THE INTERLANGUAGE OF THAI LEARNERS OF ENGLISH:

A TWO-WAY STREET?

By

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Bachelor of Arts

Rollins College

Winter Park, Florida

1988

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University in
partial fulfillment of
the requirements for
the Degree of
MASTER OF ARTS
July, 1996

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ACKNOWLEDGMENTS

There are many people who have been very instrumental in the creation and making of this project. Most of all I would like to express my most sincere thanks and gratitude to Dr. Carol Lynn Moder for all of her help and support. Without her faith and encouragement, I do not think that this study would have ever been completed on time. I would also like to thank Dr. Ravi Sheorey and Dr. Susan Garzon for serving on my thesis committee as well as for their needed input throughout the two terms I have been working on this paper.

In addition, I would like to express my thanks to my subjects who gratefully volunteered their time and effort to make this research project possible, and to those people who gave their time and input concerning the Thai language. During my time here at OSU, they have made me more than welcome as a member in the Thai Student Association (TSA) and have included me in all of the club sponsored activities. Those people I would like to recognize as valuable participants in this study include Veera Asvasermcharoen, Panithi and Panjit Damrongkulkamjorn, Chussanida Kulachote, Siva Liewlom, Nuchara Phaengrasmee, Kullapapruk Piewthingngam, Darin Sriphanya, Thanachart Thunyahan, and anyone else I might have left out from the TSA.

Furthermore, I would like to acknowledge Paul and Nadine Woods for all of their support and suggestions while they were here in America and in England; the people I work with at the English Language Institute-Kyoto, who have both directly and indirectly

helped me with my thesis one way or another: Mary Theresa Seig, Frances Griffin, Debbie Shores, Tommy Pierce, Michelle Seagrave, and Kim Wills; my fellow graduate students for their support both here and in Chicago: Sheryl Kizer, Glenn Bryant, and Becky Dechert; those people I could always count on to offer their needed moral support, namely my immediate family, Mom, Dad, Mary, and Kimbell; and to those "family members" who are not related by blood, but were there nevertheless: Lori Petermann, Rhoda Hughes & family, Kevin Winchester, Beeth Thomsonnop, and Kat.

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CHAPTER I

Introduction

Does living in a foreign country assist a person in learning to speak that country's language? Based on the second language learning research and from my own experiences, the answer would have to be "yes," but the question that comes to mind is: "To what extent can and does learning a second language in the country in which it is prominently spoken affect a language learner's own native language?"

For me, living outside my native country for an extended period of time has opened many new life experiences, learning opportunities, and the chance to meet a diverse group of people from all over the world. The chance to live and work in both Thailand and Japan for a total of five years immediately after receiving my B.A. was no exception. Both countries offered me the ability to work in a field that I have since grown to love, the chance to expand my knowledge about two different Asian cultures, and the exposure to two very distinct languages. However, since my stay in Thailand was considerably longer than my stay in Japan, I was able to gain a much greater command of the Thai language than I was of Japanese. Not having previously been a successful language learner, I approached the task of learning Thai by interacting with the people when I was able to, and by exposing myself to those situations that were necessary to my survival, namely communicating in restaurants, in shops, and with the local people.

At first, with a little bit of patience and perseverance, I was able to acclimate my

ears to the five different tones of the language. I then began to recognize commonly used phrases and words spoken in eating establishments, and later I attempted to use those phrases and words when I went out to eat. Slowly, I gained more and more confidence in my language ability and I tried to use my newly found ability in other situations, like in shops, in and around the place I lived, and at my place of work. After about two years, I found that I had a very basic grasp of the language and was able to pick up new words much faster and more easily than before. By the time I left the country, after spending a total of four years in Thailand, I was able to competently communicate in a wide variety of situations in Thai.

When I lived in Thailand, I noticed that I would occasionally transfer some grammatical and phonological aspects of the Thai language into English. For example, sometimes when I asked questions, I would inadvertently use the Thai expression and ask my friend, "Are you hungry or not yet?" While speaking I would occasionally use the Thai pronunciation of English words by substituting the "r" sounds in certain words for an "l". Although many Thais commonly substitute "r" sounds for "l" and "l" sounds for "r" in English, I primarily just produced the former. Upon my return to the United States, I noticed that I continued to transfer some grammatical and phonological aspects of the Thai language to my native language, but after a short period of time this transfer eventually subsided. Since then, I do not normally transfer any part of Thai when I speak English; however, when I type, there have been times when I unwittingly used an "l" when I should have used an "r".

Possible questions that come to mind when considering this phenomenon of the

second language affecting the first are what causes it, whether it is just a simple transfer from one language to another, and what other aspects of language it affects. In order to better understand this occurrence, it is important to first understand how a person goes about learning a second language, looking at how a first language (L1) can affect the second language (L2); finding out what variables are important when learning a second language; and determining if these variables are just as important when looking at how L2 is able to influence L1.

Research has shown that learning a second language is not a cut and dried process. There are many different theories that suggest the different ways a person, consciously or subconsciously, goes about learning a second language. Some of them include Schuman's "acculturation model" (1978); Krashen's "input hypothesis" (1980); and Hatch's "discourse theory" (1978). These theories offer explanations of how and why second language learners (SLL) are able to acquire a new language. As a language learner, I was able to learn and successfully communicate in the Thai language. However, like many learners, I am sure, I was not aware of these theories of acquiring a second language at the time. I simply approached learning Thai by slowly increasing my exposure to the language (Schumann, 1978). I tried to put myself in situations where I was able to understand the language used, like in restaurants and shops, and in situations which involved language just above my threshold, for example, in conversations with my Thai friends and colleagues (Krashen, 1980). I found myself focusing primarily on understanding what was being said, rather than concentrating on the grammatical aspects of the language. I was highly motivated to learn the language and my learning surroundings were very non-

threatening (Hatch, 1978). I had positive feedback from all situations: from the restaurant, I was able to order and receive the food I wanted; in shops, I could ask for and obtain the goods I wanted; and my friends and colleagues gave me support and encouragement when they could understand me and helped me when they could not (Hatch, 1978; Krashen, 1980). Without many problems, I was able to become functionally fluent in a short period of time. These hypotheses, however, do not directly address the issue of how or why L1 and L2 are interrelated.

The "interlanguage hypotheses," first proposed by Selinker (1972), is a theory of second language acquisition (SLA) which says that learners incorporate the usage of L1 and L2 to produce what is called an "interlanguage." Selinker's original definition has been modified by studies trying to redefine its definition to include such ideas as variability and permeability (Dickerson, 1975; Adjemian, 1976; Tarone, 1979; Beebe, 1980).

The theory of interlanguage has been used to explain some effects of L1 on L2 in studies by Dickerson (1974) and Beebe (1980). These studies demonstrated how the subjects' pronunciation of an L2 (English) could be influenced by varying levels of speaking formality. Other aspects of interlanguage were examined by Tarone, Cohen, and Dumas (1983), who showed that there were six different communication strategies related to interlanguage which could aid in learning a second language in terms of phonology, morphology, syntax, and lexical items. The one significant factor was language transfer from L1 to L2, where L1 could directly influence or interfere with the production of L2. The earlier studies of language transfer primarily concentrated on the errors produced by L2 learners, which directly corresponded with Wardhaugh's Contrastive Analysis

Hypothesis (CAH) in 1970 (Wardhaugh, 1983).

These studies, which will be discussed in more detail in the next chapter, have primarily focused on the effects of L1 on L2 using the concept of interlanguage. The focus of this study is to extend the theory of interlanguage in SLA by examining the effect a target language has on a native language in terms of phonological permeability.

This paper originated from a pilot study I conducted in 1995, which focused on the pronunciation of the /r/ and /l/ by native Thai speakers in both English and Thai in environments varying in degrees of formality. That study showed that the level of formality had a direct influence on the elicited utterances in both languages. The subjects were able to correctly pronounce the [r] and [l] in both English and Thai in a formal setting. However, one of the subjects in this study demonstrated a clear irregularity of using the American continuant [ɹ], not only in English speaking situations, but also in Thai, in both formal and informal environments. This irregularity has not been addressed by any of the previous studies. This paper further investigates this phenomenon and examines the theories that could explain the effect of a target language on a second language learner's native language.

This study opens with a discussion of the concept of "interlanguage" (Chapter II). The chapter focuses on the origin of this concept within the framework of second language acquisition (SLA), defines it, and shows how its theoretical constructs have been studied and expanded over the years. It then introduces the nature of the problem being addressed. The third chapter follows with a brief history of the Thai language in terms of its origins, phonological environments, and the differences between the Thai trilled /r/ and

the English continuant /ɹ/. It concludes with a short discussion of the importance of English in Thailand itself.

Chapter IV describes the methodology of this investigation, gives details of the subjects, materials, and procedures, and then follows with a look at some of the procedural differences relating to the different subjects. The results of this study are presented in Chapter V. They are based on the individual performances of each subject in English and then Thai. These results are then discussed in chapter six in terms of linguistic and situational environments, and the subjects' individual differences.

Chapter VII closes this study by first proposing some implications for instructors and second language learners, and then suggesting possible areas of further research.

CHAPTER II

Interlanguage

Second language research is generally concerned with the processes by which learners acquire or learn a second language, as well as produce it. This study, though based on SLA, focuses on the effects a second language has on the learners' native language. The concept of interlanguage, first introduced by Selinker in 1972, plays an important role in explaining how and why this may happen. Dickerson (1975) and Beebe (1980) have both demonstrated some of the effects interlanguage has on the production of English as a second language. I would like to show how the native language can also be affected. This chapter will first briefly describe some of the theories that suggest the ways learners, consciously or subconsciously, go about learning a second language, and then discuss interlanguage in more depth.

Several important theories have been used to explain the process of SLA. The "acculturation model," first presented by Schumann in 1978, is based on the idea of the second language learner (SLL) becoming familiar with and assimilating to a new culture, taking in many of the cultural traits that enable the learning of a new language and adopting the social and psychological factors that create a "good" learning situation (Schumann, 1986). These factors include being generally accepted with the target language group, having a positive attitude about living in the area, and being highly motivated. In many ways, this theory applies to what happened to me in Thailand. I was

there for four years involving myself with the local population, trying to interact as much as I could in the target language in order to become conversationally fluent in it. I was happy where I was and motivated to get involved.

Krashen's "input hypothesis" (1980), on the other hand, suggested that a person learns a second language by being exposed to and taking in "comprehensible input," that is, incoming utterances that are understood by the learner. If a learner is exposed to structures that are at or just above his/her level of comprehension (i+1), then that learner will both comprehend and acquire the target language. Krashen states that fluency of the second language increases over time so that it is acquired rather than learned through direct instruction. He distinguishes between the acquisition and learning of a second language by pointing out that acquisition is "subconscious" and like the development of a first language, whereas learning is a "conscious" process where language is formally taught (Krashen, 1980; Krashen, 1981). Again, by continually putting myself into familiar speaking situations in Thailand, I was allowed to take in the language already known to me and add new words and structures that I was able to slowly understand. I did most of my learning of Thai in an actual speaking environment and not in a formal classroom.

The "affective filter hypothesis," first put forth by Burt and Lambert in 1977, and used by Krashen to form a theory which complements his input hypothesis quite well and takes into account Schumann's (1978) acculturation model. It refers to factors in a learner's surroundings which prevent him/her from being able to completely grasp the target language. These factors might include various motivational and emotional states, like boredom and anxiety, which can have a direct effect on a learner's desire to learn the

language. Having a "low affective filter" and a sufficient amount of input, a learner is able to take in and acquire more of the target language. This is what Krashen refers to has a "good language learner" (Krashen, 1981). Since I was more than content with my surroundings, had a positive attitude about learning the language, and had a low level of anxiety, I was able to become a willing learner and able to develop and my Thai language abilities.

The "discourse theory" (Hatch, 1978a) focuses on the negotiating of second language meaning through conversation. The simple acts of being involved and having the willingness to communicate with native speakers of a second language open doors to a greater understanding of the language in terms of learning new vocabulary words and different syntactic structures. I found that by not only talking with, but also listening to native speakers as well, enhanced my ability to learn Thai.

The ways a second language learner learns/acquires a second language has been compared to the ways a person first gains command of his/her first language (Ellis, 1985b). The idea that interference from L1 is able to either positively or negatively influence the output of L2 is also referred to as transfer. One of the studies which first looked at the transfer of L1 to L2 was Wardhaugh's (1970) Contrastive Analysis Hypothesis (CAH), which primarily concentrated on the errors produced by L2 learners. This particular theory stated that the main problem in learning a second language was the interference of the native language, and that these errors could be predicted based on the differences between the L1 and L2. However, further investigation showed that L1/L2 differences would only be able to predict some of the errors that SLL would make. There

are two forms of CAH, the strong form and the weak form. The strong states that a learner's L2 errors can be identified and predicted by pinpointing the differences between the learner's L1 and the L2. The weak version, however, does not attempt to predict the L2 errors, but rather tries to explain why these errors would occur (Wardhaugh, 1983). Contrastive analysis was originally used as a method of predicting the most effective ways of teaching a second language. It was believed that if the learner's errors could be predicted based on the comparison of the target language and the learner's native language, and the common areas of interference could be identified, then a better teaching methodology could be developed. However, it was pointed out that CAH has problems in the ability to actually predict all of the differences between any two languages (Brown, 1994). A major problem lies in the impossibility of identifying each and every morphological, syntactic, and phonological difference between two languages.

The interlanguage hypothesis is another theory with attempts to explain the internal process of learning a second language, demonstrating that SLLs have a separate language system, which is structured somewhere between the learner's L1 and the L2 (Brown, 1994). The study of interlanguage (IL) was first brought into prominence in the study of SLA in 1972 with the work of Larry Selinker. Interlanguage was originally considered a systematic process of learning a second language (Selinker, 1972), but over the years the definition of interlanguage has been expanded to describe it as a natural language (Adjemian, 1976; Tarone, 1979), a system of variable rules (Dickerson, 1975; Tarone, 1983), and a source of non-systematic variation (Ellis, 1985a). To see this development more clearly, a brief history of interlanguage is needed.

In 1972, Selinker observed and analyzed the speech patterns of adult second language learners. He supported the claim that a person's "latent psychological structure" could determine whether a person would be a successful or unsuccessful language learner. The former was defined as a person who was able to develop a native-like competence in a second language, whereas the latter could not. The utterances produced by the unsuccessful language learners, however, signified that some kind of internal language development took place, it was just not in the same form as a native speaker. For these utterances, Selinker used the term "interlanguage," that is, speech production containing elements of a learner's native language and the desired target language, but that was a unique system within itself. By drawing upon the concept of "fossilization," he was able to explain how and why unsuccessful language learners created their own interlanguage system. In his study, Selinker focused on various language learning processes including: language transfer, transfer of training, strategies of SLL, strategies of second language communication, and overgeneralization of target language rules. The research itself consisted of an examination and comparison of three different forms of utterances by adult learners: the learners' native language, the learners' target language (the interlanguage), and the target language output by native speakers of the target language, in terms of the aforementioned processes. He found that even though the learners' target language utterances were distinctly different from those of their native language and the utterances of the native speakers in most cases, the meanings behind these utterances were similar. Interlanguage was the term used to explain this phenomenon.

In a follow up study, Selinker, in association with Swain and Dumas (1975) further

demonstrated how interlanguage could also account for second language acquisition in children. This was accomplished by comparing the L2 utterances of non-native French-speaking children (English speakers) with those of native French-speaking children in a classroom environment in terms of three of the learning processes: language transfer, overgeneralization, and simplification (a strategy used by SLL). The study assumed the existence of four different kinds of "observables" that are considered to be the basis of interlanguage. They included, stability, mutual intelligibility, backsliding, and systematicity. Selinker et al. chose to focus primarily on the concept of systematicity, defining it not as a way of describing speech production in terms of grammatical rules, but rather in terms of language learning strategies. They found that the children were able to successfully converse amongst themselves, which supported the claim that a mutually comprehensible interlanguage developed as a systematic process due to the uses of various learning strategies.

Tarone, Cohen, and Dumas (1983), first published in 1976, wanted to redefine some of the terms originally used in the study of interlanguage in order to describe a "framework" of six communication strategies that could aid the understanding of second language learning. The first is "transfer from the L1." Specifically, this refers to negative interference causing inappropriate or awkward utterances in the target language. This language behavior can be seen in phonology, morphology, syntax, and lexicon. "Overgeneralization" is the second communication strategy, which is used when an L2 rule is applied incorrectly with L2 forms. The third is "prefabricated patterns," which is the application of stock or memorized L2 phrases. The fourth communication strategy

discussed was "overelaboration," which is the production of a target language using overly formal or pompous language patterns. Though the language produced is not necessarily incorrect, it is not usually used in the native tongue. The fifth concerns the insertion of vowel sounds in various words, a process called "epenthesis," which is usually seen in the production of words that contain unfamiliar consonant clusters. The sixth communication strategy is "avoidance," the deliberate attempt to refrain from having to use those target language rules and structures that are not yet mastered. Tarone et al. go on to elaborate six different ways learners can "get around" using rules and structures in the target language. They include: topic avoidance, semantic avoidance, appeal to authority, paraphrase, message abandonment, and language switch.

Adjemian (1976) took the idea of interlanguage one step further; she considered it to be like a natural language (i.e., a system of communication which is shared and developed over a period of time by speakers of the same community). The importance of considering interlanguage as a natural language was to be able to define it, so that it could be analyzed and studied as a separate linguistic system containing its own rules of speech production. In her discussion, Adjemian critically examined the four observables, noted by Selinker, Swain, and Dumas (1975), and went on to show that these concepts, though they are important in natural languages, were not the most prominent aspects of interlanguage.

The first concept, mutual intelligibility, refers to the comprehension between two speakers of a language. Adjemian suggested that mutual intelligibility is an essential property of natural languages, and that it does not serve to make a definite distinction

between interlanguage and other languages since there may not always be a mutual understanding between interlanguage speakers of the same native language. For example, second language speakers are not often at the same language level and speakers with different backgrounds may not possess the same interlanguage ability (Pengpanich, 1989).

The second concept, stability, suggests the recurrence of either correct or incorrect forms over time within a separate language system (Adjemian, 1976). Adjemian believes that the best way to examine a language is not in terms of the individual number of correct or incorrect forms, but rather as a process where the forms are consistently used in similar environments. Both native speakers and second language learners are capable of using incorrect forms. However, for a native speaker these forms can be considered lapses and hence are short-lived. With regards to SLL, incorrect forms may tend to remain in the interlanguage. At this point, Adjemian sees that the learner has reached the highest point in his/her TL acquisition ability and cannot progress any further towards achieving native-like fluency.

Backsliding, the third concept, occurs when a learner is able to continue his/her "linguistic evolution" towards fluency in a TL. The learner has not "plateaued" at a particular level, but rather reverts back to fossilized forms that are found in the learner's interlanguage, and not on fossilized forms found in the native tongue, as discussed by Selinker (1972). Adjemian suggests that the learner is possibly employing an avoidance strategy in order not to have to use a certain TL rule or structure that he/she may find too complex to use. Adjemian further suggests that backsliding can also be seen as a failed attempt of a learner to use the correct target language form. The idea is that the learner

has some competence about the proper rule forms of the target language, but fails to use them properly. An example would be a Thai learner of English aware of the fact that the English language is not tonal, who still uses tones when speaking it (Pengpanich, 1989). Adjemian does point out that in certain cases, backsliding can be seen as an attempt of a learner to create a novel sentence, where the learner tries to apply a rule in a language rather than just falling back on a fossilized form. She states that it is important that the learner have an active form of the rule being used in order for the utterance to be considered backsliding.

The fourth concept, is "systematicity." An interlanguage has systematicity, for Adjemian, if it is understood to be a natural language. Therefore, interlanguage must have its own set of rules and basic units which are consistently used within an internally based language foundation. Her definition clearly differs from Selinker et al., who see systematicity as identifiable learning strategies and linguistic rules, which are considered separate entities, that are consistently produced in the second language. Where Selinker et al. explained the occurrence of certain incorrect language behaviors as a transfer of rules from English to the interlanguage, Adjemian saw it as being a transfer of a "subcategorization feature from English into [the] interlanguage" (Adjemian, 1976, p. 305). Using specific examples, she showed that strategies and rules are not separate, but rather a part of a single system where everything works together.

In her discussion, Adjemian introduces the concept of permeability, which she defines as when "either the IL system is penetrated by rules or forms of the NL not usually evidenced in its speech forms, or an internalized TL rule or form is improperly generalized

or distorted in some way" (Adjemian, 1976, p. 308). In other words, permeability occurs when the IL is influenced by either the TL or NL, when the learner attempts to use unknown structures. An example can be seen when a learner attempts to use unfamiliar grammatical lexical items in the TL, and produces utterances that are comprehensible, but possibly incorrect, in the TL. These utterances are said to have been permeated by the rules of the interlanguage (Pengpanich, 1989). This can be demonstrated by using Selinker's et al. (1975) study which showed how English speaking children in a French immersion program incorrectly used lexical and grammatical items in the TL. The utterances demonstrated structures that were formed by using the NL rule system, yet were unacceptable but comprehensible in the TL. Though this is not a clear example of permeation as it is actually an example of language transfer, it does show how the NL rules can be applied to a TL. A clearer example of permeation can be seen in the influence of a superordinate or subordinate rule system on a learner's interlanguage, as shown by Beebe (1980). She found that her subjects' utterances were influenced by their NL and TL rule systems in either formal or informal situations. For example, in the formal, speaking situations, the subjects' IL was sometimes permeated by the TL in their production of the final "r" sound, and sometimes permeated by the NL as was seen in the production of the initial "r" sound (Beebe, 1980). Adjemian claimed that permeability was one concept which could successfully distinguish interlanguage from other natural language systems. However, this is not necessarily true, as native speakers can and do generalize and distort their L1 rule systems as a result of the influence of L1 dialects. These dialects can permeate the L1 rule system in the same way a second language

learner's L2 or L1 can permeate the IL. Adjemian, nevertheless, understands interlanguage to be systematic, and permeability is a prominent aspect of it.

Tarone (1979), basing her ideas on Adjemian's assumptions that IL is a natural language, looked at IL in terms of its behavior in varying circumstances. She shows that permeability is a result of an invasion by the superordinate or target language rules under formal speaking conditions into the language being spoken. She further suggested that the native language can also act as the superordinate rule system on the interlanguage, but under different communicative conditions. Her paper examined the various experimental conditions in which interlanguage is considered a variable. By using the "Observer's Paradox", originally discussed by Labov in 1965, she made reference to the five axioms which describe the way people talk when they are not being observed in experimental situations. The first of these axioms is the idea of style-shifting, which focuses on the variation of linguistic and phonetic forms used by speakers in different social environments and topics of conversation. The second focuses on the amount of attention a speaker pays to his/her speech. The third states that in casual speech (or vernacular speech) the least amount of attention is paid, whereas in other speech styles the amount of attention varies. The fourth axiom discussed looks at formality. Under formal speaking conditions a speaker will pay more attention to his/her speech than in informal contexts. The fifth and final axiom states that the best way to get "good data" is by "an individual tape recorded interview: a formal context" (Tarone, 1979, p. 188). The word "good" here refers to a high level of clarity when recording speech for research. She stressed the need for the researcher to be present with the subject at the time of recording, and for the microphone

of the recording device to be placed close to the subject's mouth. The importance of these axioms is seen in the systematic research of interlanguage. They lay out a formula for researchers to follow in order for accurate data to be collected.

Beebe (1980) investigated the implication made by Tarone, that under formal speaking conditions, the rule system of the target language would permeate the speaker's interlanguage system. Tarone (1979) suggested that under informal conditions, the native language system could possibly be more influential. Formal speaking conditions were defined as when the speaker is aware that his performance is being watched and examined (Tarone, 1979). Informal situations try to set the speaking environment so that the speaker is not particularly focused on his pronunciation or grammar, but is more concerned with expressing his ideas within a conversational context (Tarone, 1979).

In her study, Beebe used nine adult Thai subjects living in New York City. These subjects were equally divided into three different social classes (upper, middle, low), based on their present occupation in the US. The different occupations hold different social standings; for example, doctors or professors were considered upper class; nurses were considered middle class; and dishwashers and food vendors were considered to be in the lowest class. Three subjects were selected for each group, ranging in ages from twenty-five to forty years old; there were unequal numbers of males and females. Beebe was not concerned with the sex of the subjects because it was not considered relevant in her investigation. All subjects were interviewed in English for about one hour under similar conditions. In each interview, the subjects had a conversation, they read from a passage, they read a list of isolated words, and they took part in a listening perception test. This

study only examined the conversation and the isolated words, which came directly out of the reading passage. The former was considered an informal situation, whereas the listing of words had a higher level of formality. She specifically examined the pronunciation of the /r/ in the single initial, single final, initial cluster, and final cluster positions.

One part of Beebe's results seemed to directly support Tarone's claim that interlanguage is more influential as formality increases in the target language. The final /r/ was pronounced properly 72% of the time for the isolated words, but only 35% in the conversational setting. These results are not very surprising. As the Thai language does not contain a final /r/, the subjects would be influenced by the rule system that did, namely the TL. With reference to the initial /r/, the Thais pronounced the sound correctly 48% in conversation, but only 9% in the listing task. For the initial /r/'s, these results suggest that the native language superordinate rule was generally more influential. Though the conversation pronunciation results showed a greater NL influence, the listing task result was the opposite of what was expected. Beebe pointed out the L1 superordinate rule system permeated the English production in this situation. In Thai, the trilled [r] is considered the prestige variant, while [l] is used in less formal context. Beebe explained that the production of the initial trilled [r] was the result of the social value placed upon it in the native language of the subjects. Since Thai does not have a final /r/, NL interference would not be as likely in that environment. Beebe explained that in the complete analysis of the /r/, the low responses for the listing task were explained by the negative interference of the NL, where the English [ɹ] is commonly replaced by the Thai [r] sounds.

Beebe concluded that the position of the /r/ in a word and the formality of the

speaking conditions determined which rule system would ultimately influence the formal interlanguage. In the final position, the TL would be the superordinate rule because of the lack of a final /r/ in Thai, and possibly because of the subjects' desire to display their English ability. As for the initial position, since it occurs in both English and Thai, the most prominent rule system would take precedence, that is the NL, due to the way the Thai [r] is taught and used in Thailand. Under formal conditions the subjects paid more attention to their utterances. Beebe put forth the idea that the social values themselves could also play a meaningful role in the subjects' speaking behavior, because of their focus on either demonstrating their competence in the TL or their accuracy in using the NL.

Dickerson's (1975) study considered the interlanguage of L2 learners as a variable system in pronunciation, and showed how students developed a phonological system for speaking a second language. She focused on the pronunciation of specific sounds used by Japanese students in both formal and informal situations. She observed that the English /z/ sound was problematic for Japanese students, and found that varying sounds were often used in its stead. In order to describe the phenomenon, like Beebe she used different tasks in her interview methodology, which included a conversation and a list. She also included a reading dialogue, which Beebe did not have. The conversation represents the most informal environment, while the listing of words is the most formal.

She used ten Japanese speakers who were studying English at an American university to collect her data over a nine-month period. She found that the correct pronunciation of the /z/ was more likely in the more formal speaking environment. Her results for most of her subjects showed a direct correlation between the correct

pronunciation and the level of formality. This correlation demonstrated that an internal unified system (i.e., interlanguage) could be seen as a rule system for learners' language behavior.

Ellis (1985a) also looked at the variability of interlanguage and explained it in terms of systematicity and non-systematicity. He defined systematicity as ordered rules that explain variation in an interlanguage, based on understanding the ideas of situational and contextual variability; and non-systematic variability, which dealt with variations that could not be predicted by any ordered rules, for example performance and free variation. Performance variation is caused by problems in the production of utterances that are haphazard and not predictable. Free variation focuses on utterances which contain alternate variants that have the same functions (Ellis, 1985a). For example, words that have the same spelling and the same meaning, but have different pronunciation, like /ijðəɹ/ vs. /ajðəɹ/, and /towmejtow/ vs. /towmatow/, depending on the origins of the speaker or the context of the speaking.

As the studies (Selinker, 1972; Selinker, Swain, & Dumas, 1975; Adjemian, 1976) previously discussed have indicated, interlanguage is seen as being systematic. However, Ellis (1985a) supports the view that it can also be seen as a variable (Dickerson, 1975), where the learner adopts different production rules that have the same function. Ellis takes Tarone's (1983) hypothesis showing that interlanguage is "systematically variable", and then divides the variability into two types: situational and contextual variability. The former refers to the usage of different linguistic forms under varying factors, including the setting of a situation, the material being used, and those factors which relate directly to the

participants; whereas the latter looks at the different linguistic forms used in terms of their linguistic environments.

Definition of the Problem

The studies of interlanguage over the past twenty years or so have examined second language behavior in both adults and children. They sought to explain how and why this "separate linguistic system" is so important in production of a target language (Selinker, 1972) and apply it to research that looks at it as a variable which is both systematic and non-systematic (Ellis, 1985a). Research has primarily focused on how interlanguage affects a target language in terms of syntax (Selinker, 1972; Selinker, Swain, & Dumas, 1975), phonology (Dickerson, 1975; Beebe 1980), and morphology (as seen in Tarone, 1983). The emphasis was placed largely on how interlanguage, and in some cases the first language rules, alters, influences, and in fact permeates the target language rule system to either benefit or hinder it. Research does not address the different influences that learning a second language may have upon the native language. Is a learner's interlanguage rule system capable of permeating the first language in the same way it does the second? Adjemian (1976) did not think so:

> "The same speaker producing forms in her native language would not allow the penetration of other forms or rules into her grammar; nor would she distort her grammar in the way an IL speaker will. The NL grammar is consistent and relatively stable; it is not permeable. If a situation is encountered where the speaker is unable to communicate a particular semantic content, she will turn to the use of paraphrase, she will ask for a word, an expression, or she may simply avoid the frustration of the situation by not saying anything. The learner, on the other hand, has two linguistic systems at her disposal by means of which she may be able to continue in her attempt to express meaning" (Adjemian, 1976, p. 309).

She here suggests that a learner's native language is not permeable nor is it influenced by any other linguistic system in terms of grammar, and perhaps other aspects of language, like morphology, lexicons, and phonology. I would like to propose that L1 can be influenced by a learner's L2 or even by his/her L2 interlanguage.

In a pilot study (Fenske, 1995), phonological evidence was collected that indicated that one subject's native language may have been permeated by the rule system of the target language. The original study examined phonological data looking at the influences of informal and formal situations, which might reveal the permeation of the interlanguage system by L1 and L2 respectively. The purpose of the study was to examine the environments of the Thai /r/ under varying conditions of formality, to find out under which conditions the [r] is substituted for the [l].

Three Thai students studying at Oklahoma State University participated. Each subject had different L2 (English) experience and participated in three speaking situations in both Thai and English: a casual conversation, reading two prepared lists of words that contained the Thai and English /r/ sound in various positions, and a reading. Both codes were used so that a comparison of the different /r/ phonemes could be made. The results indicated that the subjects were able to correctly pronounce the /r/ in their own language and the target language in a formal speaking environment, which would confirm Beebe's (1980) findings. In the informal situations, there was only a small number of substitutions of the [l] for the [r] in the English language which did not confirm Beebe's study. It was observed, however, that one of the subjects lacked the Thai [r] entirely in any of the speaking situations, and instead produced a clear American continuant [ɹ], which

suggested a need for further investigation of the possible permeation of L2 by L1.

In the present study I focus on Thai learners of English, looking at whether the pronunciation of the [r] sound in Thai is permeated by the [ɹ] in English in collected samples from subjects in different situational and linguistic environments. My hypothesis is that, typically, a speaker of Thai should produce the Thai [r] sound when speaking his native language under formal conditions. Under informal conditions, it would be expected that a Thai speaker would frequently use an [l] sound, which is a derivative of the /r/ in Thai. In order to examine any influences of the second language, it must first be determined under what speaking conditions the subjects can use the English [ɹ]. When speaking English, I would predict that in a formal English-speaking environment, the speaker would use the proper continuant [ɹ] sound, and in a less formal environment, the native language rule system would permeate the production and some variant of the Thai /r/ would be evident. It is hoped that this study will demonstrate whether the subject in the pilot study (Fenske, 1995) who used the continuant [ɹ] is merely an isolated example or whether there is a trend for Thai learners of English to employ the [ɹ] in their native language. It is also my hope that this study may shed some light on the nature of the variation of interlanguage. However, before any investigation can be conducted, first some aspects of the Thai language must be examined.

CHAPTER III

The Thai Language

Origins

Thailand is a Southeast Asian country surrounded by Myanmar (Burma) to the West, Laos to the North and Northeast, Kampuchea (Cambodia) to the Southeast, and Malaysia to the South. It borders both the Gulf of Siam on the East coast and the Ardaman Sea on the West. Its people and language have developed over a long period of time, dating back more than a thousand years. There is no exact date of the country's origin, but it is said that a large portion of the people who now inhabit Thailand originated from the Yunnan area of what is now Southern China (Smith, 1966). By 1238 A.D., the first kingdom of Thailand was established during what is called the Sukohthai period (1238-1350). That period, through the Autthaya period (1350-1767) and until the present day helped not only to shape Thailand itself, but also the language (Smith, 1966).

In 1283, under the rule of King Ramkhamhaeng, the first Thai alphabet was developed. It was founded upon the alphabet system that was used to represent Sanskrit, incorporating the script used by the Khmers and new symbols created to represent the Thai sounds that these languages did not have (Hudak, 1990). The symbols used to represent each sound and tone are read as they are in English, from left to right, but bear no other resemblance to it. There are no upper or lower cases, no punctuation marks, and no spaces to separate individual words in sentences, though there are spaces to signify

pauses and full-stops (Smyth, 1987), and the script is not Romanized in any way. Since Thai is a tonal language with five different tones, two methods were created to distinguish them. The first way used separate markers which were placed directly above each word, the second used the actual spelling of the word (Hudak, 1990). The tonal and syllabic qualities of the Thai language as well as parts of the vocabulary were largely influenced by the surrounding languages: Chinese, Mon, Khmer, Sanskrit, and Pali (Thiengburanathum, 1977). As kingdoms rose and fell during the different periods, the language underwent many changes. According to Hudak (1990), the Autthaya period (1350-1767) had the greatest influence in the development of Thai, in terms of tonal development and expansion of vocabulary words. Many of the technical terms commonly found in fields like science and government were originally from Sanskrit and Pali.

Today during the Bangkok period (1767-present), there is only one official language of Thailand, even though many different dialects are spoken around the country. The official language, Thai, also known as "Standard Thai" or "Central Thai," was standardized during the reign of King Mongkut (1851-1868), and added to by Kings Chulalongorn and Vajiravudh (1868-1910) and (1910-1926) respectively (Hudak, 1990). It is now used throughout the country as the main form of communication between people from different areas.

Phonological environments

The Thai language, a member of the Tai family of languages, consists of 44 consonants and 32 vowels. There are 20 individual consonant and 24 individual vowel phonemes, each of which may be represented more than one way. The consonants are

divided into high, middle, and low classes in order to identify the tone in spelling, while the vowels, including diphthongs, can be either long or short (Hudak 1990). The five tones include high, low, rising, falling, and mid. The language is primarily composed of monosyllabic words, although polysyllabic words do exist (Thiengburanathum, 1977; Smyth, 1987; Hudak, 1990).

All of the consonants, shown in Table 1, may occur in the initial position; eight (/p/, /t/, /k/, /m/, /n/, /ŋ/, /w/, /y/) of the twenty may occur in the final position; there are 12 possible consonant clusters which include labial, alveolar, and velar sounds. They are /pr/, /pl/, /pʰr/, /pʰl/, /tr/, /tʰr/, /kr/, /kl/, /kw/, /kʰr/, /kʰl/, and /kʰw/ (Hudak, 1990).

Table 1 (Adapted from Hudak, 1990:760)

Thai Consonants

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Stops						
- Voiceless unaspirated	p		t	ʤ	k	
- Voiceless aspirated	pʰ		tʰ	ʧ	kh	
- Voiced	b		d			
Fricatives		f	s			h
Sonorants						
- Nasals	m		n		ŋ	
- Lateral			l			
- Trill/Tap			r			
- Semi-vowels	w			y		

The vowels (see Table 2) are able to exist in any environment. They surround a consonant by preceding it, following it, or by being above or below it, individually or as a diphthong. (Note: There are symbols in Thai that may appear directly above or below the

main body of text; they include some of the vowels and the tone markers. A sample of Thai writing can be found in Appendix B.) There are nine different phonemes, including /ɪ/, /e/, /ɛ/, /ɨ/, /ə/, /a/, /u/, /o/, and /ɔ/, and three diphthongs (/ua/, /ia/, and /ɨa/), which may all be either long or short (Hudak, 1990).

Table 2 (Adapted from Hudak, 1990:761)

Thai Vowels

	Front	Back unrounded	Back rounded
High	ij	ɨ	uw
Mid	ej	ə	ow
Low	ɛ	aj	ɔ

Seven different English phonemes do not have equivalent sounds in the Thai language; they include /v/, /z/, /g/, /θ/, /ð/, /ʒ/, and /ʃ/ (Smyth, 1987), and therefore some Thai learners of English may have some difficulties in acquiring and using some of these sounds. One of the most interesting phenomena concerning the Thai language, however, is the free variation of the /r/ and /l/ phonemes. Even though they are separate phonemes and are not variants of a single phoneme, they may act as if they are (Hudak, 1990). In conversation or informal speech, the /r/ sound is often substituted for an /l/ sound (Hudak, 1990; Smyth, 1987). This usually occurs at the beginning of words and syllables, and in some consonant clusters. A common example can be seen in the Thai word /ə?raj/ (meaning "what"), where the /r/ is substituted for an /l/, forming the pronunciation /ə?laj/. Thai learners also seem to regularly transpose these two sounds (/ɹ/ to /l/) in English as well (Smyth, 1987). A typical example would be the word "room" being pronounced as

"loom."

According to Hudak (1990), educated speakers insist that the two sounds are distinctly different; however, in fast speech (casual speech) they appear to be the same. In conversation with my subjects, I learned that the Thai /r/ is very formal and used only in formal situations where pronunciation needs to be clear, as on television and radio; it is considered to be inappropriate and almost rude in a casual context between close friends and family. The /l/ sound is the accepted form, even though the /r/ is the "proper" pronunciation. In further conversation, I found out that some Thai speakers, those usually of Chinese descent, are unable to pronounce the /r/ at all, and use the /l/ in all speaking situations. My Thai informants believed that this is a result of the genetic size and shape of their tongue.

Thai /r/ vs. English /ɹ/

Since this study is largely concerned with the production of a particular sound which might be replacing a sound which is normally produced in a certain language, it would be important to first understand the environments in which the original sound occurs. For this project, the continuant /ɹ/ is speculated to be emerging into the Thai language of some speakers, and possibly replacing the normally used trilled /r/. It is important to look at the environments in which the trilled /r/ is usually articulated in order to understand why the continuant /ɹ/ could possibly be replacing it.

The Thai /r/ is considered a trill, where the tip of the tongue is allowed to vibrate as air passes over it (O'Grady, et al, 1991). The English /ɹ/ is a continuant, where there is a continuous flow of unobstructed air over a curled tongue toward the back of the mouth

(O'Grady, et al, 1991). The /l/, a liquid, is pronounced the same in both languages: the tip of the tongue is raised as a continuous flow of air passes over it. The Thai /r/ and the /l/ are similar in the fact that the tongue is raised for both sounds, which could possibly suggest why the two sounds are frequently in variation.

The linguistic environments, in Thai, of the /r/ and the /l/ are also similar, but they are separate phonemes. They occur in minimal pairs in the initial position in a word, for example, /rak/ (meaning "love") and /lak/ (meaning "kidnap"), but in fast speech these words are pronounced exactly the same, with the [l], so only through context can the meanings of the words be known. The same pronunciation can be found in words that occur in the syllabic initial position, as seen in /rowŋriɛn/ (meaning "school") and /lɔkliɛn/ (meaning "copy" or "imitate"). There are also minimal pairs for consonant clusters, for example, /brɔʔ/ (meaning "fragile") and /blɔʔ/ (meaning "section" or "link"). Again these words use the same [l] pronunciation, and the only way to distinguish them is through context. In terms of orthography, neither sound is pronounced in the final position, even though they do occur orthographically. For example, the Thai word "Ubol" is pronounced /ubon/, where the "l" is pronounced as the nasal "n", and borrowed English word "bar" is pronounced /ba/, as Thai does not have a final "r". Both sounds exist in consonant clusters, "pr", "pl", "br", "bl", "kr", and "kl" (there is "tr", but not "tl").

In my own experience, when a Thai speaker speaks English, not all of the English /ɹ/'s are transposed into /l/'s. They seem only to be transposed when the sound in English is in a position which would normally occur in Thai, for example, in the initial position, where "room" becomes /luwm/; after voiceless consonants (including fricatives and stops),

"African" becomes /aflikan/, and "prince" becomes /plɪns/; and when it follows a glottal stop, "around" becomes /əʔlawnd/. In Thai, the /r/ sound can be replaced by the /l/ sound in all these contextual environments.

Since Thailand has a very socially conscious society, the differences in the way certain people speak can reveal their level within the social structure. The different uses of the Thai trill /r/ and English continuant /ɹ/ can also be seen in the social environments in which these sounds are spoken. As stated before, the trilled /r/ is primarily used in formal speaking situations and considered a more prestigious sound, and hence, produced by those individuals in more renowned occupations, like those in high-level government and universities, as well as those positions in public broadcasting. The [l] allophone, on the other hand, is commonly used in all other speaking situations. The production of the [r] in casual speech is generally considered unnecessarily proud or haughty, and usually avoided by the public, since only a minority of the population possesses those prestigious jobs. Though the English continuant /ɹ/ does not exist in the Thai phonemic system, its usage does represent modernity (Smalley, 1994) and therefore establishes a connection between an individual and an up-to-date society. With the influx of Western comforts and ideas, many Thai people (especially those of the younger generation living in the larger metropolitan areas) attempt to break away from the traditional Thai way of life, and embrace a more current one. The proper usage of the English [ɹ] when speaking English in Thailand could possibly indicate a desire to assimilate to the Western lifestyles.

The importance of English in Thailand

In Thailand, the knowledge of English is a valuable asset. Not only is it used and

taught in schools, but it is also very important in service and manufacturing businesses, and international politics. To be able to speak English opens up to a Thai national a wide variety of different opportunities both in and outside of the country. For these reasons, English is considered an international language in Thailand (Smalley, 1994), and so its study is mandatory in school, from primary school through university. The problem with English being taught in school is that the instruction is primarily delivered in Thai by Thai teachers, whose command of spoken English is not very good. So there is an insufficient amount of authentic comprehensible input available in the local school system for students to properly acquire it. However, not all English is learned at school. Many English speakers come as tourists each year to Thailand. Tourism is the number one money making industry and many speakers of Thai have opportunities to interact with English speakers. An increasing number of the local population are finding it important to learn English.

Given the fact that the interaction between English and Thai is noticeably rising, it is not surprising that the number of second language learners is also rising. As Beebe's (1980) discovered, both the English and Thai language system can influence the production of English as the target language, with Thais living in New York I suggest that the English language could also have a similar effect on the native language, especially with those Thais living in the US. However, because of the large influx of English speakers into Thailand as tourists, as well as expatriates, more and more English learners will likely be forced to learn and practice English in their place of work, and no longer just in the schools. There will be more authentic contact with English speakers, and hence

more use of English phonemes. I suspect that the use of continuant /ɹ/ by Thais in their native language could be fostered by the exposure to the English speakers coming into the country every year.

The methodology of this study is found in the next chapter. By conducting a case study using five Thais living and studying in the US, it is my intention to discover whether the phenomenon of the L2 affecting the L1 is merely an isolated case or whether the L1 production of other Thai speakers of English is also affected.

CHAPTER IV

Methodology

In this chapter, I am going to present the methods and procedures I used to investigate the ways a second language could possibly affect the phonological production of the first language. Previous studies have suggested that students' production of their native languages should not be influenced in any way by their acquisition of a second language. However, the purpose of this research is to see if the interlanguage of Thai subjects, who have already acquired the ability to use the English language, does influence the pronunciation of certain sounds of the first language. Specifically, this study is looking at the possible effects of the English continuant /ɹ/ on the Thai trilled /r/. Methods used in Beebe (1980) and Dickerson's (1975) studies were adapted in order to vary the degree of formality in the different tasks and the varying environments in this study. It was my purpose to establish more and less formal speaking environments, which might have a possible effect on native and target language production.

Subjects

Three female and two male Thai students living and studying at Oklahoma State University (OSU) in the Stillwater area participated in this study. Each subject was individually chosen and personally asked to take part in this research. Since they were already my friends, their help was easily solicited. One of the primary considerations in choosing these subjects was where they lived and how well they knew one another. Since

one of the tasks originally planned was a free conversation in the native language, it was important that the subjects be grouped together in one place for a period of time to allow for the collection of the data in a nonthreatening speaking environment, and that those subjects could naturally communicate with one another. Subjects #1, #2, and #3 were often together during dinner time, while subjects #4 and #5 shared the same apartment.

Prior to the collection of any data, each subject was asked to complete a personal information sheet (see Appendix A), which requested information about the subjects' personal background in Thailand and the US, their educational history in the US, their native and target language usage and ability, and their plans for the near future. Since Thailand has a very diverse population, I wanted to have subjects who were from the same area, who grew up with a similar type of upbringing, and who were within the same age group, in order to reduce any possible interfering variables.

All of the subjects were originally natives of the Bangkok area, from a similar upper-middle-class upbringing, and are presently in their mid to late twenties. See Table 3 for a brief description of all of the subjects. A detailed description of each subject follows the table.

Table 3

Subject Profiles

	Subject #1	Subject #2	Subject #3	Subject #4	Subject #5
Sex	Female	Male	Male	Female	Female
Age range	26-30	26-30	26-30	21-25	21-25
Ed. level	Ph.D.	Master's	Bachelor's	Master's	ELI
Field of Study at OSU	Electrical Engineering	Electrical Engineering	Architecture	Agricultural Economics	Intensive English
Length of stay in US (approx)	4 ½ years	2 years	7 ½ years	2 years	½ year
% of time speaking Thai: English:	 70-80% 20-30%	 95% 5%	 50% 50%	 70% 30%	 40% 60%

Subject #1 was chosen, because she was observed in the pilot study mentioned earlier (Fenske, 1995) to employ the American continuant /ɹ/ in both the target and native language. She has been living in the US for the past four years in an OSU university apartment with her brother. She has just completed a master's degree in Electrical Engineering and is now enrolled in a Ph.D. program in the same field. According to her personal information sheet, she speaks Thai 70-80% of the time with her brother and Thai friends, and speaks English only 20-30% in an academic setting (i.e. with her advisor, teachers, and non-Thai classmates). She plans to complete her Ph.D. degree and find a job either here in the US or back in Thailand.

Subject #2, a friend and classmate of Subject #1, has been living in America for about one and a half years. He has completed a master's degree in Electrical Engineering and has since returned to Thailand to seek a job. He lived alone in a university apartment,

but was almost always in the company of his Thai friends. He reported speaking Thai 95% of his time at OSU; he only spoke English when he had to (i.e. with his advisor and teachers).

Subject #3 is the older brother of Subject #1. He has been living and studying in Stillwater for more than seven years, and has just completed a bachelor's degree in Architecture. He plans to move to California to attend a culinary school and look for a job in that area of work. For the past four years, he has been living in a university apartment with his sister. He has many English speaking friends as well as Thai friends, so he found himself speaking the same amount in Thai and English each day.

Subject #4 has been in America for more than one year. She was chosen because she also participated in the previous pilot study. Though she did not produce the American continuant [ɹ] like Subject #1, she was a willing participant. She has been studying Agricultural Economics and plans to graduate in the Fall of 1996. It is her wish to continue studying at the Ph.D. level in a similar field. She claims to speak Thai 70% of her time with her friends. She speaks English the other 30%, mostly in an academic environment. However, since she is also the President of the Thai Student Association on campus, she is forced to communicate in English in a social capacity as well.

Subject #5 shares an apartment with Subject #4. She has been in the US for less than six months and is enrolled at an intensive English (ELI) program on the OSU campus at the intermediate/advanced level. Her goal is to study for a Master's of Business Administration when she graduates from the ELI. Because of the English program, she finds herself speaking English 60% of the time with her classmates and only 40% with her

Thai friends.

Materials

In order to collect "good data," and create and maintain speaking situations that would allow for the collection of casual and careful speech, I tried to adhere to the procedure of minimizing the "observer's paradox" highlighted by Tarone (1979). In creating these speaking situations, it was not only important to have both clear and simple instructions, but also to have established a congenial relationship with the subjects. Since a friendly relationship had been established in previous encounters with all of the subjects, the negative effect of my presence as the experimenter was minimized. I am considered to be more of a friend than a researcher. I gave each of the subjects the same verbal instructions before the commencement of each task, and made sure that each of the tasks was understood by asking if there were any problems with regards to the material or with subjects' understanding of the instructions themselves.

Three different speech events were used to obtain the English and Thai data The tasks included reading passages from a well-known Japanese story, describing pictures from a popular English picture dictionary, and free conversing with their Thai friends and then with the primary researcher. Each task was first done in Thai and then in English.

All speech events were recorded on a portable General Electric cassette tape recorder except for the reading tasks, which were recorded on a Tandberg Educational IS 10 Language Laboratory system, on low bias 60 and 90 minute cassette tapes. The free conversation in Thai was collected in the subjects' own home, which was considered the most casual speaking environment. This was the only task for which I was not present.

The reading task took place in a setting where the subjects were expected to focus on producing careful speech, which was in the English Language Institute-Kyoto (ELI-K) language laboratory. The lab has divided cubicles which contained individual cassette recorders and headphones. There was a control room from which I monitored each of the subjects. The picture-description task took place in the ELI-K computer lab classroom, which consisted of a large table in the center of the room which was surrounded by sixteen computers that were along the walls. This was also considered a casual speaking environment. At the time of the recordings, I sat across the table from the subjects and I maintained a friendly and casual demeanor at all times. The computers in the room were not turned on. The free conversations in English were also conducted in the computer lab. Permission to use the ELI-K facility was kindly given by the program coordinator.

The reading passages used in the formal environment were three chapters taken from the book Totochan: The Little Girl at the Window, written originally in Japanese by Tetsuko Kuroyanagi (1981), and later translated into English by Dorothy Britton (1982) and into Thai by Pusadee Nawajit (1984) (see Appendix B). The text was used not only because it elicited the /r/ sounds in both Thai and English, but also because it was a text designed for the junior high school level so it would be at a readable level for my subjects. As it turned out, all of the subjects had either read the story in Thai when they were younger or were familiar with it. None of them had seen the text in English.

The material for the picture-description task included a series of eleven scenes taken from Parnwell's (1989), The New Oxford Picture Dictionary that contained words with /r/ sounds in both languages. In choosing the pictures, I had a Thai friend of mine

describe twenty pictures from the original text beforehand so that I could determine which pictures elicited the sounds I needed. I simply instructed my friend to describe each picture in as much detail as possible. From her description, I picked eleven pictures I felt would be most appropriate. The pictures chosen included: a photo album showing a series of family pictures; a room filled with cats in varying positions playing with balls of yarn; an American classroom depicting various objects and people; two streets with thirteen different kinds of shops; restaurant/bar scenes with people eating, drinking, and working; at the airport, depicting check-in, security gate, the cockpit and passenger seating area of an airplane; a beach scene with a wide variety of boats; a scene with a burning building and emergency vehicles; in a hospital showing four different medical procedures; a small town metropolitan area with various kinds of people, buildings, shops, and modes of transportation; and a beach with people swimming and sunbathing (see Appendix C). The actual pictures used in the study were laminated color photocopies ranging in size from 8" by 11" to 8" by 14".

For the free conversations in English, I simply started a conversation with each subject individually, hoping that the conversation itself would elicit the targeted words. I tried to create an atmosphere where the subjects would feel free to ask questions in return. My purpose was not to conduct an interview where I was the only person asking questions, but one where the subject would feel free to also ask questions.

Procedures

The free conversation data in Thai was collected first from the subjects. As stated earlier, an important consideration in picking these particular subjects for this study was

that they could be divided into two groups which could be easily recorded. Subjects #1, #2, and #3 were in one group, while Subjects #4 and #5 were in another. The subjects were given the portable General Electric tape recorder and two 90 minute tapes, and instructed to turn the tape recorder on when they were all together for an extended period of time, for example when they were eating or just "hanging out" in their apartments. It was hoped that the subjects would forget about the tape recorder and use "natural" or "spontaneous" speech in their conversation. The data from each group was collected over a period of about two weeks.

For the other tasks, I met with each subject individually for about an hour on two consecutive days. The following procedure was applied to each subject. The first day, the subject was met and led to the language laboratory. Once the subject was seated, I informed him/her that he/she would read three passages in Thai (see Appendix B). The subject was given time to read the passages silently to him/herself in order to become familiar with the text. The subject was allowed as much time as was needed, and was allowed to ask any possible questions concerning the passages, for example, if there were words that couldn't be read, or if a sentence needed to be clarified. I had brought the original texts with me, so that the subject would be able to check it if he/she had any problems. It was my aim that the subject would familiarize him/herself with the passage sufficiently to be able to read it as if they were on a radio program in Thailand. When the subject was ready, I explained how the recording mechanism worked as he/she would start the recording and stop when the task was completed. He/she was also reminded to read the passage as if he/she was doing it for a radio program. It was my hope that the subject

would speak slowly and clearly, and use the formal/standard pronunciation rather than the accepted conversational style. While the subject was reading the passages, I was in the control room monitoring. The subject was expected to spend about 10 minutes on this task. Follow the reading task, I escorted the subject to the computer lab with the large table in the center for the picture-description task in Thai. As with the reading task, the subject was allowed to examine each picture and ask any necessary questions before describing it. The subject was again in full control of the tape recorder, so he/she could start and stop the recorder to signify the beginning and end of his/her speaking sample. The subject was allowed to freely respond to pictures in any manner he/she wished. The only instruction was to give as much detail as possible. The pictures depicted scenes in which words that contained /r/ in various positions could be elicited in both Thai and English. The same pictures were used in both tasks (see Appendix C). The subject was expected to spend no more than 30 minutes on this task

Rather than setting up yet another day to obtain the casual conversation in English, I elected to speak with each subject following the picture description. I felt that this was the most opportune time as the subjects were already prepared and they were at ease in the environment. The subject was encouraged to comment on or ask anything about either the reading or the picture description task. Although English was the primary code being collected in the conversation task, the subjects were also allowed to use their native language, so as to reduce any anxiety they might have about possible difficult vocabulary words. It was my hope that the subjects would speak as freely as possible in a risk free atmosphere. At least one side of a 90 minute cassette tape was recorded for each subject

On the following day, I met with each subject to do the reading and description tasks in English. I followed the same procedure as above, except the subjects were instructed to use English. Since a sufficient amount of data was collect for the free conversation in English task the previous day, this task was not repeated.

In having the subjects use their native language one day and their target language the next for these tasks, it was my hope not only to make the task easier for the subjects, but more importantly to minimize any possible interference that might exist in going from one language to the other. I also thought that it would be easier for the subjects to first speak in their L1 and then in the L2. Similarly, I had the subjects speak in the formal environment before moving to the less-formal one, as I felt that it would be easier for the subjects to go from a formal environment to a less-formal one. Finally, by collecting the data on two consecutive days, I was hoping to reduce any possible fatigue factor that might be incurred.

Procedural differences

Even though the same procedure was followed for each subject, there were minor differences across individual subjects. These will be outlined below.

Subject #1: I met with her first in the evening a few days before she was scheduled to return to Thailand for her Christmas holiday. On the first day, while she was previewing the reading text in Thai, she found an incomplete sentence in one of the passages; I had inadvertently left out a part of the original text. She was able to write in the missing information from the original source. (I corrected the mistake for the other subjects.) This was the only problem encountered. She was able to read the three

passages without any other problems. The description of the pictures was without any incident. After the description task, I engaged her in conversation in English. Since the Thai code was no longer needed for that day, I felt that it was not a problem to speak in English. She was already comfortable and did not object to speaking. It was easy to maintain a topic of conversation, as her level of English competence is high.

The following day, we met in the afternoon. As on the day before, I allowed the subject to preview the English material and make comments or ask questions. Since there were several Japanese words written in English in the text, I wanted the subject to have the opportunity to verify any pronunciation. She asked about two words in the second passage: "it'll" and "askew". The description of the pictures in English went without any problems. Since I had already collected enough English conversation data the previous day, it was not necessary to collect any more.

Subject #2: I also met Subject #2 before the Christmas holidays. He was due to graduate that semester and would return to Thailand permanently during the middle of the next month. He previewed the Thai material and then began to read it without having any problems. He did not have any questions or problems with the reading or the picture description task, and the free conversation went smoothly. The only problem, however, was that he read the reading passages in Thai very quickly. Perhaps he did not fully understand what I meant by the instruction, "Read as if you are speaking on the radio." He may not have been aware of how people speak on the radio or he could have been in a rush and wanted to finish as soon as he could.

The free conversation was based on his university life in Stillwater and his ability to

speak English. He commented that he normally does not speak a lot of English on campus. He also mentioned that by sitting with me for this task, he spoke more English in 45 minutes than he did in an entire month. Even though the conversation flowed, the topics we could talk about were all about his university life in the US.

Subject #3: Because of his busy schedule, he was the last person I collected data from; this was done in the middle of January, 1996. Subject 3 also did not have any questions or problems in the reading task. He was very animated as he read; for example, he whispered when the characters in the passage did so, as if he were telling the story to a child. The only problem was that he also read the passage in Thai very fast, so I had a few difficulties following his speech. With regards to the picture description task in Thai, the subject did not have any problems understanding what to do, but he did have problems expressing himself in Thai. He commented that since he had been in the United States for such a long time he has forgotten how to speak Thai. At first I did not take this seriously, but as he described the pictures in Thai, I noticed that he switched from Thai to English on a regular basis. He used English whenever he could not think of a word in Thai. He was the only subject who felt more comfortable speaking English than Thai. As with the reading tasks, he was just as animated with the picture description task. He made sound effects and little side comments about his thoughts of what was depicted in the pictures, for example, "That's a nice name for a book shop" or "I didn't see the cat in the window yesterday."

For the free conversation task, we concentrated on talking about a movie we had both seen. Because of his very high ability in English, we were able to discuss many

aspects of the movie.

Subject #4: I met her during the first week of January to collect this data. Out of all of the subjects, she was the only one who read the material as if she was actually on a radio; her speech was at a slow pace and very clear. She had no problems reading the material in either Thai or English. In giving the description of the pictures, she spent the longest time. Whereas most subjects spoke less than 30 minutes in each language, Subject 4 described the pictures in Thai for a full 45 minutes. The task in English was not as long, but it was very detailed. She was able to make herself easily understood even though she made a lot of mistakes in her grammar. The free conversation focused on her life in Thailand before coming to America and her future endeavors.

Subject #5: Subject #5 had some speaking and mechanical problems when reading the English passages, and as a result she had to redo that part. She was not very confident in her reading ability. She had some false starts and of her own accord she rewound the tape so that she could start over. When she did so, something happened to the tape recorder. It appeared as if it were recording, but in fact it was not and so she had to return to record that one part again. What she should have done was let the tape continue to record and just start over. In the first attempt to record the English, she asked about the pronunciation of the word "shrubbery." Even though she was able to say it correctly when I modeled it for her, she still had problems when she was required to say it for the tape; she deleted the /ɹ/ sound, and said "shubbery."

There were no other problems; the picture description task went smoothly, in both Thai and English. She did ask if she had to speak as much in English as she did in Thai. I

think she was under the impression that I wanted her to translate what she originally said in Thai. I re-explained the task to her and there were no other complications. For the free conversation task, we talked about how and why she is studying in America, and what she was doing before coming here. For a person who has only been in the United States for a limited period of time, she was able to express what she wanted to say with few problems. She did comment, however, that she wished she could explain more to me, but was unable due to her lack of English.

The collection and analysis of the data itself was the next step. In order to do this, I created several "/r/" word lists for the different tasks. For the reading task, the making of the lists entailed reading though the actual passages and writing down each targeted word. The picture-description and free conversation task, on the other hand, required that I listen to each tape and write down the words as I hear them. The same lists were used for the reading tasks for each subject. For the other tasks, I had to create individual lists for each subject, as they used different words in their utterances. On each list, there were separate columns for each of the sounds ([r], [l], & [ɹ]), and an additional column for deletions.

As I listened to each sample, I indicated which sound was used by the subjects for each occurrence. I marked whether the sound was either an allophone of the Thai /r/ ([r] or [l]) or the English continuant /r/ ([ɹ]). There were instances where the subjects deleted the /r/ sound all together. I included false starts, repetition of words, and in some cases entire deletion of words in the subjects' results. This accounts for the inconsistency in the number of utterances for each subject. I then was able to count each of the occurrences

and compare them.

In the beginning, I used my home tape recorder to listen to and analyze the data. Though I was able to hear most of the sounds clearly, it was not sufficient because I could not hear all of the sounds. I also found that I was easily distracted, as listening for specific sounds can be very tedious and tiring when done for a prolonged time. I elected to use the facility from which I originally collected the data, the listening lab with partitioned cubicles, individual tape recorders and headphones. By using equipment that was designed to be started, rewound, and stopped many times in succession, I found that I was able to concentrate on the task at hand without the distractions, and listen to and record all of the sounds more accurately. In this way, the data could be collected and properly analyzed.

In the next chapter, the results will be reported. In the chapter following that, I will discuss these results in terms of the situational environments, focusing on the effects of the formal and informal situations; linguistic environments; and the individual differences among the subjects. I would also like to comment on how some of these factors can encourage either the maintenance or loss of linguistic features in a language.

CHAPTER V

Results

In this section, the results will be presented in terms of the types of /r/ sounds made by the subjects, in each of the three tasks, and overall in both English and Thai for each subject. The results for each subject will given individually and then compared with the other subjects. First, the sounds made in each task will be highlighted, and then I will talk about the collected data. The English data will be presented first in order to establish the fact that the subjects are capable of making the [ɹ] sound in the given environments, as well as to determine the distribution of the /r/ sounds they made when speaking English. Then the sounds made in Thai will be analyzed. A discussion of the results in terms of situational and contextual environments will follow in the next chapter.

In analyzing the data itself, I examined the phonological environments which were the same in both the English and Thai language. It is important to remember that the Thai /r/ sound only exists in the word initial or syllable initial position, or as a consonant cluster. In addition to the Thai environments, the English /r/ sound can also exist in the final and medial positions. For this study, I primarily focused on those environments which occur in both languages. I also was concerned with the vowel sounds that followed each of the /r/ sounds as well as the type of consonant in the cluster. It was my intent to try to establish any possible trends. Since I am focusing on individual subjects as case studies and not in an empirical study, each subject is discussed separately.

The tasks

As indicated in the previous chapter, this study used three different tasks to collect the Thai and English data. They were designed to collect careful and casual speech in formal and informal situations. The tasks included reading from a prepared text, spontaneously responding to colored pictures, and having free conversation. Of these three tasks, the reading and description tasks will be examined in depth.

The free conversation task was problematic since the Thai samples were not clear enough to use, and the speaking conditions for both languages were completely different so that a close comparison of the utterances could not be made. The Thai samples were recorded in groups of two and three in the subjects' own home. The setting was not ideal for recording and a lot of unnecessary background noise as well as a lot of inaudible speech interfered with the recording process. For one group, the recordings took place during the times of eating dinner and washing dishes so there was a lot of television chatter and clanging of dishes which made transcribing the tape very difficult and made accuracy impossible. The English samples, on the other hand, were collected with the researcher in an isolated classroom. Ideally, the collection of the free conversation in English should have been made, not in an isolated situation, but rather in an English speaking environment where the subjects could have been together as part of a group. However, to bring these subjects together for the sole purpose of speaking English would not have been an authentic situation. Speaking with me, on the other hand, on an individual basis in English is more of a regular occurrence and was thought to be more realistic. Because of inaudible speech and lack of uniformity in the speaking settings, I

elected to drop the free conversation tasks and primarily focus on the reading and description tasks in this study.

The reading task. This task was considered the most formal and the most restrictive in terms of the linguistic content. It was expected that the subjects would carefully attend to their speech production in both English and Thai, especially since they were instructed to speak as if they were on the radio.

The reading sample in English consisted of 18 different words beginning with the /ɹ/ (31 occurrences), 4 words with the sound in the syllable initial position (7 occurrences), and 19 words with /ɹ/ in a cluster (28 occurrences), for a total of 66 separate occurrences. The clusters included were /tɹ/, /pɹ/, /fɹ/, /gɹ/, /stɹ/, /dɹ/, /ʃɹ/, /θɹ/, /bɹ/, and /kɹ/. A total of 12 different vowel sounds was used in combination with the /ɹ/ sound. They included /e/, /ɪ/, /a/, /ɔ/, /ʌ/, /ɛ/, /ej/, /ij/, /aw/, /uw/, /aj/, and /ow/. A list of the words focused on can be found in Appendix D.

The Thai sample had 23 different words starting with the /r/ (80 occurrences), 8 words in the syllable initial position (26 occurrences), and 15 words with /r/ in a cluster (50 occurrences), for a total of 156 occurrences. The clusters consisted of /tr/, /kr/, /pr/, /br/, and /gr/. The vowel sounds with the Thai /r/ included /ow/, /ɨ/, /ɔ/, /ij/, /a/, /ej/, /uw/, /aw/, /ə/, and /aj/.

In the reading results in both languages, there was some variation in the total number of "r" words uttered. In English there was a total of 66 occurrences that should have been made. Subject #4 was the only one who produced 3 more than she should have, due to a repetition of some words. In Thai there was a total of 158 occurrences,

Subjects #3 and #4 uttered 157, due to some word deletions, Subject #5 uttered 160 words, as she had a couple of false starts. Both Subjects #1 and #2 had the expected number of utterances.

The time for each reading task also varied; however there was more of a difference in the description task than in the reading, as the subjects were asked to produce as much spontaneous speech as they wanted to. As shown in Table 4, the average reading time in English was 9.6 minutes, with a range from 7 minutes to 12 minutes. For Thai the average time was 8.2 minutes, with a range from 7 to 10 minutes. Subject #3 spent the shortest time reading in both languages, while Subject #4 spent the longest time.

Table 4

Time (in minutes) Spent in English and Thai for the Reading Task

	Sub #1	Sub #2	Sub #3	Sub #4	Sub #5	$\bar{x}$
Time (Eng)	9 min	9 min	7 min	12 min	11 min	9.6 min
Time (Thai)	8 min	8 min	7 min	10 min	8 min	8.2 min

The description task. This task was considered less formal because of the change in venue and equipment. It was also hoped that the subjects would concentrate more on describing the pictures than on the pronunciation of the actual words. Since the subjects were not reading from a prepared text, they had to think of the vocabulary themselves, that is, produce spontaneous speech. The pictures used were of scenes with which the subjects would most likely be familiar. There is a complete description of the task in the methodology section and photocopied prints of the stimuli in Appendix C.

Table 5

Time (in minutes) Spent in English and Thai for the Description Task

	Sub #1	Sub #2	Sub #3	Sub #4	Sub #5	$\bar{x}$
Time (Eng)	17 min	21 min	17 min	35 min	22 min	22.4 min
Time (Thai)	15 min	20 min	21 min	45 min	20 min	24.2 min

The speaking time for the description task was longer in length than for the reading task. The average speaking time for the description task in English was 22.4 minutes, with a range from 17 minutes to 35 minutes (see Table 5). For the Thai language, there was a larger spread; the average speaking time was 24.2, ranging from 15 to 45 minutes. Subject 1 had the shortest speaking time in Thai and shared the shortest speaking time in English with Subject #3. Subject #4 spent the longest time on both tasks.

In English, there were 23 different words beginning with /ɹ/, only 6 words with the sound in the syllable initial position, and 65 words with a cluster in the entire list of words uttered. Since the subjects spoke at different lengths, they varied in the number of words they actually spoke. As seen in Table 6, the total number of /ɹ/ words spoken by each subject was: 58, 55, 119, 103, and 87. All consonant and vowel sounds represented in the reading task were also in the description task, except for [ʃɹ].

Table 6

Total # of "r" Words Spoken in English and Thai for the Description Task

	Sub #1	Sub #2	Sub #3	Sub #4	Sub #5
# of words (Eng)	58	55	119	103	87
# of words (Thai)	110	143	113	223	170

For Thai, the number of words beginning with /r/ was 14; there were 14 different

words for the sound in the syllable initial position; and 18 words with cluster combinations. The number of /r/ words used by each subject was: 110, 143, 113, 223, and 170. All sound combination listed in the reading task also occurred in the description task. Please refer to Appendix D for a complete list of "r" words used in both languages.

English language results

It is important to examine how the subjects use English in order to first establish the fact that they are able to use the sound in question, [ɹ], and to examine whether this sound is also used when speaking Thai. The subjects and their results will be given in the order of the highest usage of the English [ɹ] to the lowest. They will then be compared with each other.

Table 7

Subject #1: Overall, Reading, and Description Task Results in English

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	0	0	123	1	124
%	--	--	99.2%	0.8%	100%

Reading task results

#	0	0	65	1	66
%	--	--	98.5%	1.5%	100%

Description task results

#	0	0	58	0	58
%	--	--	100%	--	100%

Subject #1. Subject #1 was the original subject chosen for this project. She had previously been observed to have used the continuant [ɹ] in both Thai and English. She has been living in America for more than four years and is currently working on a Ph.D. in

electrical engineering. She had the highest usage of the [ɹ], and had no problems using the continuant [ɹ] in any of the speaking situations, as can be seen in Table 7. These numbers indicate the number of times the subject used the sound out of the total number of occurrences, indicated on the right of the table. Below this is the percentage of time a sound was used or deleted. It can be seen that Subject #1 has an overall 99.2% use of the English continuant [ɹ], and only one instance of a deletion. The word "shrubbery" was the single word with which she had a discrepancy. It occurred twice in the reading sample; the first time she said it correctly, the second contained the deletion. Every /ɹ/ word in the description task was pronounced correctly.

Table 8

Subject #3: Overall, Reading, and Description Task Results in English

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	0	1	183	1	185
%	--	0.5%	99.0%	0.5%	100%

Reading task results

#	0	0	65	1	66
%	--	--	98.5%	1.5%	100%

Description task results

#	0	1	118	0	119
%	--	0.8%	99.2%	--	100%

Subject #3. Subject #3 is the other person in this study that had a near-perfect score in using the English [r] correctly. He is the older brother of Subject #1, and has been living in the US for the past seven and a half years. He has just completed his bachelor's degree in architecture and intends to remain in America to either find a job or

enter a culinary school. He had a 99.0% use of [ɹ], with one deletion and one usage of the [l] sound. The deletion occurred in a word with a single voiceless consonant cluster, "probably." However, in other words that contained the same cluster, for example, "properly," "precious," and "surprise," the subject did use [ɹ]. The usage of the [l], I believe, was a result of a confusion of vocabulary; he used the word "clutch" when he should have used "crutch." In the recording there was a slight hesitation before the word was uttered, which could possibly indicate that he was unsure of the word itself rather than the sound. His results can be seen in Table 8.

Table 9

Subject #5: Overall, Reading, and Description Task Results in English

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	7	34	104	8	153
%	4.6%	22.2%	68.0%	5.2%	100%

Reading task results

#	0	15	47	4	66
%	--	22.7%	71.2%	6.1%	100%

Description task results

#	7	19	57	4	87
%	8.1%	21.8%	65.5%	4.6%	100%

Subject #5. Subject #5 is a female currently studying at an intensive English program at OSU and has been in America for less than six months sharing an apartment with Subject #4. It is her goal to enter a graduate program in Business Administration at OSU. She demonstrated a fairly high overall percentage of [ɹ] use (68.0%) and a moderate usage of the [l], 22.2%, as seen in Table 9 It is important to note that in the

reading task this subject did not use the [r] variant all, whereas she did in the description task (8.1%). Even though this use accounted for less than 10% of the occurrences, this greater rise of the formal [r] in the less formal context is contrary to the findings of Beebe (1980) and Dickerson (1975). The [l], [ɹ], and deleted forms were relatively stable across each of the tasks.

Table 10

Subject #2: Overall, Reading, and Description Task Results in English

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	18	20	79	4	121
%	14.9%	16.5%	65.3%	3.3%	100%

Reading task results

#	10	9	43	4	66
%	15.1%	13.6%	65.2%	6.1%	100%

Description task results

#	8	11	36	0	55
%	14.5%	20.0%	65.5%	--	100%

Subject #2. Subject #2 is a male who has just completed his master's degree in electrical engineering. He has lived in American for just about two years, and he wants to return to Thailand to get a job in his field. His results were more varied, as can be seen from Table 10. It can be seen that in both tasks for the majority of the time (65.3%), he used the continuant [ɹ] correctly, whereas for approximately 30-35% of the time, the subject utilized either the [r] or [l]. It is interesting to note that his results in the reading and description tasks are very similar, with the exception of the deleted sounds. He used the [ɹ] just over 65% of the time, the [r] more than 14.5% in both tasks. This might

suggest that he has a fairly consistent command of the [ɹ] in both spontaneous and restrictive tasks. Unlike Subject #5, his use of [r] and [l] is fairly evenly divided across the two tasks.

Subject #4. Subject #4 has also been in America for about two years, while working on a Master's degree in Agricultural Economics. Her results demonstrate that she is aware of the [ɹ] and knows how to use it, but she is not as consistent with its use as the other subjects (see Table 11). Even though she has been here longer than her roommate (Subject #5), she had the lowest overall percentage of correct usage of the [ɹ] in both tasks, 52.9%. In both of the tasks the [r] is not used at all, but the [l] use is fairly stable (42.0% for the reading and 35.9% for the description). This usage of the [l] could have a possible bearing on her Thai pronunciation, which will be discussed in the next section.

Table 11

Subject #4: Overall, Reading, and Description Task Results in English

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	0	66	91	15	172
%	--	38.4%	52.9%	8.7%	100

Reading task results

#	0	29	33	7	69
%	--	42.0%	47.8%	7.0%	100

Description task results

#	0	37	58	8	103
%	--	35.9%	56.3%	7.8%	100

The fact that Subjects #2, #4, and #5, had like results, as did Subjects #1 and #3,

could possibly stem from similar social characteristics, namely their length of stay in the United States. Both Subjects #1 and #3 have been in the United States for the longest time, and their English pronunciation of the continuant [ɹ] is extremely high. It is also interesting to note that they plan on remaining in the United States for a while longer. Subjects #2, #4, and #5 have been in the US for two years or less; this might explain the lower [ɹ] pronunciation usage. However, Subject #5 has only been here for about six months and yet she used the continuant [ɹ] more than either Subjects #2 or #4. It is also her desire to remain in the US for an extended period of time, long enough, at least, to complete an MBA. In addition, the fact that she is presently studying at an English language institute may have had more of an effect.

When reading the English samples, each of the subjects used the proper pronunciation of the English [ɹ] at least some of the time, but they varied in the number of times that they used it. Subjects #1 and #3 were very consistent in properly pronouncing the English [ɹ] (98.5%), whereas Subjects #2, #4, and #5 used the continuant [ɹ] a majority of the time, ranging from 52.9% to 68.0%, but they frequently used the Thai variant as well (26.8% to 38.4%). This would indicate that all subjects are aware of the fact that there is a definite difference between the Thai /r/ and the English /ɹ/, and they know how to use it correctly most of the time.

Subjects #1 and #3 did not use any variant of the Thai /r/ in the readings, whereas Subjects #2, #4, and #5 used the [l] sound in the place of [ɹ] some of the time. Subject #2 was the only one to use the Thai [r] in the English reading, 10 out of 66 times (15.1%). This could suggest a transfer of L1 phonological rules to L2 for the latter subjects, while

for Subjects #1 and #3 there is no transfer of the L1 rules at all. All subjects had at least one deletion. The highest percentage of deletion occurred with Subject #4, an overall rate of 8.7%. This indicates that deletion is rare when Thais speak English.

The different tasks did not appear to have a prominent effect on the subjects' English pronunciation, as they all produced relatively stable samples across both the reading and description tasks. The only discrepancy was the slight increase in Subject #5's [r] pronunciation during the description task. Beebe (1980) and Dickerson's (1975) studies would have predicted that this increase would have occurred during the reading task instead, since it is the more prestigious variant.

It was expected that the subjects would be able to use the continuant [ɹ] in both tasks fairly consistently, as the Thai educational system does teach English at an early age so the subjects would have had some background knowledge. Since these subjects have lived in the United States and have had some contact with native speakers, they would have also had some practical English speaking experiences. Since they are native Thai speakers, it was not unusual to observe some phonological aspects of Thai in their English pronunciation, like the [r] and [l] allophones. In the next section, the subjects' first language will be analyzed in terms of these same tasks and the same phonological environments.

Thai language results

One purpose of this research was to determine whether Subject #1's [ɹ] pronunciation is an isolated case or whether other Thai learners of English are also prone to do so. In speaking Thai in both tasks, Subject #1 was expected to produce the

continuant [ɹ], as she had done in a previous study, whereas the other subjects were expected to primarily use either the Thai trilled [r] or the simpler [l] derivative. The latter subjects were not necessarily expected to produce the continuant [ɹ] sound, but a small number of occurrences could be possible since they do have a command of the [ɹ] in English and there could possibly be some carry over. It was anticipated, however, that the formal reading task would evidence more trill allophones, while in the less formal description task, the [l] would be more common.

Surprisingly, the results showed that all subjects produced the continuant [ɹ] to some extent, only with a different percentage of usage. In discussing the results, I will present the subjects in terms of their percentage of usage of the continuant [ɹ] in ascending order beginning with Subject #2.

Subject #2. Subject #2 produces examples of the sounds I would expect a typical Thai speaker to use. As expected (see Table 12), in both the reading and description tasks, the [l] sound was most commonly used, 61.4% and 77.6% respectively. This was largely due to the fact the subject spoke fast, a situation which commonly resulted in the use of [l], as pointed out in Hudak (1990). The subject's usage of the formal trilled [r] was primarily found in some of the consonant clusters, namely /tr/, /br/, and /kr/. The subject did not follow the instruction to speak as if he was on a radio program, he spoke in a manner that was unclear and would suggest that he wanted to finish quickly. The relatively high percentage (16.8%) of deletions in the description task would also be an indication of fast, unattended to speech.

Table 12

Subject #2: Overall, Reading, and Description Task Results in Thai

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	38	208	20	35	301
%	12.6%	69.1%	6.7%	11.6%	100%

Reading task results

#	38	97	12	11	158
%	24.0%	61.4%	7.6%	7.0%	100%

Description task results

#	0	111	8	24	143
%	--	77.6%	5.5%	16.8%	100%

The employment of the English variant [ɹ] is seen only in a few isolated instances, in which the Thai forms were also used, for example, the word /rijɛn/ meaning "study" by itself. When it is preceded by either /rowŋ/, "building," or /hɔŋ/, "room," forming a compound word, it refers to a "school" or "classroom" respectively. These forms were used 22 times in the three passages and he used the continuant [ɹ] only 4 times. Other instances using [ɹ] included both voiced and voiceless clusters. Examples were /braʔ/ and /kruw/. The former was used 4 times out of a total of 11 occurrences, and the latter 2 times out of 8.

The reading task did appear to have an effect on this subject's [r] production, as he produced this sound 24.0% of the time in this task, and not at all in the description task. There was almost a 15% increase in the production of the [l]'s going from the more formal task (64.4%) to the less-formal one (77.6%) In addition, more than a 50% increase was also found in the number of deleted sounds in the same tasks (7.0% to

16.8%). These findings are supported by both Beebe (1980) and Dickerson (1975).

Subject #4. Subject #4 was another example of a typical Thai speaker, as is seen in the high overall number of the Thai allophones produced (see Table 13). Overall 53.3% of the time she used the [r] and 30.7% was spent on the [l]; however, only a small percentage of the continuant [ɹ] was produced (7.6%). Subject #4 is similar to Subject #2 in the high production of the Thai variants, the low number of the English continuant [ɹ]'s, and the number of deletions. The major difference can be seen in the types of Thai variants used. Subject #4 produced more [r]'s, whereas Subject #2 produced more [l]'s. This is especially evident in the reading task where their results are almost exactly opposite.

Table 13

Subject #4: Overall, Reading, and Description Task Results in Thai

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	203	117	29	32	381
%	53.3%	30.7%	7.6%	8.4%	100%

Reading task results

#	97	41	11	9	158
%	61.4%	25.9%	7.0%	5.7%	100%

Description task results

#	106	76	18	23	223
%	47.5%	34.1%	8.1%	10.3%	100%

Subject #4 did produce a higher number of [r]'s, a lower number of [l]'s, and a lower number of deletions in the reading task than in the description task, which would indicate that the level of formality did have an effect on her language production. The

number of [ɹ]'s, however, remained constant throughout both tasks. I believe that since this subject had been used in a previous study focusing on the pronunciation of the Thai /r/, she possibly felt that she should pay close attention to her speech in both tasks. For this reason, careful speech was very evident in her samples, more so than in any of the other subjects. One example of this can be clearly seen in the use of the Thai word /ruwpʔ/, meaning picture. She used this word 95 times during the description task, and 45 (almost 50%) of those times she used the trilled [r]. The other subjects also used this word many times, but they produced the [l] or the [ɹ] sound instead. She spent 45 minutes on the description task, a much longer time than any other subject, which would account for her high word count of 223 words.

Table 14

Subject #5: Overall, Reading, and Description Task Results in Thai

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	85	108	101	36	330
%	25.8%	32.7%	30.6%	10.9%	100%

Reading task results

#	62	36	47	15	160
%	38.7%	22.5%	29.4%	9.4%	100%

Description task results

#	23	72	54	21	170
%	13.5%	42.4%	31.8%	12.3%	100%

Subject #5. Because of her shorter stay in the United States, it was expected that Subject #5 would also produce a high percentage of Thai forms. By referring to Table 14, it can be seen that even though there were more Thai forms than any other sound, Subject

#5 revealed an approximately 30% usage of the continuant [ɹ] for both tasks. For the reading task, the subject had more instances of the [r], 38.7%, whereas in the description task, the [l] was more frequent, 42.4%. This would indicate that the level of formality did effect her speech production. With regards to the number of deletions in the reading task, 8 occurrences out of 15 were found in the use of only one word, /braʔ/. All other subjects also deleted the [r] in this word, but not nearly as frequently.

Subject #3. Subject #3 revealed more surprising results, as seen in Table 15. In his overall results, it can be seen that he utilized the English [ɹ] more than the other sound (45.1%). The reading task showed that he used it more than 50% of the time, while the description task demonstrated a much more limited usage (31.9%).

Table 15

Subject #3: Overall, Reading and Description Task Results in Thai

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	39	77	122	32	270
%	14.4%	28.5%	45.2%	11.9%	100%

Reading task results

#	37	10	86	24	157
%	23.5%	6.4%	54.8%	15.3%	100%

Description task results

#	2	67	36	8	113
%	1.7%	59.3%	31.9%	7.1%	100%

The reading results revealed a much higher usage of the [ɹ] (54.8%) than of the [r] (23.5%). There was small number of deletions (15.3%) and an even smaller number of [l]'s (6.4%). For the description task, this subject had a notably higher usage of the [l]

than the [ɹ], 59.3% versus 31.9%, with an insignificant usage of the trill (1.7%). These results indicate that the level of formality did appear to influence the speech production, as the [ɹ] and [r] were considerably higher than the [l] in the formal task. But, in the description task, these figures were reversed, the [l] was prominently used, while the [ɹ] and [r] were greatly reduced.

This subject also had the highest number of deletions, which were produced in words containing clusters. The clusters included both voiced and voiceless consonants, in words like, /kruw/ ("teacher"), /graʔbowŋ/ ("dress"), /braʔtuw/ ("door"), and /truwat-tuwa/ ("check a ticket"). I would like to point out that this subject also did not adhere to the original instruction of speaking as if on the radio. He spoke extremely quickly, even though he did demonstrate a change in the tone in his voice as he read the direct speech for individual speakers in the story, as if he was actually reading a story.

Subject #1. Subject #1 demonstrated the highest overall utilization of the English [ɹ] in both of the tasks (see Table 16). Her speech production was appropriate for the tasks at hand. Both the reading and description tasks produced large amounts of the continuant [ɹ], which was not considered too surprising, as she previously demonstrated the ability to utilize the continuant [ɹ] in her speech. In these tasks she demonstrated more careful speech in the reading than she did for the description task. In the reading task, both [ɹ] (53.2%) and [r] (39.2%) were much higher than the [l] (5.7%), and there was an insignificant number of deletions (1.9%). The description task, on the other hand, demonstrated a lower usage of the [r] (19.1%), a greater usage of the [l] (11.8%), and a jump in the number of deletions (10.0%). Unlike subject #3, Subject #1's number of [ɹ]'s

increased to 59.1% in the description task.

Table 16

Subject #1: Overall, Reading, and Description Task Results in Thai

Overall results

	[r]	[l]	[ɹ]	deleted	Total
#	83	22	149	14	268
%	31.0%	8.2%	55.6%	5.2%	100%

Reading task results

#	62	9	84	3	158
%	39.2%	5.7%	53.2%	1.9%	100%

Description task results

#	21	13	65	11	110
%	19.1%	11.8%	59.1%	10.0%	100%

These results could suggest that, even though the [ɹ] was the most widely used variant, the [r] continues to hold a level of prestige in certain formal speaking situations. It could also be seen that, for Subject #1, the [ɹ] is more indicative of casual speech rather than careful speech, due to the increase of its usage in the description task. On the other hand, for Subject #3, the [ɹ] may be an indication of careful speech rather than casual.

The overall results for the Thai samples were more widely varied than for the English samples, especially with regards to the production of the English continuant [ɹ]. In the results of the Thai reading samples, Subjects #1 and #3 produced the English [ɹ] much more frequently than any of the other subjects. They have both resided in the US for a much longer period of time, and they also demonstrated the highest use of [ɹ] in English. Subject #1 used the continuant [ɹ] 53.2% of the time and Subject #3 used it 54.8%; Subject #5 followed with the next highest percentage of 29.4%; and Subjects #2

and #4 used it the least, 7.6% and 7.0% respectively. For the description task, the results yielded similiar findings. Subjects #1 and #3 both had the highest usage, even though Subject #1 had an almost 30% higher usage. Subject #5 again followed with 31.8%, which was very similiar to her production in the reading task. Both Subjects #2 and #4 had percentages that were less than 10%. These results would suggest that there is a possible transfer from the L2 to L1, but that it is strongest in Subjects #1 and #3 and to a lesser extent in Subject #5.

Subjects #1 and #3, have lived in the US in excess of 4 years and may have possibly developed a continuant [ɹ] due to their prolonged stay in America. However, length of stay does not explain why Subject #5 would have also developed a continuant [ɹ]. Although Subject #5 has been in the United States the shortest amount of time, she had far more instances of using the [ɹ] than either Subjects #2 or #4. Other factors that have not been considered, for example, the amount of English speaking contact, or other motivating forces, like the desire to remain here in the US for educational, business, or personal means may play a role.

With regard to the Thai /r/ variants, [r] and [l], all subjects except Subject #2 had a greater percentage of using [r] than [l] in the reading task. This could mean that the other subjects were possibly attending more to their speech, while Subject #2 appeared to be attending minimally. He may have just been in a rush to complete his tasks, maybe he was not really interested in helping, or perhaps he does not normally use the trilled [r] as much as the other subjects. The results for the description task were much different. Subjects #2, #3, and #5 all produced the [l] more than the [r]. Subject #2 produced the most [l]'s

with 77.6% and did not produce any [r]'s; Subject #3 followed with the next highest [l] production rate of 59.3% with a 1.7% rate of usage for the [r]; and Subject #5 produced the [l] 42.4% and the [r] 13.5% of the time. Subjects #4 and #1 produced more [r]'s than [l]'s. For Subject #4, the [r] production rate was 47.5 and. 34.1% for the [l]. Subject #1 had much smaller numbers (19.1% vs. 11.8%). In terms of the production of the Thai variants in the description task, it would appear that Subjects #2, #3, and #5 have all fallen back on their original L1 rule system, where the informal variant of the Thai /r/ would be more predominantly used than the formal one in an informal context. However, Subjects #1 and #4 used more of the formal variant, which would suggest that they were possibly attending more to their production and hence produced more careful speech.

The percentage of deletions was not significantly different for either the reading or the description tasks. Subject #1 had the fewest number of instances and the lowest overall percentage of 5.2%, while Subject #3 had the highest overall percentage of 11.9%

The individual results from this study are surprising in terms of the influence of English on Thai, specfically looking at the pronunciation of the /ɹ/ sound. Subjects #2 and #4 revealed results that would be expected of a "typical" Thai speaker, since they primarily use the traditional Thai [r] and [l] sounds with just a hint of the English continuant counterpart. Subjects #1 and #3 exhibited a notable usage of the continuant [ɹ] in both tasks, as did Subject #5, though to a lesser degree.

The next step of this research project was to examine the linguistic factors which might explain the variation within and between subjects in the pronunciation of these sounds. In order to understand this, the linguistic environments of the words spoken need

to be examined in terms of the types of vowels and consonants which were associated with the "r".

When compared with the trilled [r], the continuant [ɹ] is an easier sound to articulate. The trill involves the vibrating of the tongue tip as air passes over it, whereas in articulating the continuant the tongue is curled with no vibration. After reviewing the general results on the Thai language tally sheet looking for possible linguistic trends, it was thought that there might be a difference between the words that contain back vowels and those that have front vowels, since the [ɹ] is a back consonant articulated with the tongue blade raised and the tip lowerd, while the trilled [r] is articulated with a raised tongue tip. I grouped the words into front and back vowels and calculated the percentage of time each of the /r/ sounds were used for each subject.

As indicated by Hudak (1990), the back vowels in Thai consist of /ow/, /ɨ/, /ɔ/, /a/, /uw/, /ə/, and /aj/; and the front vowels were, /ij/, /ej/, /aw/, and /ɛ/. See Table 17 for the distribution of back and front vowels for each "r" sound in the reading task

Table 17

Back and Front Vowel Distribution for the Reading Task in Thai
Subject #1

	[r]	[l]	[ɹ]	deleted	Total
back vowels	46	6	59	3	114
%	40.2%	5.3%	51.8%	2.6%	100%
front vowels	15	3	20	0	38
%	39.5%	7.9%	52.6%	--	100%

(Table 17 continued)

Subject #2

	[r]	[l]	[ɹ]	deleted	Total
back vowels	31	66	6	11	114
%	27.2%	57.9%	5.3%	9.6%	100%
front vowels	5	26	6	0	37
%	13.5%	70.3%	16.2%	--	100%

Subject #3

back vowels	28	6	58	19	111
%	25.2%	5.4%	52.3%	17.1%	100%
front vowels	7	4	25	2	38
%	18.4%	10.5%	65.8%	5.3%	100%

Subject #4

back vowels	68	29	8	8	113
%	60.2%	25.7%	7.1%	7.0%	100%
front vowels	27	9	1	0	37
%	73.0%	24.3%	2.7%	--	100%

Subject #5

back vowels	39	26	35	15	115
%	34.0%	22.6%	30.4%	13.0	100%
front vowels	20	9	9	0	38
%	52.6%	23.7%	23.7%	--	100%

It was thought that the placement of the tongue for the back vowels might lead to their greater co-occurrence with [ɹ], since the [ɹ] is a sound which is produced with the tongue pulled toward the back of the mouth. However, the results revealed that there was no real difference in the percentage of /r/ used with front and back vowels. The [ɹ] was used approximately the same amount of time with front and back vowels for each subject. For example, for Subject #1 the back vowels occurred with the [ɹ] 51.8%, and the front

vowels 52.6%. Subject #5 had a break down of 30.4% for the back vowels and 23.7% for the front. Likewise, for the Thai allophones, the difference in the usage was not large enough. Again, the back vowels with the [r] occurred 40.2% and the front vowels occurred 39.5% of the time for Subject #1. The [l] sound with the back vowels occurred 5.3% and with the front vowels the usage was slightly greater with 7.9%.

It was also thought that consonant clusters (CC) might have also contributed to the production of the continuant sound, where the [ɹ] would be more likely with the voiceless consonants, /tr/, /kr/, and /pr/, while the [r] would occur with voiced, /br/ and /gr/. However, like the results for the front and back vowels, these were also similar in distribution, as seen in Table 18. Subject #1 demonstrated a high percentage of [ɹ] in both the voiced and voiceless consonant clusters, (61.1% and 60.0%), whereas, Subject #4 had a very low percentage distribution, 6.9% and 10.0%. There was not a sufficient difference for any of the subjects for the [ɹ]. However, Subjects #2, #3, and #5 seemed to use the trill [r] with voiced consonants, while Subjects #1 and #4 use it slightly more with voiceless consonants.

Table 18

Voiced and Voiceless CC Distribution for the Reading Task in Thai
Subject #1

	[r]	[l]	[ɹ]	deleted	Total
voiced	13	0	22	1	36
%	36.1%	--	61.1%	2.8%	100%
voiceless	6	0	12	2	20
%	30.0%	--	60.0%	10%	100%

(Table 18 continued)

Subject #2

	[r]	[l]	[ɹ]	deleted	Total
voiced	28	3	3	3	37
%	75.7%	8.1%	8.1%	8.1%	100%
voiceless	8	3	3	6	22
%	40.0%	15.0%	15.0%	15.0%	100%

Subject #3

voiced	10	0	20	0	30
%	33.3%	--	66.7%	--	100%
voiceless	2	0	8	8	20
%	11.1%	--	44.4%	44.4%	99.9%

Subject #4

voiced	18	2	2	7	29
%	62.1%	6.9%	6.9%	24.1%	100%
voiceless	15	1	2	2	20
%	75.0%	5.0%	10.0%	10.0%	100%

Subject #5

voiced	18	2	8	5	33
%	54.6%	6.1%	24.2%	15.1%	100%
voiceless	5	0	4	10	19
%	26.3%	--	21.1%	52.6%	100%

The third linguistic environment that was examined was the position of the /r/ sound in the word being spoken. Table 19 gives the overall distribution of the [r], [l], [ɹ], and deleted sounds in word initial position (#r), syllabic initial position ($r), and in consonant clusters (CC) for the reading task in Thai for Subject #1. It can be seen that in word initial positoin the [ɹ] was used 53.1%, followed by the [r] with 40.7%. Apart from deleting the sound altogether, the [l] was the least used with 6.2%. The syllable initial

position followed a similar pattern with 46.4% for [ɹ], 42.9% for [r], and 10.7% for [l]. The CC was the only environment in which the [l] did not occur, but there were 4 instances where the sound was deleted altogether. The most prominent variant used was the continuant [ɹ]. It can be seen that Subject #1's pronunciation across the different variants for the different environments remained constant.

Table 19

Subject #1: #r, $r, and CC Distribution for the Reading Task in Thai

	[r]	[l]	[ɹ]	deleted	Total
#r	33	5	43	0	81
%	40.7%	6.2%	53.1%	--	100%
$r	12	3	13	0	28
%	42.9%	10.7%	46.4%	--	100%
CC	21	0	29	4	54
%	38.9%	--	53.7%	7.4%	100%

Like Subject #1, Subject #3 had a relatively stable usage of all variants across the different environments (see Table 20). For word initial position, he used the [ɹ] 60.5%, the [r] 25.9%, and the [l] only 8.6% of the time. Less than 5% of the time the sound was deleted. The syllable initial position had similar results. For the CC, the variants were more evenly distributed except for the [l], which was not used at all; the [ɹ] was used 34.0% and the [r] was used 28.3%. The sound was deleted 37 7% of the time, which was Subject #3's only noticable difference from Subject #1.

Table 20

Subject #3: #r, $r, and CC Distribution for the Reading Task in Thai

	[r]	[l]	[ɹ]	deleted	Total
#r	21	7	49	4	81
%	25.9%	8.6%	60.5%	4.9%	99.9%
$r	7	4	15	1	27
%	25.9%	14.8%	55.6%	3.7%	100%
CC	15	0	18	20	53
%	28.3%	--	34.0%	37.7%	100%

From Table 21, Subject #5's distribution can be seen. Her results demonstrated a more evenly distribution in the word and syllable initial positions for the [ɹ], [r], and [l]. There were no deletions in these environments. However, the CC showed greater in the [r] usage (48.1%) than the initial position, the [l] was not used, and the [ɹ] remained stable at 25.0%. There was a significant increase in the deleted forms (26.9%) compared to the initial positions.

Table 21

Subject #5: #r, $r, and CC Distribution for the Reading Task in Thai

	[r]	[l]	[ɹ]	deleted	Total
#r	28	26	31	0	85
%	32.9%	30.6%	36.5%	--	100%
$r	9	9	6	0	24
%	37.5%	37.5%	25.0%	--	100%
CC	25	0	13	14	52
%	48.1%	--	25.0%	26.9%	100%

Subject #4 had a prominent and consistent usage for the [r] across the different environments ranging from 59.5 to 64.8%, as seen in Table 22. Like Subject #5, Subject #4 used the [l] variant in word and syllable initial postions at a percentage in the mid-30s. In CCs however, the [r] was used 64.8%, the [l] and [ɹ] were used minimally (5.6% and 13.0%), and the sound was deleted 16.7%. She had a very low overall usage for the continuant [ɹ], but like Subjects #1 and #5, only deleted the /r/ in CCs.

Table 22

Subject #4: #r, $r, and CC Distribution for the Reading Task in Thai

	[r]	[l]	[ɹ]	deleted	Total
#r	47	27	5	0	79
%	59.5%	34.2%	6.3%	--	100%
$r	17	10	0	0	27
%	63.0%	37.0%	--	--	100%
CC	35	3	7	9	54
%	64.8%	5.6%	13.0%	16.7%	100.1%

Subject #2 had the most interesting results (see Table 23). For both word initial and syllable initial position, he used the [l] over 80% of the time and hardly made any deletions (2.5% and 3.7%). In the word initial, the [r] was used 8.6% of the time, whereas it was not used at all in the syllable initial position. In CCs, the results were almost completely opposite. The [r] was used 60.0%, the [l] was used only 5.5%, the [ɹ] 12.7%; and the number of deletions increased to 21.8%

Table 23

Subject #2: #r, $r, and CC Distribution for the Reading Task in Thai

	[r]	[l]	[ɹ]	deleted	Total
#r	7	69	3	2	81
%	8.6%	85.2%	3.7%	2.5%	100%
$r	0	22	4	1	27
%	--	81.5%	14.8%	3.7%	100%
CC	33	3	7	12	55
%	60.0%	5.5%	12.7%	21.8%	100%

It can be found in Thai that, once again, Subjects #1 and #3 demonstrated a fairly high usage of the [ɹ] across the three different environments. Subject #1 maintained an approximate 50% usage for all three, whereas Subject #3 had a much higher rate in the word and syllable initial positions than he did for the CCs (more than a 20% difference). Subject #5, also produced the [ɹ] at a roughly uniform rate, though word initial position (36.5%) was about 10% higher than either the syllable initial or CC. Both Subjects #2 and #4 did not demonstrate a stable usage of the continuant [ɹ]. Even though Subject #2 produced the sound in all three environments the word initial postion had the lowest rate of 3.7%, while the syllable initial position had the highest with 14.8%. He used the [ɹ] with the CC more than 12% of the time. Subject #4 hardly used the continuant sound: 6.3% for the word initial position, 0% for the syllable initial position, and 13.0% for the CC. This subject was the only one who did not pronounce the [ɹ] in the syllable initial position.

For the trilled [r], Subjects #4, #1, and #3 all had a very stable production across

the three environments. Subject #4 had the highest usage with an average usage of more than 60%, Subject #1 followed with an overall usage of about 40%, and Subject #3 maintained an average rate close to 27%. Even though Subject #5 averaged about a 40% usage for the [r], there was a different percentage of usage for each environment, the CC produced the highest with 48.1%, syllable initial position had a rate of 37.5, and the word initial position was used 32.9%. Subject #2 had the most eratic performance with regards to this variant. In the word initial position, it was produced only 8.6% of the time, and in the CC it jumped to a rate of 60%. He did not use it in the syllable word position at all

Subject #4 was really the only subject to use the [l] sound prominently. He produced the sound over 80% of the time in the word and syllable initial positions, and only 5.5% of the time for the CC. The only other subjects who used the [l] in CC position was Subject #2 (5.6%). All other subjects did not use it at all in the CC. Both Subjects #4 and #5 used the sound more than 30% of the time in the word and syllable positions, while Subjects #1 and #3 used it minimally. With regards to the [l] variant, all subjects were able to produce it in both the word and syllable initial positions, but in the CC they tended to delete it.

The deleted sound in the word and syllable initial postions was not widely used, though Subjects #2 and #3 did use them, but for less than 5% of the time. A sharp increase in deletions can be found in the CC position. Subject #3 had the highest percentage of 37.7%, followed by Subject #5 with 26.9%. Subject #2 deleted the sound 21.8%, and Subject #4 deleted it 16.7. Subject #1 had the lowest usage of 7.4%.

From these results, it can be seen that for four of the subjects, two of the variants

were most prominently used. In some cases, the prominent variants were the [ɹ] and [r] (Subjects #1 and #3), in others [r] and [l] (Subjects #2 and #4). Subject #5 was the only one to have a fairly evenly distribution across all three variants and environments. Across the environments, Subject #2 was the only subject to demonstrate a large distinction between any of the two sounds. For word and syllable positions he primarily used the [l], and for the CC he would use the [r].

This chapter dealt with the reporting of the individual results for each of the subjects in this study, as well as the results from the analysis of the linguistic environments. The overall individual results for the reading and description tasks for both English and Thai indicated that all subjects produced the continuant [ɹ] in both tasks. In English, Subjects #1 and #3 produced the [ɹ] almost all of the time, Subjects #2 and #5 produced the sound more than 60% of the time, and Subject #4 used the sound just above 50%. For the Thai language, Subjects #1 and #3, once again used the continuant sound for the majority of the time, but only about 50% of the time. Subject #5 followed with an approximate usage of the 30%. Subjects #2 and #4 used the [ɹ] less than 10% of the time.

The type of task was found to influence their subjects' production in Thai, more so than in Enlgish. For the reading tasks in Thai, the subjects supported Beebe and Dickerson's hypotheses, especially with regards to the [r] and [l]. For all subjects, the use of the [l] variant increased in the less formal description task For 4 out of five subjects the use of the trilled [r] decreased in the description task and the use of deletions increased. Subjects differed in their use of the continuant [ɹ] across tasks. Three subjects

seemed to treat the sound as a less formal variant in that they used it more in the description task than in the reading task. However, the remaining two subjects had a higher use of the [ɹ] in the reading task, suggesting they use it as a more formal variant. In the more formal task the [r] was used more, and in the less formal one, the [l] was used more. The analysis of the linguistic environments demonstrated that the co-occurrence of the /r/ phonemes with front and back vowels, and voiced and voiceless consonants did not play an important role in the production of the [ɹ]. In terms of the distribution of the sounds in word initial position, syllable initial position and CCs, no strong trends were found to influence the production of the [ɹ]. All subjects used fewer [l] variants and more deletions in Ccs than in word or syllable initial position. With respect to the two /r/ pronunciations subjects responses varied. For three subjects the use of the trilled [r] was similar in all environments, but two subjects used more trilled [r]s in CCs than in initial positions. For the continuant [ɹ], three subjects had similar percentages across environments, while one subject increased the percentage of [ɹ]s in CCs and another decreased them. This latter subject favored deletion in CCs at the expense of other variants. In the next and final chapter, I will discuss these results in terms of the linguistic and situational environments, and the subjects' individual differences.

CHAPTER VI

Discussion

The purpose of this research was to examine the possible effect of L2 on L1 through a second language learner's interlanguage. As discussed in Chapter II, the situational environments used by Dickerson and Beebe demonstrated that in a more formal speaking arena, a second language speaker is more likely to use difficult English sounds than in a less formal one because of the influence of the interlanguage rule system. In the formal environment, a speaker would be attending more to the way he is speaking and consequently use the correct forms. Conversely, in an informal environment, the same speaker is not concentrating on the speech production and the result is an incorrect utterance which is typical for the learner's native language group. In this research, I also considered the level of formality of the speaking environment as an important factor that can influence the production of the L2, and more interestingly, the L1.

In terms of the production of the L2, it was expected that all subjects would be able to produce the English [ɹ] form in both the reading and description tasks, instead of using either the Thai [r] or [l] sound. In the more restricted reading task the subjects should have demonstrated a greater usage of the English form than in the spontaneous description task, as they would have been attending to the speech more. As it turned out, all subjects did use the [ɹ] the majority of the time in both of the English speaking tasks. Subjects #1 and #3 elicited a near perfect usage for both tasks. Subject #2's usage of the

[ɹ] remained at the same rate of about 65%, from one task to the next. There was a 7% increase of the [l] in the description task, as he was going from a linguistically restricted speaking task to a spontaneous one. Subject #4 demonstrated an average of 50% usage of the continuant [ɹ], but showed almost a 10% increase from the restricted reading task to the description task. Subject #5 was the only one who actually demonstrated a decrease in the [ɹ] production from the reading task (71.2%) to the description task (65.5%). Her [l] production remained constant in both tasks at about 22%, but there was an increase in her usage of the trilled [r] from the reading to the description tasks. In the reading task she did not produce the [r] at all, but in the description task she produced the [ɹ] 8.1% of the time.

These results would suggest that each subject has an ability to produce the English [ɹ] which is relatively stable across tasks and that in any L2 speaking situation this sound would most probably be used. For three of the subjects, the use of [ɹ] alternated with the use of the Thai sounds [r] and [l], but this variation was also consistent across the two tasks. This could indicate that the tasks used to collect the English data for this study may not have been sufficiently different for the subjects to produce a noticeable change in their pronunciation.

Based on the results from the studies of both Beebe (1980) and Dickerson (1975), which found that the level of formality of the speaking environment did influence the correct speaking pronunciation of certain words in the target language, we would have expected to find more [ɹ] production in the English reading task (more formal) than in the description task (less formal). This would have also supported Beebe's claim that under a

more formal speaking situation the subjects' L2 rule system would have permeated the speakers' interlanguage and hence there would be more production of the continuant [ɹ] in their L2 pronunciation. In the less-formal situation, the subjects' L2 production would have been influenced by the L1 system and so one or both of the Thai allophones would have been more evident instead of the continuant [ɹ].

In this study, the range of differences in the [ɹ] production in the reading and description tasks in either language was generally small (0.03% to 5.9%), except in one case where the difference was close to 30%. In Thai all of the subjects used more [r] in the reading task than in the description, and all used more [l] in the description than in the reading, which confirms Beebe (1980) and Dickerson's (1975) hypotheses. It should be commented that both Beebe and Dickerson's studies involved a listing task, where words are spoken in isolation, in contrast to reading and conversation tasks, which entail uttering words (restrictive or spontaneous) as part of a string (or sentence). Saying words individually is more of an experimental task and so more attention would be drawn to the words themselves. In contrast, words are said in a continuous flow, where words are linked together, there is less stress and less attention drawn to them (Tarone, 1979; Labov, 1972). Reading passages and describing pictures involve producing words in sentences and not as isolated items, and so the distinctions between the two tasks lie in the restrictiveness or spontaneity of the speech as well as the actual speaking situation.

In terms of the results in speaking Thai, it was expected that the subjects would show a greater percentage of use of the Thai trill in the restricted reading task than in the spontaneous description, while showing an increase in the use of the [l] sound in the

description task. The use of the continuant [ɹ] was not expected for any of the subjects except Subject #1, as she had already demonstrated that she used it in the L1. All of the subjects clearly demonstrated a higher usage of the [r] than the [l] in the reading passage, and a higher usage of the [l] than [r] in the description task. The only distinction was the difference in percentage of use for each sound. However, all subjects also demonstrated some usage of the English continuant [ɹ]; it was not exclusively found with Subject #1 as was predicted.

Both Subjects #2 and #4 used the [ɹ] about 7% of the time for both tasks when speaking Thai, indicating there may have been a small amount of transfer. Subjects #3 and #5 had a surprisingly large average [ɹ] use of 45.2%, and 30.6%, respectively. Subject #1 used the continuant [ɹ] well over 50% of the time overall. For only one subject did the level of formality seemed to have a large effect on the use of the continuant [ɹ]. Subjects #1, #4, and #5 had a slightly higher use of [ɹ] in the description task than in the reading task. Subject #2 had a slightly higher [ɹ] percentage in the reading task. In the reading task, Subject #3 used the [ɹ] 54.8% of the time, while the rate dropped more than 20% in the description task to 31.9%. For this subject, the frequency of the [l] sound usage jumped from a 6.4% in the reading task to almost 60% in the description. In general, the reading task seemed primarily to affect the usage of [r] and [l], and not the use of [ɹ] (except where noted).

An explanation of why three of the subjects used the English [ɹ] could be based upon the L1 being permeated by the L2 due to some of the subjects' individual differences. The subjects' interlanguage has adopted the English [ɹ] sound structure. This

system permeates the L1 in the instances where it has become the superordinate rule system. Factors which may lead to the L2-based interlanguage rules becoming the superordinate system include the subject's length of stay in the United States, the amount of contact they have had with native speakers of English in and around the university community, and their motivations or reasons for being in America. In this study, the subjects' ages, social economic backgrounds, and places of origin are all similar, and therefore are not considered factors. The sex of the subjects was also not considered an important factor in their production of the continuant [ɹ] in Thai, although it could be indirectly related to their motivations of being in the US. It was found that in general the female subjects spoke with more clarity than the males, but this did not affect the results themselves, just the ease of analyzing the data.

A superordinate rule system is one which has been found most likely to be able to permeate another rule system. For two of the subjects, Subject #1 and Subject #3, social and motivational factors suggest that English is currently their superordinate system. Living and studying in the United States for four and a half years, Subject #1 has had the opportunity to establish herself as a competent English speaker. As a part of her academic life in the engineering department, she also attended various national conferences in her field; she has traveled to New York to present a poster session and to Baltimore to take part in another conference. In addition to her studies, Subject #1 is also a teaching assistant for her advisor, where it is her responsibility to check and grade students' homework and, if necessary, meet and talk with them about their work She has regular contact with her advisor, in which she must use English to discuss her own work as a

Ph.D. candidate. After graduating, it is her goal to find a job either here in America or in Thailand. If she returns to her home country, she must deal with the fact that Thailand is a male dominant society where women are not always seen and treated as equals. A doctoral degree in a field which is primarily controlled by men, will not only help her get a job in that field, but also help her to rise above the inequality and allow her to pursue her own life.

Subject #3 has also been in America for a long time (seven and half years), and definitely has established himself as a proficient speaker of English. Most of his time here has been spent working on a bachelor's degree in Architecture, which he just completed at the beginning of 1996. His taking a long time to finish was not the result of a lack of proficiency in English, but rather a lack of interest in the field he was studying. Subject #3 is an extremely outgoing and friendly person which enables him to meet and make many friends; he likes people and enjoys being with them. On his own, he has become an accomplished chef, and from time to time, has successfully catered different events. He is an avid movie watcher, and takes joy watching different kinds of films and discussing them afterwards. It is not his desire to return to Thailand at the present time, he would like to relocate to the West Coast and attend a culinary school if possible or find a job to initially establish himself, and then open his own catering business.

Subject #5 shows evidence that English or an English-based interlanguage may be the rule system which is the greatest demand at this time, although it may not actually be the superordinate rule system for her yet. As a student attending an intensive English program, Subject #5 is working very hard so that she can be accepted into OSU. She

wants to pursue a master's degree in Business Administration. In her studies at ELI, the types of task she has been asked to perform is not unlike the tasks for this study. Students studying intensive English are often asked to read English samples aloud, as well as to verbally describe pictures in the target language, which could have easily influenced her speaking performance in English. Another consideration concerning her study at the ELI for the past six months is her contact with many people with whom she must speak English. There is a small number of other Thai students in her program, so everyone must communicate in the same language. Even though Subject #5's grammatical skills are not that strong, she does possess very good social communication skills. She is a very outgoing and friendly person, and has many English speaking friends. Often being around Subject #3 and his friends, and having an American boyfriend are other contributing factors to her English development.

Subject #5's results were somewhat surprising, as she produced the [ɹ] for an overall average of 30.6%, a substantial amount of usage for only being in the country for less than six months. Both her reading and description results were also around the same mark. But her results cannot be explained in terms of her length of stay in the country. Perhaps, being in an English speaking situation (where she could have had ample practice reading and describing pictures), and often in another English speaking situation when she is not at school, could be used as an explanation. Because she has surrounded herself in the culture of the language, she is learning and picking up new forms of the language. In this case, I do not think that the motivation of getting an MBA is as pressing as getting a Ph.D. for Subjects #1 and #4.

Unlike the other three subjects, Subjects #4 and #2 appear to have maintained Thai as their superordinate rule system. Subject #4 is another person who wants to get a doctoral degree at OSU. She has been here for more than two years now working on a master's degree in Agricultural Economics, and plans to complete it in the Fall of 1996. She is a very active member in the Thai Student Association (TSA) and was the president last year, she is now serving as the vice-president of the organization. As president, she was required to communicate in English with people around the community and often held TSA meetings in English for the benefit of the group's advisor. She currently has similar responsibilities as vice-president, but they are not demanding. Unfortunately, Subject #4 is not as socially active as Subjects #3 and #5. She does not interact as much as she could with the English speaking community. She appears to be a relatively shy person and is often with her Thai friends communicating in English. It is her goal to return to Thailand with a Ph.D. and get a job related to her field. The doctoral degree is necessary for her, as her field is also male dominated.

Subject #2 was here for two years to get a degree in Electrical Engineering. He lived alone and primarily had only other Thai friends. He was very friendly and outgoing within his own group, but very quiet and reserved in the company of English speakers. He only spoke English when he had to at the university, at the library, in the Student Union, at the bursar, and with his advisor. Other than his advisor, I was really the only other English speaker with whom he spoke. He returned to Thailand at the beginning of this year to get a job in his field.

Both Subjects #2 and #4 were considered typical examples of Thai speakers, as

they used the Thai allophones more than the other subjects, and used [ɹ] minimally. They both demonstrated similar results in terms of an overall production of [ɹ] (6.7% for Subject #2 and 7.6% for Subject #4). What marks them as typical Thai speakers is their overall production of the Thai allophones. Subject #2 had the highest usage of the [l] sound: overall 69.1%, for the reading task 61.4%, and 77.6% for the description task. Subject #4, however, had a substantially greater usage of the [r] sound than anyone else: 53.3% overall, 61.4 for the reading task, and 47.5 for the description task.

The individual differences: the length of stay, the amount of English contact, and the motivation of the being in America, I believe, have played a significant role in the subjects' production of the continuant [ɹ] in both English and Thai. As reported in the preceding chapter, Subject #1 and #3 had the highest usage of [ɹ] in both English and Thai. The extended period of time in which Subjects #1 and #3 have been in America could account for their high usage of the [ɹ] in both English and Thai. The fact that Subject #3 has been in the L2 country for three years longer than Subject #1 would indicate that there might be a set period of time that a person needs to be in the country of the second language before the usage of certain aspects of the L2 plateaus and becomes a part of the first. The results for the tasks in the Thai language show that Subjects #1 and #3 had a near 50% usage in the overall results (55.6% and 45.2% respectively). The reading task scores were 53.2% and 54.8%, indicating a similar level of [ɹ] production, while for the description, the results were 59.1% and 31.9%, which show a much broader difference. Since the description task was designed to elicit spontaneous speech, the results imply that Subject #1's interlanguage has been more heavily influenced by the L2

than Subject #3's, and it appears that there is more carry over in her L1 production.

These individual factors (i.e., the length of stay, the amount of English contact, and the motivation of the being in America) appear to have influenced the L1 speech production of all subjects. Those subjects who have lived in the US for an extended period of time and those who have had extensive contact with English speakers, both academically and socially, demonstrate a much greater influence of the L2 on their L1 production. It could be suggested that this is due to the permeation of their interlanguage system into their L1, which is a system that not only enhances their [ɹ] pronunciation in the L2, but has also introduced a new sound into their L1 as well.

The next and final chapter will bring together all of these findings, propose implications for second language learners and teachers, and suggest possible areas of further research.

CHAPTER VII

Conclusions

The findings of this research have primarily focused on a different aspect of language learning: the effects on a second language learner's native language of the target language. Normally, research has considered how L1 can be used to predict possible errors in L2 (Wardhaugh, 1983), or how certain aspects of the L1 can be applied negatively or positively to the production of L2 in terms of interference, transfer, or interlanguage (Selinker, 1972; Selinker, Swain, & Dumas, 1975; Dickerson, 1975; Beebe, 1980). The question of how one's native language is affected by the learning of a second language has not really been considered.

This paper examined the influence on L1 in terms of the permeation of the interlanguage. It has already been established that interlanguage is capable of permeating the L2 rule system so that the pronunciation of various sounds in the L2 are influenced (Beebe, 1980), but the question stands, can interlanguage go the other way and in a similar fashion permeate the pronunciation of the L1?

This question was born from the observation of a particular Thai subject producing a typical English sound in her native language, a sound not normally found in Thai. This one subject and four others, all living and studying on a large American university campus, were asked to respond to two different kinds of tasks in both their native and second language. The purpose was to see if this one subject was an isolated case, or if the other

subjects produced similar sounds in their native language. In addition to the one particular subject, two others demonstrated a definite usage of the English sound in their mother tongue in both tasks. The sound was very prominent in the English samples, and it also existed in the Thai samples.

The explanations of why this phenomenon occurs were thought to have been linguistically and situationally based, but in fact it was found that the subjects' individual differences and motivation were more influential. This phenomenon could also be a matter of the subjects adopting a simplified sound from the L2 and inadvertently applying it to the L1. This would refer to the production of the continuant [ɹ] over the trilled [r], which is generally an easier "r" sounds to articulate.

I would like to suggest that the permeation of one aspect of the L2 phonological rule system, the continuant [ɹ], into the subjects' L1, is a development of the subjects' interlanguage rule system (i.e., the combination of both the L1 and L2). Furthermore, this combination rule system can be applied to both the second and native language.

Thailand is a country whose language possesses sounds that are in variation, /r/ and /l/, and when spoken the [r] is regularly substituted with the [l] in many different situations (Hudak, 1990). This variation is complicated by social perceptions relating to the use of each Thai variant. The [r] is the more prestigious sound and is usually pronounced in more formal speaking situations. The [l] is more commonly used in all other speaking environments. When Thais learn English, especially in an English speaking setting, they are introduced to a new and more simply pronounced variation of the "r" sound, /ɹ/. The new variant may be perceived as being articulatory between the

two Thai variants. Therefore, one resolution of the alternation might be for speakers to adopt [ɹ] as a compromise between the formal but pretentious [r] and the informal [l] in Thai. Depending on the learners exposure to and usage of the L2, aspects of the L2 may be produced when the learner is speaking in the L1, particularly in the case where the L1 contains unstable sounds.

Implications

Though the findings in this study may not have a direct impact upon the teaching or learning of a second language, I think that it is important for both learners and instructors alike to be aware of some of the possible consequences of learning a second language and actively using that language in a second language environment. This will not only allow learners to be aware of their own ability and the possible effects it may have on their native language, but give instructors the chance to understand why some learners are able to use certain phonological sounds and why others are not.

Teachers should be aware of the fact that some learners' ability to master the target language is greater than others, and because of this ability, these learners may acquire some L2 attributes and unknowingly apply them to their L1. This application of L2 attributes to L1 may be most likely in situations where the native languages already contain unstable sounds. In the country where the target language is spoken, for example Thailand, the learner may not notice a change in his/her L1 speaking; however, upon return to his/her native country the learner may find him/herself not being understood by some of the people living in his own country. Though this is not a serious problem in the long run, the learner will be able to maintain his/her native language and revert to his/her

own L1 speaking habits after a short period of time (Baker, 1993), if they have not been away for such a long period that the native language itself has changed . The teacher should be prepared to explain to a learner that there may a period of time of "'reverse' culture shock" which could produce different levels of anxiety similar to the learner's first experiences in the target language country (Ellis, 1994).

Learners, on the other hand, may themselves want to be aware of the fact that different aspects of their native language could very well be influenced by the learning of a second language. This would allow them to understand why people in their own land may not be able to understand what they say.

There is already evidence in Thailand of English influencing Thai. This can be seen more and more in the amount of borrowed words in the language, where the Thais often adopt these words and then apply a Thai pronunciation to them (Smalley, 1994). However, there may be a time when the Thai language will not only have new vocabulary words, but possibly new sounds, like the continuant [ɹ]. I have noticed in my own experience, how many of the expatriates living in Thailand are unable to properly pronounce the Thai trill when speaking Thai, so in its stead they use the continuant [ɹ]. This may also be a contributing factor to the introduction of this new sound in Thai.

Recommendations for further research

Since this study only looked at the pronunciation of five Thai learners of English, it is recommended that an empirical study be conducted to find out if the Thai language is actually adopting the continuant [ɹ] sound. Ideally, I see the study being conducted in the target language country as well as in Thailand across different classes of people. It would

be assumed that the educated persons and/or those people who have had extensive contact with foreigners would be more likely to develop the continuant [ɹ] than those who do not have any such contact. It would also be suggested that the study utilize a wider variety of tasks including a list of words, as in Beebe and Dickerson's study, and free conversation to add a range of different speaking styles. In order to determine how widespread this phenomenon is, the investigation should also be done for other languages.

Previous studies of interlanguage have primarily focused on the combination of L1 and L2 rule systems and on the effects of this combined system on the production of the L2. The results of this study indicate that a better understanding of the nature of interlanguage can be achieved if it is viewed as a "two way street" which can be traveled in ways which affect both L2 and L1.

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APPENDICES

APPENDIX A

INFORMATION SHEET / CONSENT FORM AND

QUESTIONNAIRE

THESIS INFORMATION SHEET

Dear Participant:

Thank you for agreeing to participate in my research project. The purpose of this project is to examine some of the effects the Thai language has on the English language and vice versa.

In this project, I will be asking you to fill out a personal information sheet, as well as speak into a cassette tape recorder under different conditions. My purpose is to collect English and Thai data in formal and informal speaking situations. I will ask you to:

i) record authentic Thai speech in your own home. I will supply you with a portable tape recorder and tapes, and just ask you to record your everyday conversation.
ii) describe various objects in Thai that are possibly familiar or not familiar to you.
iii) read a passage in Thai.
iv) have an interview with me in English.
v) describe various objects in English that are possibly familiar or not familiar to you.
vi) read a passage in English.

Since I will not be able to collect all the data in one sitting, I would like to be able to set up appointments to meet with you throughout this Fall term.

I would like to inform you that any and all of the information collected will be kept confidential. In my actual thesis, I will not use your name, but will create a fictitious one to protect your identity.

If you are interested, I would be willing to share my conclusions with you when I am finished.

Once again I would like to thank you in advanced for your help.

Ross Fenske

Please sign and date the consent form below.

Consent Form

I have read and understand the information given above, and I,

_____, do agree to participate in this research. I understand that my participation is voluntary, and that I am free to withdraw my consent and participation at anytime after notifying the researcher.

_____ _____

(signature) (date)

Please answer the following questions by either writing in the appropriate places or by circling the appropriate categories. Only answer the questions that apply to you.

PERSONAL INFORMATION

1. Subject # _____
2. Place of birth (city and country): _____
3. Nationality: _____
4. Sex: male / female
5. Martial Status: single / married / separated / divorced
6. Age: 15-20 / 21-25 / 26-30 / 31-35
7. What is your mother's current occupation? _____
8. What is your father's current occupation? _____
9. How many brothers and sisters do you have? _____
10. What are brothers and/or sisters currently doing? _____
11. What is your native language? _____
12. How long have you been actively speaking/using English? _____
13. Are you able to speak any language other than you native language or English? yes / no
14. If so, what language(s): _____
15. How long have you spoken these languages: _____
16 Where are you currently living in Stillwater? dormitory / apartment / house
17. Do you live alone or with roommate(s)? _____
18. What language do you usually speak in your home? _____
19. Who do you usually speak this language with? _____
20. Do you speak English in your home?

    never / rarely / sometimes / usually / almost always / always
21. If you do, who do you usually speak English with? _____
22. What percentage of a typical day do you spend speaking Thai? _____
23. What percentage of a typical day do you spend speaking English? _____
24. What percentage of a typical day do you spend speaking any other language? _____

TRAVELING EXPERIENCE

25. Have you lived in any other countries other than America or your native country? yes/no
26. If so, where: _____
27. How long was your stay? _____
28. What was purpose of your stay? _____
29. Total length of stay in America: _____
30. What places in America have you lived (excluding Stillwater, OK)? _____
31. How long was you stay in each place? _____
32. What was the purpose of your stay in each place? _____
33. Length of stay in Stillwater, OK: _____
34. What was your purpose in coming to Stillwater, OK? _____

EDUCATIONAL INFORMATION

35. What is your current level of study at OSU? ELI Bachelor's Master's Ph.D.
36. How long have you been studying at OSU (excluding ELI)? _____
37. If you were at ELI, how long did you study there? _____
38. What major field of study are you currently enrolled at OSU? _____
39. How have you been studying in this field? _____
40. When do you plan on completing your present degree? _____
41. What do plan to do after completing your degree? _____
42. If you are at ELI, what is your level? alpha beta delta gamma omega
43. What are your plans after graduating from ELI? _____

APPENDIX B

READING TASKS

The Railroad Station

They got off the Oimachi train at Jiyugaoka Station, and Mother took Totto-chan by the hand to lead her through the ticket gate. She had hardly ever been on a train before and was reluctant to give up the precious ticket she was clutching.

"May I keep it?" Totto-chan asked the ticket collector.

"No, you can't," he replied, taking it from her.

She pointed to his box filled with tickets. "Are those all yours?"

"No, they belong to the railroad station," he replied, as he snatched away tickets from people going out.

"Oh." Totto-chan gazed longingly into the box and went on, "When I grow up I'm going to sell railroad tickets!"

The ticket collector glanced at her for the first time. "My little boy wants a job in the station, too, so you can work together."

Totto-chan stepped to one side and took a good look at the ticket collector. He was plump and wore glasses and seemed rather kind.

"Hmm." She put her hands on her hips and carefully considered the idea. "I wouldn't mind at all working with your son," she said. "I'll think it over. But I'm rather busy just now as I'm on my way to a new school."

She ran to where Mother waited, shouting, "I'm going to be a ticket seller!"

Mother wasn't surprised, but she said, "I thought you were going to be a spy."

As Totto-chan began walking along holding Mother's hand, she remembered that until the day before she had been quite sure she wanted to be a spy. But what fun it would be to be in charge of a box full of tickets!

"That's it!" A splendid idea occurred to her. She looked up at Mother and informed her of it at the top of her voice, "Couldn't I be a ticket seller who's really a spy?"

Mother didn't reply. Under her felt hat with its little flowers, her lovely face was serious. The fact was Mother was very worried. What if they wouldn't have Totto-chan at the new school? She looked at Totto-chan skipping along the road chattering to herself. Totto-chan didn't know Mother was worried, so when their eyes met, she said gaily, "I've changed my mind. I think I'll join one of those little bands of street musicians who go about advertising new stores!"

There was a touch of despair in Mother's voice as she said, "Come on, we'll be late. We mustn't keep the headmaster waiting. No more chatter. Look where you're going and walk properly."

Ahead of them, in the distance, the gate of a small school was gradually coming into view.

The New School

When she saw the gate of the new school, Totto-chan stopped. The gate of the school she used to go to had fine concrete pillars with the name of the school in large characters. But the gate of this new school simply consisted of two rather short posts that still had twigs and leaves on them.

"This gate's growing," said Totto-chan. "It'll probably go on growing till it's taller than the telephone poles!"

The two "gateposts" were clearly trees with roots. When she got closer, she had to put her head to one side to read the name of the school because the wind had blown the sign askew.

"To-mo-e Ga-ku-en."

Totto-chan was about to ask Mother what "Tomoe" meant, when she caught a glimpse of something that made her think she must be dreaming. She squatted down and peered through the shrubbery to get a better look, and she couldn't believe her eyes.

"Mother, is that really a train? There, in the school grounds!"

For its classrooms, the school had made use of six abandoned railroad cars. To Totto-chan it seemed something you might dream about. A school in a train!

The windows of the railroad cars sparkled in the morning sunlight. But the eyes of the rosy-cheeked little girl gazing at them through the shrubbery sparkled even more.

A moment later, Totto-chan let out a whoop of joy and started running toward the "train school," calling out to Mother over her shoulder, "Come on, hurry, let's get on this train that's standing still."

Startled, Mother began to run after her. Mother had been on a basketball team once, so she was faster than Totto-chan and caught hold of her dress just as she reached a door.

"You can't go in yet," said Mother, holding her back. "The cars are classrooms, and you haven't even been accepted here yet. If you really want to get on this train, you'll have to be nice and polite to the headmaster. We're going to call on him now, and if all goes well, you'll be able to go to this school. Do you understand?"

Totto-chan was awfully disappointed not to get on the "train" right away, but she decided she had better do as Mother told her.

"All right," she said. And then added, "I like this school a lot."

Mother felt like telling her it wasn't a matter of whether she liked the school but of whether the headmaster liked her. But she just let go of Totto-chan's dress, took hold of her hand, and started walking toward the headmaster's office.

All the railroad cars were quiet, for the first classes of the day had begun. Instead of a wall, the not very spacious school grounds were surrounded by trees, and there were flower beds full of red and yellow flowers.

The headmaster's office wasn't in a railroad car, but was on the right-hand side of a one-story building that stood at the top of a semicircular flight of about seven stone steps opposite the gate.

Totto-chan let go of Mother's hand and raced up the steps, then turned around abruptly, almost causing Mother to run into her.

"What's the matter?" Mother asked, fearing Totto-chan might have changed her mind about the school.

Standing above her on the top step, Totto-chan whispered to Mother in all seriousness, "The man we're going to see must be a stationmaster!"

Mother had plenty of patience as well as a great sense of fun. She put her face close to Totto-chan's and whispered, "Why?"

Totto-chan whispered back, "You said he was the headmaster, but if he owns all these trains, he must be a stationmaster."

Mother had to admit it was unusual for a school to make use of old railroad cars, but there was no time to explain. She simply said, "Why don't you ask him yourself? And, anyway, what about Daddy? He plays the violin and owns several violins, but that doesn't make our house a violin shop, does it?"

"No, it doesn't," Totto-chan agreed, catching hold of Mother's hand.

เมื่อลงจากรถไฟสายโอโอมาจิ ที่สถานีจิยูงะโอกะ แม่ก็จูงมือโต๊ะโตะจังเดินไปที่ช่องตรวจตั๋ว โต๊ะโตะจังไม่ค่อยได้นั่งรถไฟบ่อยนัก จึงไม่อยากคืนตั๋วที่กำไว้อย่างหวงแหนให้กับคนตรวจตั๋ว เธอถามคนที่อยู่ในช่องตรวจตั๋วว่า

"ขอตั๋วนี้ไว้ไม่ได้หรือคะ"

"ไม่ได้หรอก" คนตรวจตั๋วตอบ แล้วรีบหยิบตั๋วไปจากมือของโต๊ะโตะจัง

เธอชี้ไปที่กล่องซึ่งมีตั๋วใช้แล้วอยู่เต็ม และถามว่า

"ตั๋วนี่ของลุงทั้งหมดเลยหรือคะ"

"ไม่ใช่ของลุงหรอก ของสถานีน่ะ" ลุงคนตรวจตั๋วตอบพลาง มือก็คอยรับตั๋วจากมือของคนที่เดินออกนอกสถานี

"หรือคะ--"

โต๊ะโตะจังจ้องตั๋วในกล่องอย่างอาลัยอาวรณ์ พลางพูดว่า

"ถ้าหนูโตขึ้น หนูจะเป็นคนขายตั๋ว"

ลุงคนตรวจตั๋วชำเลืองมองหน้าโต๊ะโตะจังเป็นครั้งแรก

"ลูกชายของลุงก็บอกว่าอยากทำงานสถานีรถไฟเหมือนกัน หนูทำงานกับเขาสิ"

โต๊ะโตะจังถอยห่างออกมานิดหนึ่ง แล้วเขม้นมองดูลุงคนตรวจตั๋ว เขาเป็นคนอ้วน สวมแว่นตา ดู ๆ ท่าทางใจดีอยู่เหมือนกัน

"เอ้อ--" โต๊ะโตะจังเท้าสะเอว พินิจพิเคราะห์คนตรวจตั๋ว "ทำงานกับลูกของลุงก็ดีเหมือนกัน แต่ขอคิดดูอีกที ตอนนี้หนูยังไม่ว่าง ต้องไปโรงเรียนแห่งใหม่"

โต๊ะโตะจังวิ่งไปหาแม่ซึ่งยืนคอยอยู่ เธอตะโกนว่า

"หนูอยากเป็นคนขายตั๋ว"

"แล้วที่ว่าจะเป็นสายลับล่ะ จะทำยังไง" แม่พูดอย่างไม่แปลกใจสักนิด

โต๊ะโตะจังให้แม่จูงมือเดินไปเรื่อย ๆ พลางคิดว่า 'จริงด้วยสิ ฉันเคยคิดว่าจะเป็นสายลับจนถึงเมื่อวานนี้ แต่การมีตั๋วรถไฟเต็มกล่องก็ดีเหมือนกันนี่นะ'

"ใช่แล้ว!!"

โต๊ะโตะจังคิดอะไรได้อย่างหนึ่ง เธอแหงนหน้าขึ้นมองแม่ และพูดเสียงดังลั่น

"สมมุติว่าเป็นคนขายตั๋วที่ความจริงแล้วเป็นสายลับล่ะคะ ดีไหม"

แม่ไม่ตอบ เพราะกำลังวิตกกังวลอยู่ในใจว่า ถ้าเผื่อโรงเรียนที่กำลังจะไปนี้ไม่ยอมรับโต๊ะโตะจังล่ะ--ใบหน้าสวย สวมหมวกสักหลาดประดับดอกไม้ดอกเล็ก ๆ ของแม่ ค่อนข้างเคร่งขรึม เธอมองดูโต๊ะโตะจังซึ่งกระโดดหยองแหยงไปตามถนน และพูดเร็วจี๋เหมือนรถไฟด่วนอยู่คนเดียว แต่โต๊ะโตะจังไม่รู้ความในใจของแม่ พอสบตาแม่เธอก็ยิ้มหวาน พูดอย่างร่าเริง

"แม่ หนูว่าหนูไม่เป็นแล้วละ ทั้งสองอย่างนั่น เป็นจินตองยะดีกว่า"

"เอาละ เดี๋ยวจะสาย คุณครูใหญ่กำลังรออยู่ เลิกพูด แล้วมองไปข้างหน้าเวลาเดิน" แม่พูดอย่างค่อนข้างสิ้นหวัง

เบื้องหน้า แลเห็นประตูโรงเรียนอยู่ลิบ ๆ

โรงเรียนใหม่

เมื่อเดินมาจนมองเห็นประตูโรงเรียนได้ถนัดตา โต๊ะโตะจังก็หยุดเดิน เพราะประตูโรงเรียนเก่านั้นเป็นเสาคอนกรีตสวยงาม ป้ายชื่อโรงเรียนด้วยไง แต่ประตูโรงเรียนใหม่นี้เป็นเสาไม้เตี้ย ๆ แถมยังมีใบไม้งอกออกมาด้วย

"ประตูที่ขึ้นมาจากดินไงล่ะ" โต๊ะโตะจังพูดกับแม่ และเสริมว่า "มันคงจะโตขึ้นเรื่อย ๆ จนสูงกว่าเสาไฟฟ้าเชียวละค่ะ"

เสาประตูโรงเรียนทั้งสองเสาเป็นต้นไม้ที่ฝังรากอยู่ในดิน เมื่อเดินเข้าไปใกล้ประตู โต๊ะโตะจังต้องรีบเอียงคอ เพราะป้ายชื่อโรงเรียนซึ่งแขวนอยู่ที่ประตูนั้นเอียงกะเท่เร่ คงเป็นเพราะโดนลมพัด

"โรงเรียนโทโมเอ"

โต๊ะโตะจังเอียงคออ่านป้ายชื่อโรงเรียน แล้วหันมาจะถามความหมายของชื่อนั้น แต่สายตามองไปเห็นสิ่งซึ่งไม่น่าจะเป็นไปได้เสียก่อน โต๊ะโตะจังลงนั่งยองโย่งหยก มุดศีรษะเข้าไปที่ช่องว่างของต้นไม้ที่ประตู แล้วมองลอดออกไป---'นั่นไง เห็นแล้ว'

"แม่คะ นั่นรถไฟจริง ๆ หรือคะ ที่อยู่ตรงสนามโรงเรียนน่ะค่ะ"

ตู้รถไฟซึ่งไม่ได้ใช้แล้ว ๑ ตู้ จอดอยู่ที่นั่น และใช้เป็นห้องเรียน โต๊ะโตะจังคิดว่าเธอฝันไป

"ห้องเรียนที่เป็นรถไฟ---" โต๊ะโตะจังพึมพำ

หน้าต่างรถไฟถูกแสงแดดเป็นประกายวิบวับ ดวงตาของโต๊ะโตะจังซึ่งจ้องมองอยู่ก็เป็นประกายเหมือนกัน

วินาทีต่อมา โต๊ะโตะจังร้องลั่นอย่างถูกใจ

"ไฮ้ไฮ!" และวิ่งถลาไปที่ห้องเรียนซึ่งเป็นขบวนรถไฟ เธอหันกลับมาตะโกนบอกแม่ทั้ง ๆ ที่ยังวิ่งอยู่ว่า "เร็ว ๆ ค่ะ ไปขึ้นรถไฟที่ไม่ได้เล่นกัน"

แม่วิ่งตามด้วยความตกใจ บังเอิญแม่เคยเป็นนักบาสเก็ตบอลมาก่อน จึงวิ่งเร็ว และจับชายกระโปรงของโต๊ะโตะจังไว้ได้ ก่อนที่หัวของโต๊ะโตะจังจะไปถึงประตูเพียงนิดเดียว

แม่ยังจับชายกระโปรงไว้แน่นขณะที่พูดกับโต๊ะโตะจังว่า

"ไม่ได้จ๊ะ รถไฟนี้เป็นห้องเรียน แล้วเขาก็ยังไม่ได้รับลูกเข้าเรียนเลย ถ้าลูกอยากขึ้นรถไฟขบวนนี้ ต้องพูดกับคุณครูใหญ่ คนที่เรากำลังไปพบให้ดี ๆ นะจ๊ะ ถ้าโชคดี ลูกจะได้มาเรียนที่นี่ เข้าใจไหมจ๊ะ"

โต๊ะโตะจังรู้สึกเสียดาย ที่ยังไปขึ้นรถไฟไม่ได้ แต่ก็ตัดสินใจทำตามแม่พูด

"ค่ะ" เธอตอบเสียงดัง และเสริมว่า "หนูชอบโรงเรียนนี้มากค่ะ"

แม่คิดในใจว่า ปัญหาไม่ได้อยู่ที่ว่า โต๊ะโตะจังจะชอบโรงเรียนหรือไม่ แต่สำคัญตรงที่คุณครูใหญ่จะชอบโต๊ะโตะจังหรือเปล่าต่างหาก แต่ก็ไม่ได้พูดออกมา เพียงแต่ปล่อยมือจากชายกระโปรงลูกสาว และจูงมือกันเดินไปที่ห้องทำงานของครูใหญ่

ตู้รถไฟทุกตู้เงียบเชียบ ดูเหมือนว่าชั่วโมงแรกเพิ่งจะเริ่มต้นเมื่อสักครู่นี่เอง รอบ ๆ บริเวณโรงเรียนซึ่งไม่ค่อยกว้างขวางนัก ปลูกต้นไม้ชนิดต่าง ๆ แทนรั้ว ที่แปลงดอกไม้มีดอกไม้สีแดง สีเหลือง บานเต็มไปหมด

ห้องทำงานของคุณครูใหญ่ไม่ได้เป็นตู้รถไฟ แต่อยู่ทางขวามือของอาคารชั้นเดียวซึ่งอยู่ตรงกับประตูโรงเรียน ต้องขึ้นบันไดหินรูปร่างเหมือนพัดคลี่ไป 7 ขั้น

โต๊ะโตะจังปล่อยมือแม่ วิ่งขึ้นบันได แล้วก็หยุดกะทันหันหันหน้ามา เกือบจะชนกับแม่ซึ่งเดินตามขึ้นไปติด ๆ

"ทำไมจ๊ะ" แม่รีบถาม เพราะนึกว่าโต๊ะโตะจังเปลี่ยนใจเสียแล้ว เธอยืนอยู่บนบันไดขั้นสุดท้ายพอดี ทำหน้าเคร่งขรึม เอาจริงเอาจัง และกระซิบกับแม่ว่า

"แม่คะ คนที่เราจะไปพบนี่เป็นเจ้าหน้าที่สถานีรถไฟไม่ใช่หรือคะ"

แม่เป็นคนที่มีความอดทน หรือจะว่ามีอารมณ์ขันก็ได้ จึงเอียงหน้าลงไปหาโต๊ะโตะจัง และกระซิบถามว่า

"ทำไมหรือจ๊ะ"

เต๊ะโตะจังทำเสียงแผ่วลงอีก

"ก็อแม่บอกว่า เขาเป็นคุณครูใหญ่ แต่มีรถไฟเยอะ ๆ อย่างนี้ สงสัยว่าจะเป็นเจ้าหน้าที่สถานีรถไฟมากกว่า"

แม่ก็คิดว่า ข้อข้องใจของโต๊ะโตะจังฟังเข้าทีดีอยู่เหมือนกัน เพราะไม่ค่อยมีใครนำตู้โดยสารรถไฟที่ไม่ใช้แล้วมาทำเป็นห้องเรียน แต่ตอนนี้ไม่มีเวลาอธิบาย จึงตัดบทไปว่า

"เอาละ ลูกไปถามคุณครูใหญ่เองก็แล้วกัน แล้วลองคิดเรื่องพ่อของลูกดู พ่อเป็นนักดนตรีแล้วก็มีไวโอลินหลายตัว แต่พ่อก็ไม่ใช่เจ้าของร้านขายไวโอลิน ใช่ไหมจ๊ะ"

"จริงค่ะ" โต๊ะโตะจังตอบ แล้วจับมือแม่ไว้

APPENDIX C

DESCRIPTION TASKS


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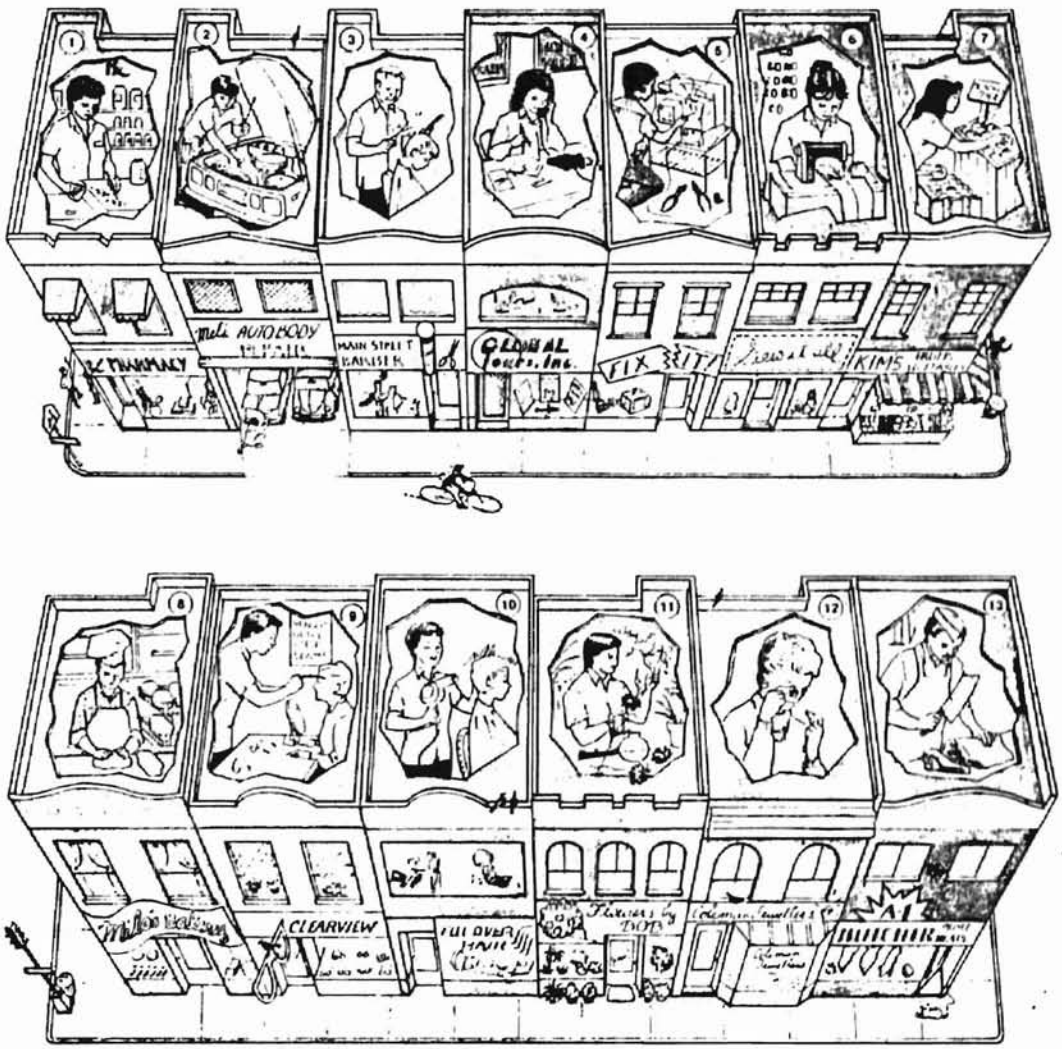
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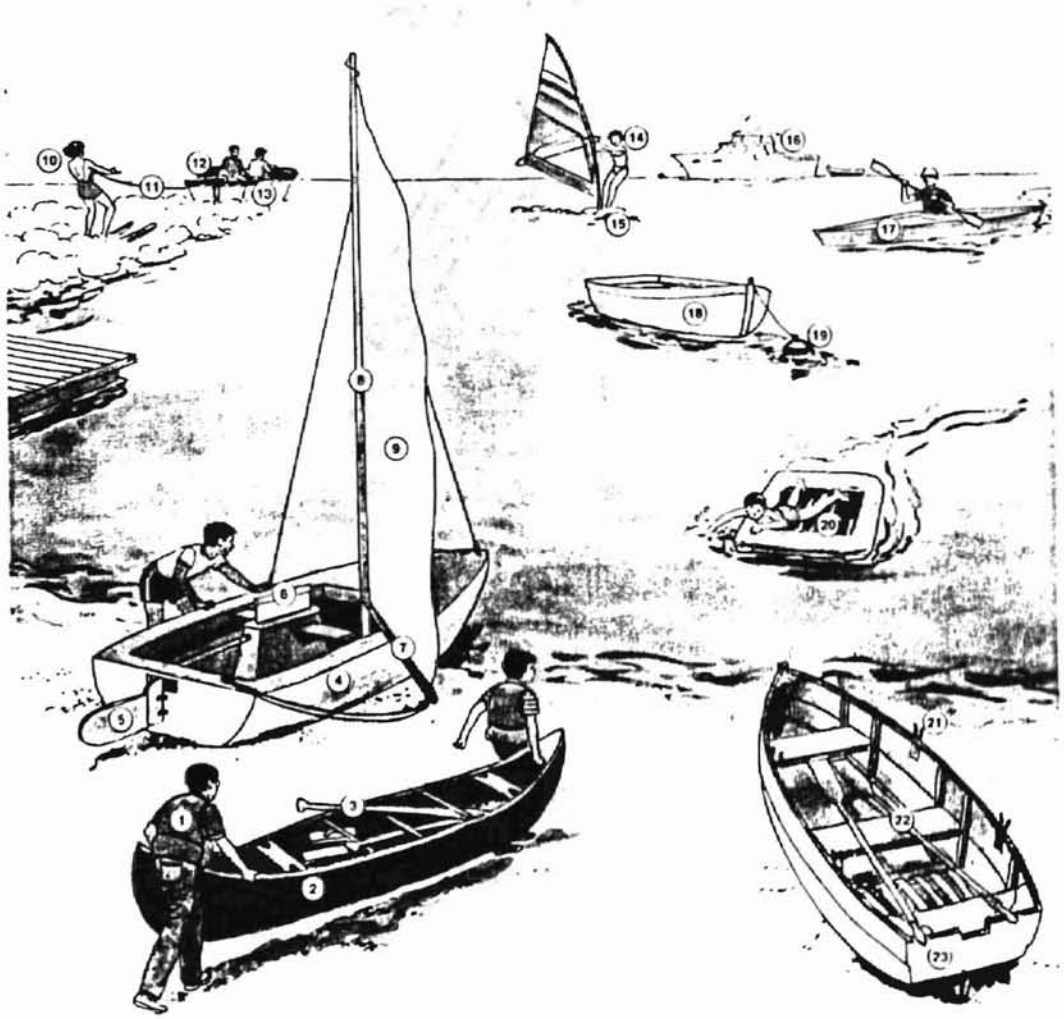
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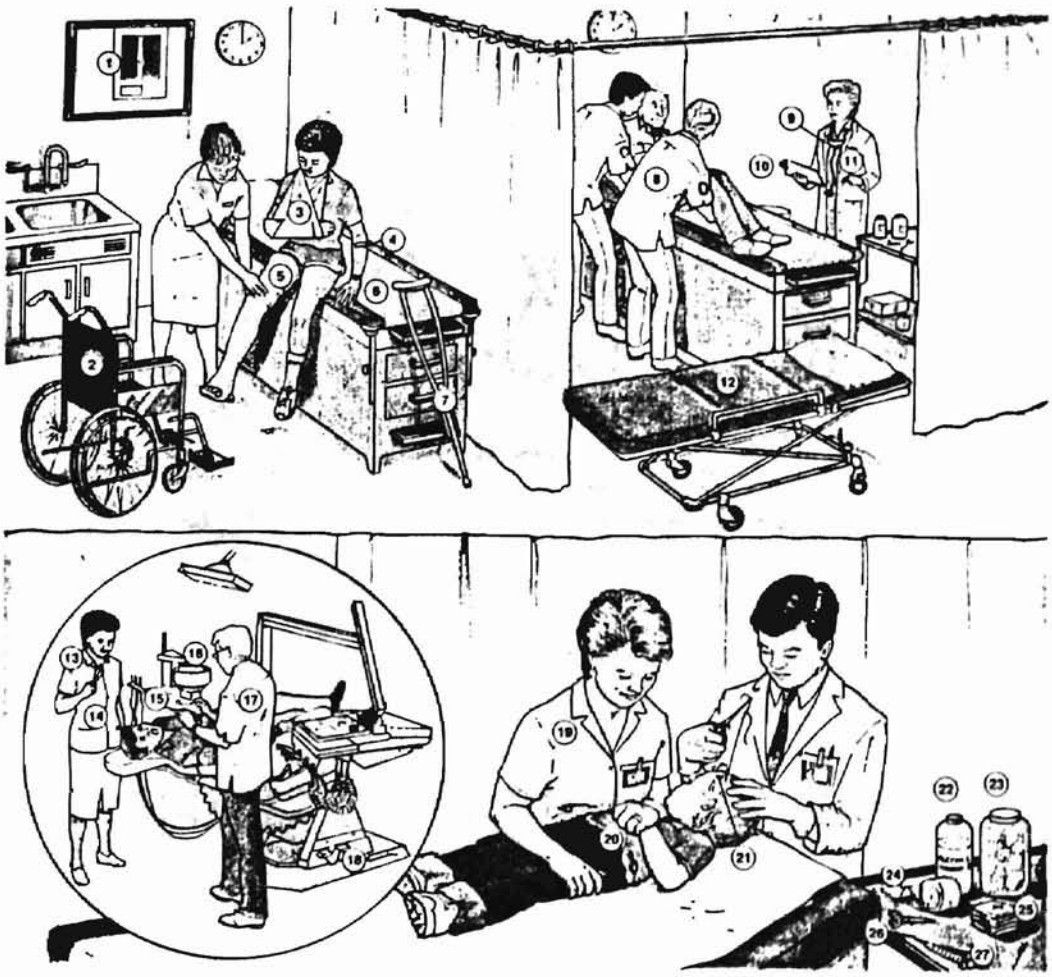
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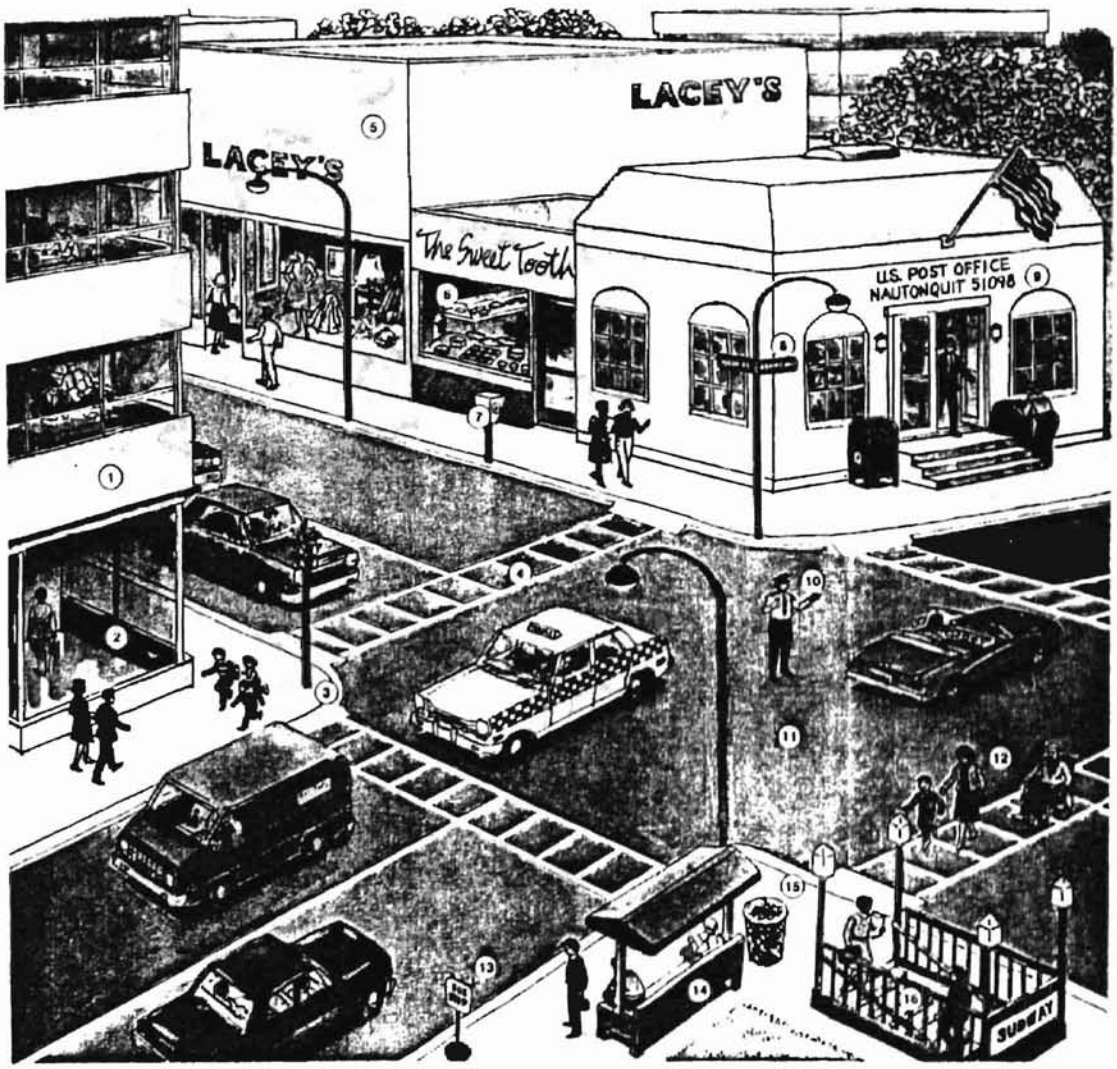
LACEY'S
LACEY'S
The Sweet Tooth
U.S. POST OFFICE
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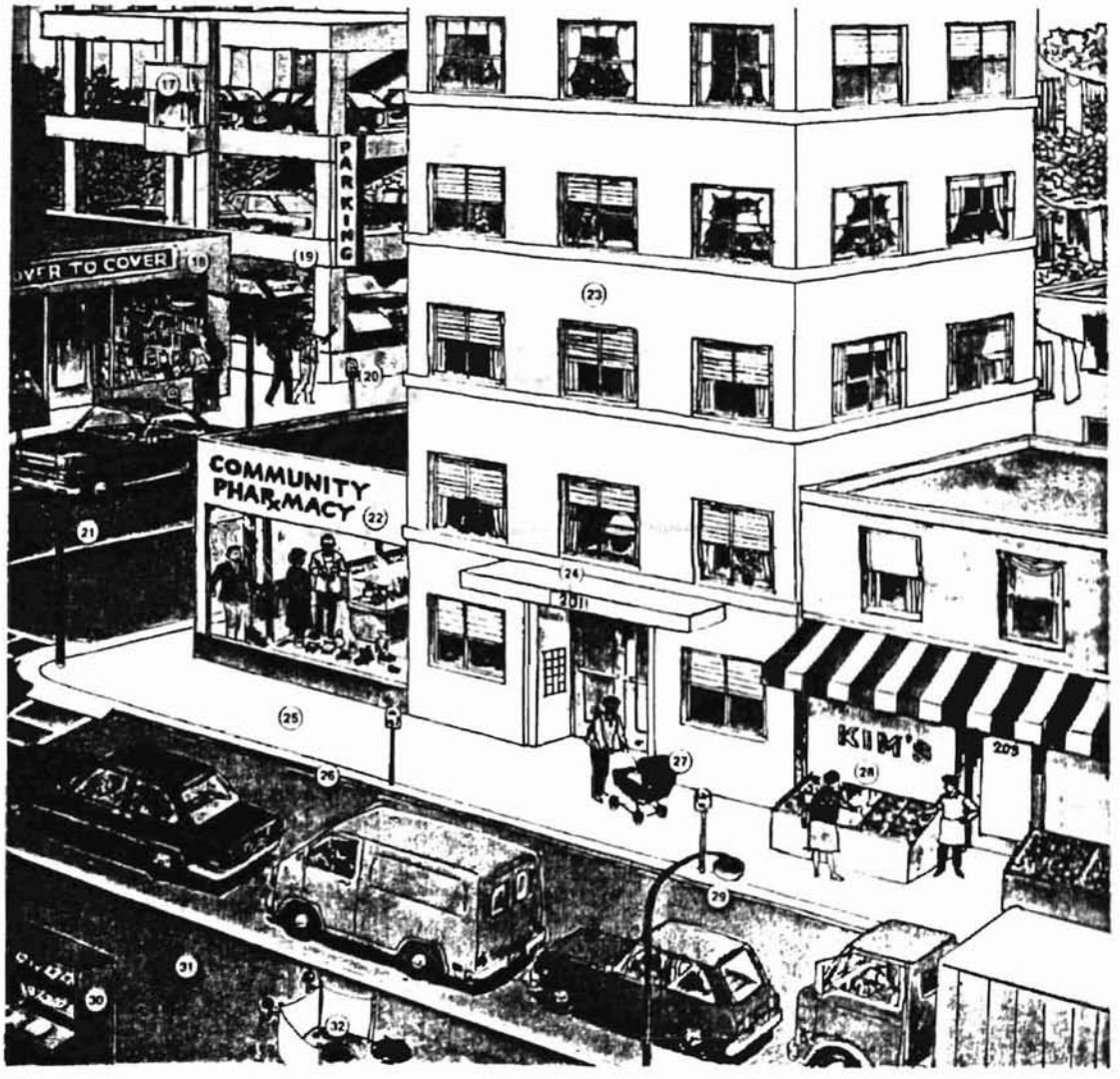
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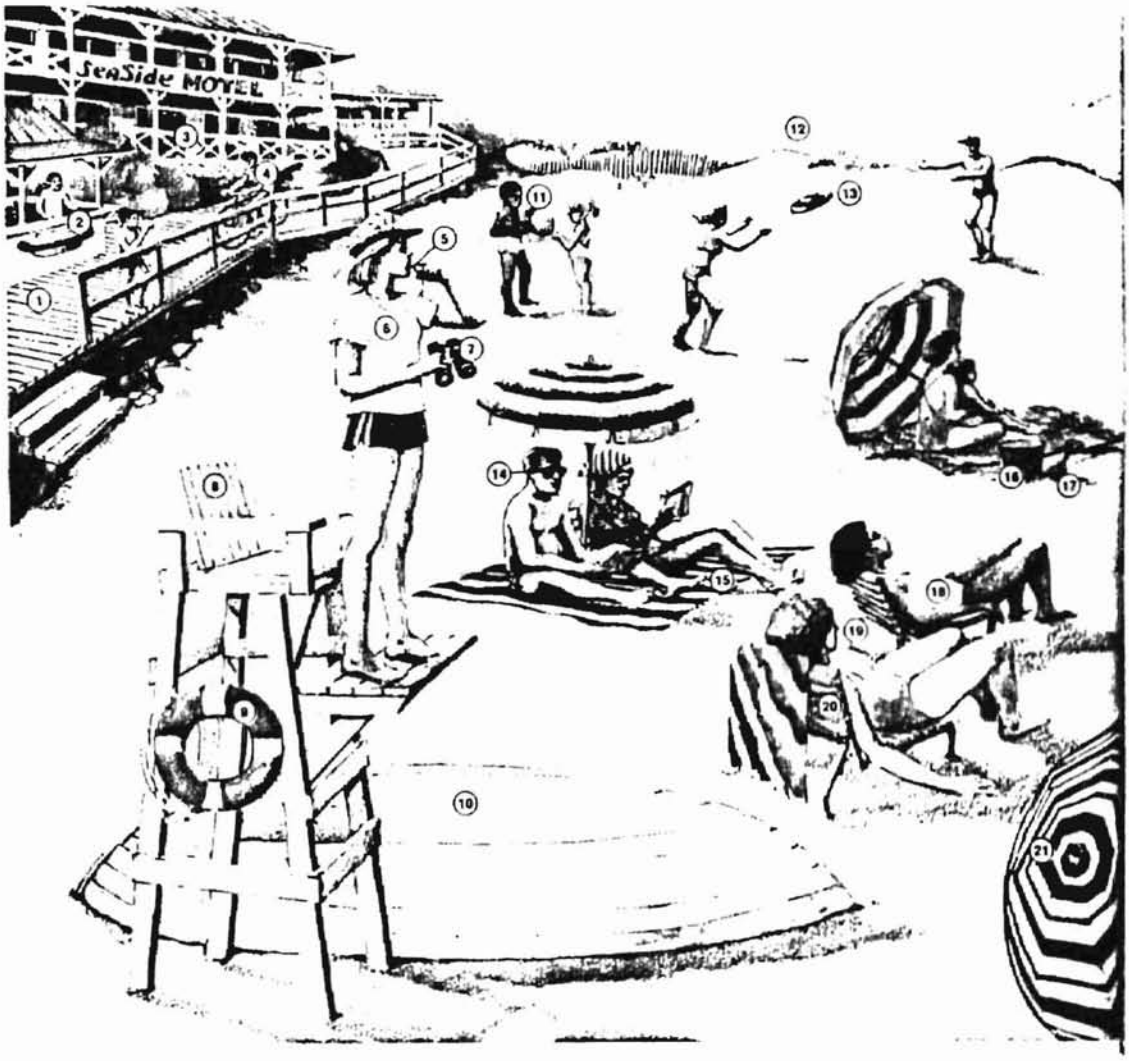
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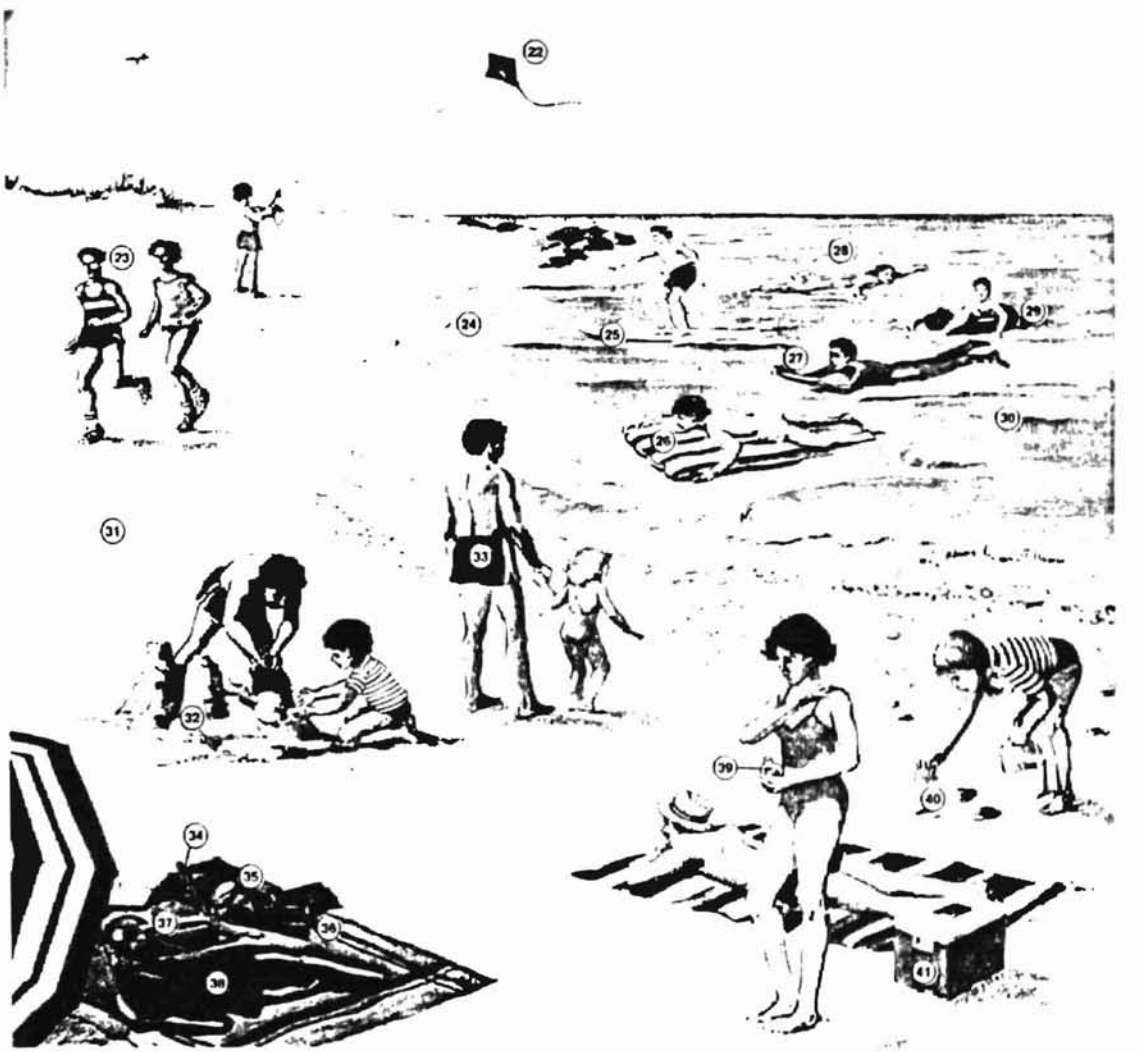
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APPENDIX D

TASK WORD LISTS

Reading Task - English Word List

The following words are found in the three English passages given to the subjects to read.

Word initial	Syllabic initial (middle-position)	Clusters (initial or middle position)
railroad	railroad	train(s)
reluctant	classroom	through
reply (ied)	surrounded	precious
rather	around	from
ran		grow(ing)
remembered		surprised
really		properly
road		street
roots		gradually
read		probably
rosy-checked		trees
run(ning)		dreaming
reached		shrubbery
right(-handed)		grounds
raced		dress
red		abruptly
		great
		agreed
		concrete

Description Task - English Word List

The following "r" words were spontaneously produced by the subjects when prompted with the pictures. Please note that not one subject used all of the words.

Word Initial
room
rest
restaurant
ready
repair
really
relaxing
writing
real
reading
rescue
red
raft
rim
rich
ruler
recliner
related
right
run(ning)
riding
ring
radio

Syllable initial (middle-position)
classroom
already
arranging
around
restaurant
x-ray

Clusters
grand
try(ing)
dry(ing)
thread
dress
bread
draw(ing)(er)
probably
brought
front
three
street
fruit
drink(ing)
broke(n)
control
children
grow
grocery
triangle
through
from
concentrate
traffic
frizbee
cross
electronic
reservation
unbrella
pregnancy
pretzal
travelling
trash
brings
pretty
prescription
apron

drapes
trees
preparing
screaming
prime
bright
drugs
trucks
crash
brochure
strooler
break
frame
gray
train
brown
trousers
green
group
driving
providing
extra
structure
brandy
breathe
processing
problems

Reading Task - Thai Word List

Each of the following words can be found in the Thai text. They have been transcribed from the original Thai text into IPA format by the researcher.

Word initial	Syllabic initial (middle-position)	Clusters
rowtfaj	(rowŋ)rijɛn	trowat-tuwa
rowŋrijɛn	(hɔŋ)rijɛn	trowŋ
rɨ	a?rowm	kɔnkrijt
rɨej	bowrij?	trij
rɔk	dajrab	bra?
rɔ	kraŋrɛk	gra?
rɔŋ	rarəŋ	krejŋkrum
rɔb	a?raj	ruwbraŋ
rijb		kruw
rijɛn		kraŋrɛk
rab		pijkrɔ?
rarəŋ		prɔ?
rak		kraj
ran		
rejow		
rej		
ruwə		
ruw		
ruwbraŋ		
ruwaŋ		
raw		
rəm		
rɛk		

Description Task - Thai Word List

Each of the following transcribed words were spontaeously produced by the subjects when prompted by the pictures. Please note that not one subject used all of the words.

Word initial	Syllable initial (middle-position	Clusters
ruwpʔ	tamɾuwat	krɔbkruwa
ruw	sijrɔks	kruw
ruwan	sowmrowt	truwat
rɔn	rowŋ-rɛm	kruwa
rowt-	-rijɛn	majprowm
rowŋ-	nakrijɛn	graʔbrowŋ
rijɛn	bɔrijsat	kraj
ran	buwrijʔ	prajsənij
rɛk	aʔraj	graʔbaw
rɨa	tawraj	braʔman
rɨ	towrasap	praʔwa
	narak	krab
	faraŋ	krɨəŋ
	saharat	prəsadʒijgayown
	ejksrej	
	tuwrejt	

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VITA

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Candidate for the Degree of Master of Arts

Thesis: THE INTERLANGUAGE OF THAI LEARNERS OF ENGLISH: A TWO-WAY STREET?

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OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 09-05-95 **IRB#:** AS-96-012

Proposal Title: THE INTERLANGUAGE OF THAI LEARNERS OF ENGLISH: A TWO-WAY STREET

Principal Investigator(s): Carol Lynn Moder, Ross Fenske

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

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ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature: _____ Date: September 20, 1995

Chair of Institutional Review Board