. In codas, the “b” follows before the “l” as in (3), because the further from the nucleus, the less sonorous the sound, so voiced stops follow liquids.

English follows these rules of the SSP but with one exception. The “s” sound

violates the SSP in English because it can come before stops in the onset and after stops in a coda, even though it is defined as a voiceless fricative. For example, in the word street, there are three initial consonants beginning with a fricative, then a stop and then a liquid. In the word lapse, the stop comes before the voiceless fricative in the coda. These patterns violate the SSP, but they are still acceptable formations of sounds in the English language.

French follows all the rules of the SSP with no exceptions. Examples in (4) and (5) help demonstrate the SSP in French.

(4) graine, seed, [gʁɛn]

(5) sorte, sort or kind of, [sɔʁt]

In the onset of (4), the [g] comes before the [ʁ], which follows the SSP by having voiced stops come before voiced fricatives. In the coda of (5), the [ʁ] comes before the [t] which also follows the SSP because voiced fricatives come before voiceless stops.

French has compensated for the "s" violation which occurs in English, by having a vowel in front of syllables that begin with "s" and then a stop. For example, in English, the word spirit violates the SSP, but the French cognate is written as esprit. By having an extra sound in front of the "sp" combination, the syllable break separates the "s" and the "p". Therefore, esprit fits neatly into the SSP rules.

(6) spirit [spi.ʁit]

esprit [ɛs.pʁi]

Contrastive analysis would predict that French speakers may re-syllabify

sounds in English so that these sounds do not violate the SSP. For example, in the phrase, any student in (7), they may re-syllabify in order to follow the SSP ordering system, even if this exception is permitted in English.

(7) any student

English transcription [e.ni. stu.dɛnt]

After re-syllabification [ɛn.i s.tu.dɛnt]

In conclusion, contrastive analysis makes several predictions concerning the syllable structure. These predictions are as follows:

- i. French speakers may have trouble pronouncing syllables or words that end in consonants because most of their words end in vowels.
- ii. French speakers may have difficulty with the CCCV pattern, because the CCCV syllable structure does not occur in French.
- iii. French speakers may re-syllabify sounds in English so that these sounds do not violate the SSP.

3.0 Phonological Rules

Ladefoged defines phonological rules as the descriptions of the systems and patterns of sounds that occur in a language. Instead of describing all of the phonological rules for French and English, I chose four American English rules that illustrate consonant pronunciation and discuss how these rules may cause problems for French speakers of English because of their differences with the French rules. The first three rules are obligatory for American English speakers, but the fourth

rule is optional, so not all native English speakers follow it.

The first rule is that voiceless stops /p t k/ in English are aspirated in word initial position and syllable initially before a stressed vowel.

Aspiration Rule:

(8) Voiceless stops become aspirated at the beginning of a word or stressed syllable.

Aspiration means that there is a period of voicelessness after the release of an articulation, as in the word pie (Ladefoged 1993; 292).

Aspirated in English:

(9) pie [p^haɪ]

(10) poison [p^hɔɪzən]

(11) sometimes ['sʌm,t^haɪmz]

(12) can [k^hæn]

In the same positions, the French counterparts are unaspirated. Therefore, using contrastive analysis, French speakers may have trouble pronouncing words like (9-12), because in English the /p t k/ are aspirated but in French they would be unaspirated.

The second rule deals with the American English tap. This rule only applies for American English speakers, not British English speakers. In American English, when an alveolar stop /t d/ is the single consonant between two vowels, the second of which is unstressed, then it becomes a tap.

Tap Rule:

(13) An alveolar stop becomes a tap when it is a single consonant between two vowels, the second of which is unstressed.

For example, in the word muddy (14), the [d] becomes a /ɾ/ because it is between two vowels, the second of which is unstressed. Another example is in the word attitude (15) where the first [t] becomes a /ɾ/ because of its location.

Tap:

(14) muddy ['mʌɾɪ]

(15) attitude ['ætɾɪtʊd]

Full Closure:

(16) attitude ['ætɪtʊd]

(17) adore [ə'dɔːɾ]

French does not have the flap allophone of /t d/ that English has. Therefore, contrastive analysis suggests that instead of pronouncing attitude with a tap, the French would pronounce it with a full [t] closure as in (16). It is important to note that not all English has the tap allophone. British English, for example, does not have the tap and would pronounce attitude the same way that native French speakers are predicted to, with the full [t] closure. French would also pronounce the word adore with a full [d] closure as in (17).

The third rule looks at the [l] sound. The English [l] has two allophones. The first is before front vowels and is produced by a distinct contact of the tip of the tongue against the alveoles. This allophone occurs in such words as really and believe.

(18) *Examples of /l/ before front vowels:*

really ['riːli]

believe [bə'li:v]

The second /l/ allophone is velarized and occurs everywhere else.

Velarization Rule:

(19) [l] becomes velarized everywhere except before front vowels.

According to Ladefoged (1993; 298), velarization is a secondary articulation in which the back of the tongue is raised toward the soft palate. Example (20) gives words that possess this allophone. (Valman 1976; 39)

(20) *Examples of velarized /l/:*

loom [lʊm]

ball [bɔ:l]

belt [bɛ:l]

French has only a single front allophone for /l/ which is always produced with energetic contact of the tip of the tongue with the inner side of the upper front teeth or the alveoles. The French allophone is like the first English allophone described. Contrastive analysis would predict that French speakers would have trouble producing the velarized English /l/ since they do not have it in their own language. Most likely, they would pronounce all English [l] sounds in the same manner with the front allophone for /l/ regardless of the sound's location.

The fourth and final rule also deals with the voiceless stops /p t k/. This is an optional rule in English so not all native speakers regularly follow this rule. In English, voiceless stops are normally unreleased for some speakers in final position whereas in French, there is a clearly audible release phase.

Optional final consonant release:

(21) Voiceless stops in final position are unreleased.

Therefore, in words such as help, a native English speaker may not release the [p], but a native French speaker may pronounce the final [p] with a clearly audible release. Similarly, with words such as think and that may sound different when pronounced by a native English speaker who does not release stops in final position as opposed to a native French speaker who does release stops in final position.

These four rules are not the only phonological differences between English and French. However, they are representative of the kinds of problems that can arise when speakers of different languages pronounce the same sounds in different ways depending on the phoneme's location. In summary, due to the differences in phonological rules, contrastive analysis would predict that, when speaking English, native French speakers would have trouble:

- i. Pronouncing words in which /p t k/ are aspirated at the beginning of a word or a stressed syllable.
- ii. Making an alveolar stop /t d/ into a tap when it is the single consonant between two vowels, the second of which is unstressed.
- iii. Producing the velarized [ɣ] allophone.
- iv. Producing unreleased voiceless stops /p t k/ in final position.

4.0 Pilot Study

Since this was to be a pilot study, I planned a test to be given to one subject with the idea that, if possible, someone could take my hypotheses and results and

make them into a full fledged study with many participants. Taking the predictions from the phoneme inventories, as well as the predictions regarding syllable structure and phonological rules, I made a list of individual words as well as a short paragraph using all the relevant sounds. In this way, I was able to test the participant's pronunciation in both continuous and discrete speech environments. I wanted to have both discrete and continuous speech because I thought that the words in the list would be pronounced differently than the same words in continuous speech because more effort could be placed on each word without thinking of the next word in the sentence.

The participant was a middle aged female native French speaker. She started learning British English in school at the age of 11 and studied it for seven years. She described her own language learning courses in school as "mostly based on the study of literature and written texts (not much listening or speaking at the time)" (Girard, 1998; email). When she was thirteen, she began studying German as well as English and spent some time studying in Germany during college. She also spent her summer holidays during college working as a camp counselor in the United States. During her professional career, she moved to Australia for six years where she taught French, but where she was also able to improve her spoken English. Three years ago, she worked at Western Washington University for four months and is now teaching at Swarthmore for the year. Though she communicates fluently in English, the participant was chosen because she still has a "French accent," although she did not possess the same pronunciation problems that I hypothesized.

Below is the list of words that the participant read, first to herself and then twice into a microphone. After I gave the participant the paragraph and words to read, I did a phonetic transcription of the test using my own mid-Atlantic English pronunciation as a guide, as well as a phonetic transcription of the subject's speech. Table 4.0 gives the list of words in the first column, the transcription of my pronunciation in the second column, and the subject's pronunciation in the third column.

<u>English Word</u>	<u>My Transcription</u>	<u>Transcription of Subject</u>
mitten	'mɪʔŋ or mɪtŋ	'mɪtŋ
thank you	'θæŋk ju	'θæŋk ju
sing	'sɪŋ	'sɪŋg
poison	'p ^h ɔɪzŋ	'p ^h ɔɪzŋ
help	'hɛlp	'hɛlp
witch	'wɪtʃ	'wɪtʃ
moisten	'mɔɪsŋ	mɔɪsɪŋ
emphatic	ɛ'ŋætɪk or ɛm'fæɪk	ɛm'fæɪk
that	'ðæt	'ðæt
washing	'wɔʃɪŋ	'wɔʃɪŋ
which	'wɪtʃ	'wɪtʃ
ahead	ə'hɛd or əhɛd	ə'hɛd
red	'ɹɛd	'ɹɛd
jog	'dʒɑg	'dʒɑg
muddy	'mʌɹɪ	'mʌɹɪ
rouge	'ɹuʒ	'ɹuʒ
hitch	'hɪtʃ	'hɪtʃ
youth	'juθ	'juθ

Table 4.0 List of test words and phonetic transcriptions

I will begin by analyzing the list of words using a contrastive error analysis approach. After picking out the words that the subject pronounced differently, I will see if the reasons why she pronounced them in a certain way can be explained because of native language interference. In the list, there were several errors, or differences in pronunciation of consonants between that of the subject and myself, three of which can be explained using contrastive analysis.

The first difference is in the word which in (22).

(22) My pronunciation [ˈwɪtʃ]

Subject's pronunciation [ˈwɪtʃ]

The subject uses the voiced labial-velar approximant rather than the voiceless labial-velar fricative. This could be a phonetic problem because French does not have the [ɸ] phoneme in its inventory. Therefore, she substituted the next closest sound that she did have in her native language, [w]. However, not all native English speakers use the [ɸ] phoneme, so it is not unusual or even inappropriate that she uses the [w] phoneme.

The second difference occurs in the word, rouge in (24).

(24) My pronunciation [ˈʁuʒ]

Subject's pronunciation [ˈɾuʒ]

Since rouge is a French word, it is understandable that she would pronounce it with a French "r" sound. However, in English, it is pronounced with a [ʁ] rather than an [ɾ] sound because English does not have the uvular fricative. When asked to pronounce an English word like red, she used the English sound, so I do not think it

was because she could not produce the “r” sound in rouge, but rather she reverted to saying it the French way because it is a French word.

The third difference is present in the word muddy, in (23).

(23) My pronunciation [ˈmʌɹi]

Subject’s pronunciation [ˈmʌdi]

The subject’s pronunciation is not an incorrect British English pronunciation, but most American English speakers replace the alveolar stop /t d/ with a voiced tap when it is a single consonant between two vowels, the second of which is unstressed, as in the word muddy.

Contrastive analysis was able to account for several of the pronunciation differences in the list of words. This type of analysis explains why the subject pronounced:

- i. The [ʌ] as a [w].
- ii. The “r” in rouge as [ʁ] instead of the American English [ɹ].
- iii. The [d] with full closure when native speakers would use a tap.

Below is the test paragraph I used, as well as the two transcriptions of my pronunciation and the subject’s pronunciation.

Test Sample

Paragraph:

“I think this is a really bad idea,” Heather said in a frightened tone as she looked ahead at the muddy steep cliff.

“You put too much emphasis on the negative. Don’t think about whether it is right or wrong. Just do it!” Judy responded running ahead.

“I cannot believe her sometimes. She can be such a stupid thing. She would

drink poison if she thought it was wine." Heather thought to herself but she began following her friend anyway.

Transcription of my speech:

aɪ 'θɪŋk ðɪs ɪz ə 'jɪli 'bæd aɪ'diə 'heðɜː 'sed ɪn ə 'fʁaɪlɪŋd tʰɔːn æz 'ʃi
'lʊkt ə'fiəd æt ðə 'mɑːri 'stɪp 'kʰlɪf
ju 'pʰɒt tʰu mɑːtʃ 'ɛŋəʃɪs ðn ðə 'nɛgæɪv 'dɔːnt 'θɪŋk ə'baut 'mɛðɜː ɪt
ɪz 'jaɪt ɜː 'ɜːŋ 'tʃʌst 'du ɪt 'tʃʊri jə'spɔːndɪd 'jʌnɪŋ ə'fiəd
aɪ 'kʰænt bə'liv hɜː 'sʌm,tʰɑɪmz 'ʃi 'kʰæn bi 'sɑːtʃ ə 'stʊpɪd 'θɪŋ 'ʃi wʊd
'dɪŋk 'pʰɔɪzŋ ɪf 'ʃi 'θɔt ɪt wəz 'wɑɪn 'heðɜː 'θɔt tʰu hɜː'self bət 'ʃi bi'gæn
'fələʊwɪŋ hɜː 'frɛnd 'ɛni,wei

Transcription of subject's speech:

aɪ 'θɪŋk ðɪs ɪz ə 'jɪli 'bæd aɪ'diə 'hiðɜː 'sed ɪn ə 'fʁaɪlɪŋd tʰɔːn æz 'ʃi
'lʊkt hɜː hed æt ðə 'mɑːdi 'stɪp 'kʰlɪf
ju 'pʰɒt tʰu mɑːtʃ ɛm'fʌsɪs ðn ðə 'nɛgæɪv 'dɔːnt 'θɪŋk ə'baut 'wɛðɜː ɪt
ɪz 'jaɪt ɜː 'ɜːŋ 'tʃʌst 'du ɪt 'tʃʊdi jə'spɔːndɪd 'jʌnɪŋ ə'fiəd
aɪ 'kʰænt bə'liv hɜː 'sʌm,tʰɑɪmz 'ʃi 'kʰæn bi 'sɑːtʃ ə 'stʊpɪd 'θɪŋ 'ʃi wʊd
'dɪŋk 'pʰɔɪzŋ ɪf 'ʃi 'θɔt ɪt wəz 'wɑɪn 'hiðɜː 'θɔt tʰu hɜː'self bət 'ʃi bi'gæn
'fələʊwɪŋ hɜː 'frɛnd 'ɛni,wei

In the paragraph, there are six types of consonantal pronunciation errors that can be explained using contrastive analysis. Generally, these are phoneme, syllable structure and phonological rule problems due to differences between English and French.

The first problem is a potential phoneme inventory difference. Consider the pronunciation of the word, whether, in (25).

(25) My pronunciation [ˈwɛðɹ]

Subject's pronunciation [ˈwɛðɹ]

As observed in the errors present in the list, the subject may have had difficulty producing the /w/ sound because it is not in the French inventory. Instead, she substitutes her native /v/ phoneme in its place. This does not become a problem for understanding what she is saying, especially because some native English speakers use the voiced labial-velar approximant as well in place of the voiceless labial-velar fricative. However, it is a difference in pronunciation that may be explained because of native language interference.

The second problem is one of syllable structure that appears in the phrases muddy steep and a stupid. As stated earlier, English follows the Sonority Sequencing Principle, with the exception of [s] before consonants in the onset and consonants followed by [s] in the coda. For a French speaker who is following the rules of the SSP, it is difficult to know what to do when faced with this exception. The subject compensated by re-syllabifying so that she would not have to pronounce "st" together in one syllable.

(26) My pronunciation [ˈmʌ.di.ˈstɪp]

Subject's pronunciation [ˈmʌd.i.ˈs.tɪp]

(27) My pronunciation [ə.ˈstju.pɪd]

Subject's pronunciation [ə s.tju.pɪd]

Similarly, she re-syllabified a stupid as shown in (27), to compensate for the “st” exception. The second example was not as clear as the first example, because English speakers often slur their words and combine a stupid just as the subject did in her speech. It would be interesting to have the subject read a phrase like with students to see what she does with three consonants in a row that violate the SSP.

The next four errors have to do with phonological rules that differ in the two languages. First, consider the words, muddy and negative in (28) and (29).

(28) My pronunciation [ˈmʌɹɪ]

Subject’s pronunciation [ˈmʌdi]

(29) My pronunciation [ˈnegæɹɪv]

Subject’s pronunciation [ˈnegæɪv]

In English, there is a rule that when an alveolar stop /t d/ is a single consonant between two vowels, the second of which is unstressed, then the alveolar stop becomes a voiced tap. French does not have this rule and neither does British English, the type of English the subject was taught. Therefore, the subject keeps the alveolar stop as a complete closure instead of making it a tap.

The next problem is evident in the word frightened in (30).

(30) My pronunciation [ˈfraɪnɪd]

Subject’s pronunciation [ˈfraɪtɪd]

In English there is a rule that when a voiceless alveolar stop [t] occurs before a syllabic alveolar nasal [ɹ̩], then the voiceless alveolar stop becomes a glottal stop. Again, neither French nor British English has this rule and the subject maintained

the voiceless alveolar stop instead of making it a glottal.

Consider the pronunciation in the following sets of words in (31) and (32).

(31a) really

My pronunciation [ˈɹiːli]

Subject's pronunciation [ʁiˈli]

(31b) believe

My pronunciation [bəˈli:v]

Subject's pronunciation [bəˈli:v]

(32a) looked

My pronunciation [ʔʊkt]

Subject's pronunciation [ˈlʊkt]

(32b) following

My pronunciation [ˈfəloʊwɪŋ]

Subject's pronunciation [ˈfəloʊwɪŋ]

Except for the difference in stress (31a), the examples in (31) are pronounced the same. This is because French and English both have the [l] allophone which occurs before front vowels and is produced by a distinct contact of the tip of the tongue against the alveoles. However, the words in (32) are pronounced differently. My pronunciation uses the velarized [ɫ] allophone in English which occurs, among other places, before back vowels. In contrast, French does not have the velarized [ɫ] allophone, so the subject continues to use the front [l] allophone.

The sixth and final error is evident in the word poison in (33).

(33) My pronunciation [pʰɔɪzn]

Subject's pronunciation [pɔɪzn]

In English, there is a rule that voiceless stops /p t k/ are aspirated in word initial position and syllable initially before a stressed vowel. In the same positions, French counterparts are unaspirated. Using contrastive analysis, this explains why the voiceless stop [p] is unaspirated in poison. However, there are two other points to consider with this example. First, this same word, poison, when said in discrete speech in the list of words, was aspirated correctly. This could be due to the fact that in a more restricted speech environment where only a few pronunciation rules need to be addressed at a time, a more careful pronunciation will occur. Secondly, throughout the rest of the continuous speech, all other aspirated voiceless stops were pronounced with the correct aspiration. The subject has then learned the rule of aspiration, but perhaps her native language interfered in the case of poison because it is a French word where the [p] is unaspirated.

From the paragraph test sample, contrastive analysis was able to account for six of the differences in pronunciation. Contrastive analysis potentially explains why the subject:

- i. Pronounces the [ʌ] as a [w].
- ii. Re-syllabifies the phrases muddy steep and a stupid.
- iii. Pronounces the [t] with full closure when native English speakers would use a tap.
- iv. Pronounces a voiceless alveolar stop [t] instead of a glottal stop.

- v. Uses the front [l] allophone at all times instead of the velarized [ɫ] allophone before central and back vowels.
- vi. Does not aspirate the word and syllable initial voiceless stops.

This pilot study was helpful in predicting and explaining some of the pronunciation problems that a native French speaker has when speaking American English. I think the structure of my study, with a list and a paragraph, worked well as a format for testing. It is easier to analyze a restricted group of words than free speech, although if there had been time, I would have liked to see how my predictions fared in a free speech environment. I would also have liked the subject to have said each word in the list several times, for example, poison, poison, poison. Repeating the words is simpler for analyzing the data because it is not necessary to rewind the tape and it might also prove interesting to see if the pronunciation changed with each utterance.

5.0 Conclusion

In conclusion, contrastive analysis was helpful for predicting and explaining some of the difficulties a native French speaker would have pronouncing American English consonants. A contrastive analysis study can be very helpful for the learner, the teacher and the researcher. According to Corder (1967; 168-9), contrastive error analysis is indispensable for the learner as a way to test his hypotheses about the nature of the language he is learning, for telling the teacher how far towards the

goal the learner has progressed and what remains for him to learn, and for providing the researcher with evidence as to how language is learned and acquired as well as what strategies or procedures the learner is using.

Not all predictions made using contrastive analysis held true, however, and not all errors could be explained with a contrastive analysis study. Based on my own experience in France, I was surprised that the subject did not have difficulty with the pronunciation of words that had the [θ] and [ð] phonemes. These two phonemes are part of the English inventory but are not part of the French inventory and according to contrastive analysis, this could cause a problem, and for some speakers, it does cause difficulty. There were also some errors in placement of stress that could not be easily explained with contrastive analysis. For example, in English, the stress in word idea is on the second syllable. The French cognate for idea is idéé which also has its stress on the second syllable. However, when pronouncing the word idea, the subject put her stress on the first syllable which native language interference cannot explain. These examples prove that in addition to native language interference, other language learning experiences can influence a speaker's pronunciation. Unfortunately, this type of contrastive analysis is inadequate to predict problems that may arise from all language learning experiences.

Jacquelyn Schachter and Marianne Celce-Murcia (1971; 281) put it best when they wrote, "one single view of the language learning process, attractive though it may be, will not account for the diverse phenomena that exist." Therefore, although

contrastive analysis works well in predicting and explaining the language learning process, it is not the only kind of analysis that should be used. For example, error analysis² is another method that, if used in conjunction with constrastive analysis, could be even more beneficial for the learner, the teacher and the researcher.

²For more information on error analysis, see:

Richards, Jack C. (1971) *English Language Teaching Journal* 25 , no. 3, "A Noncontrastive Approach to Error Analysis," Oxford University Press and the British Council, 204-19.

Schachter, Jacquelyn. (1974) *Language Learning* 24, no. 2, "An Error in Error Analysis," 205-14.

Schachter, Jacquelyn and Marianne Celce-Murcia (1971). *TESOL Quarterly* 11, "Some Reservations Concerning Error Analysis," 441-51.

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