

AN ANALYSIS OF THE CONVERSATIONAL TURN-
TAKING OF MANDARIN SPEAKERS OF
ENGLISH AND AN APPLICATION
OF THE RESULTS TO
THE CLASSROOM

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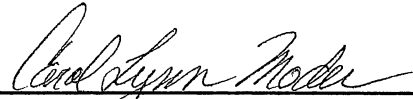
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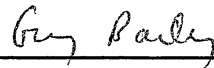
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CHAPTER I

INTRODUCTION

One reason people study English as a second or foreign language is to make communication with native speakers (NS) of English possible. If people living in their own countries meet native speakers of English or if, for whatever reason, people move to any English speaking country, all parties must be able to speak the same language in order to communicate effectively. If the goal is for the non native speaker (NNS) to communicate effectively with NSs, then the NNS must understand not only the words and grammar of English, but also the elements associated with communication.

An important part of communicating in English, as well in any language, is the turn-taking behaviors: How does a person get a speaking turn? How do people demonstrate that they are understanding and following the discourse? How does the person use gestures and eye contact to signal these things? These elements of turn-taking can be very culture specific. In some cultures, for example the Apache culture (Denny, 1985), conversational turn-taking appears to be non-existent; conversation appears to be sequenced like a monologue. On the other hand, in the culture of the Warm Springs Indians (Denny, 1985), turn-taking is very orderly with little or no overlap. And in mainstream white United

States culture, overlap in casual conversation is much more frequent than it would be in the Warm Springs Indian culture, for example. Additionally, turn-taking can vary contextually. In the United States, overlap is much more common and acceptable in informal conversation than in more formal spoken discourse.

Because turn-taking varies across cultures, and even within the same culture in different contexts and ethnic groups (Tannen, 1981, cited in Denny, 1985), NNSs of English could be confused when they encounter conversational turn-taking that differs from that of their culture. Therefore, it is important for both English as a second (ESL) and foreign (EFL) language teachers and ESL/EFL students to understand the turn-taking behaviors of NSs of English. For the teachers, the knowledge is essential in order to train their students to participate in conversation in a manner that is inoffensive to the NS. For the students, the knowledge and fluency are necessary to participate effectively in conversation with NSs without being offensive. If a NNS comes from a culture, where, for example, overlapping speech is common and accepted, the NNS may be perceived by the NS to be interruptive and even rude. If, on the other hand, NNSs come from a culture like of the Apache culture, NSs of English may perceive them to be unassertative or unsocial because they do not take speaking turns like the NSs think they should.

These problems have not been researched in detail in the field of discourse analysis. That is, a great amount of research on the conversational turn-taking of NSs exists; but research on the turn-taking of NNSs of English is practically non-existent. Nor is there a comparison of conversational turn-taking of NS and NNS. The purpose of this study is to begin filling this gap in discourse analysis research.

The study begins in Chapter Two with a review of the literature and previous research on turn-taking of NSs and of NNSs. Chapter Three explains the pilot study examining the turn-taking of four NSs of Mandarin conversing in English and the major study which examines the turn-taking of fifteen Mandarin speakers involved in casual conversation in groups of two to four people. For the pilot study, criteria taken from the literature were used to analyze the turn-taking. For the major study, these criteria were developed to include more specific turn-taking behaviors. The subjects' turn-taking was analyzed using the criteria. Also, the subjects reported in a questionnaire their interaction with NSs. The study examines the relationships between specific turn-taking behaviors (use of gaze, gesture, backchanneling, successful and unsuccessful turn attempts, interruption--based on the criteria) and three variables: dictation test scores, length of stay in the United States, and amount of interaction with NSs. Statistical analyses were applied to determine these relationships between turn-taking behaviors and the three variables mentioned.

Chapter Four discusses the results obtained. No significant relationship was found between turn-taking and the dictation scores. A significant relationship was found between length of stay and the number of successful and unsuccessful turns taken. Interaction proved to relate most significantly to turn-taking behaviors of Mandarin speakers.

Chapter Five discusses further research needed and applications of the results to ESL or EFL language classrooms.

CHAPTER II

REVIEW OF LITERATURE

Turn-taking in conversation is regulated by who the speaker and listeners are at any given moment in the discourse. During the moments when speech occurs, the individual uttering the speech, the speaker, is said to "have the speaking turn". Frequently, what one speaker says stimulates and is the focal point for the following discourse. This is referred to as "having the floor" (Yngve, 1970, p. 575).

According to Yngve, several speakers can talk simultaneously or consecutively, each speaker having a turn to talk, while only one of these speakers has the floor. That is, the several speakers each have their own speaking turn but are responding to what the main speaker, who has the floor, is saying. Therefore, in the broader discourse analysis of the conversation, one speaker has the floor; the topic of conversation revolves around this speaker. However, several people may talk, and therefore have speaking turns, while one speaker has the floor. All speakers in this context have turns, but only the speaker around whom the interaction revolves has the floor.

To clearly define who the speaker is in any conversation, Duncan's (1972) definition will be used: "A

speaker is a participant in a conversation who claims the speaking turn at any given moment" (p. 286) and whose right to speak is not disputed by any participants in the conversation. That is, whoever is speaking at a specified point in time is designated as the speaker, but this individual may not necessarily have the floor during his turn. And any individual "who does not claim the speaking turn at any given moment" is the listener or the auditor (Kendon's 1967 definition; Duncan's words 1972, p. 286). These definitions of claiming or not claiming the speaking turn are essential to the turn-taking system.

If two people are simultaneously attempting to take the turn, and they speak simultaneously, Duncan (1972) claims that "the turn-taking mechanism . . . [has] broken down" (p. 286) until one of the participants stops talking. If simultaneous turns occur, then for the duration of the simultaneous turns, there are two speakers. When one person stops talking to give the other speaker the floor, the person who relinquishes the floor becomes a listener.

In addition to defining speaker and listener, it is important to define the speaking turn. This occurs when the speaker talks and finishes speaking and eventually allows an opportunity for another participant to take the turn. According to Yngve (1970), in most situations, these turn exchanges occur smoothly and without the speakers and listeners having to think about when it is appropriate to take a turn. Yngve also purports that any native speaker

(NS) intrinsically knows when it is and is not appropriate to take the speaking turn.

Yngve (1970) proposed some ideas regarding conventions of turn-taking. His claims are based on a videotaped casual conversation between two subjects--a male and a female. The subjects met for the first time at the time of the experiment and had been matched "in conversational ability so as to produce a dialog with plenty of give and take. Candidates who thought they would be self-conscious in front of the camera were rejected" (p. 573).

Yngve (1970) states that although all native speakers intrinsically know when to take a speaking turn, occasionally "mistakes occur and each [participant in the conversation] appears to assume he has the turn, resulting in their . . . speaking at once" (Yngve, p. 574). Thus, the turn system is not perfect and the participants can misinterpret the signals or they can simply not follow the so-called rules of the turn-taking system. Yngve further observed from his data that when the NS saw or heard a turn signal (which Yngve does not define), he reacted immediately by either giving or taking the turn, whichever was appropriate.

The turn signal and the broader turn-taking system are aspects that Duncan (1972) studied extensively. In order to examine the turn system, Duncan took detailed transcriptions of both "speech and body motion" (1972, p. 284) which occurred "during the first 19 minutes of two [videotaped] dyadic interviews" (1972, p. 284). One interview between a

future client was "held at the Counseling and Psychotherapy Research Center at the University of Chicago" (1972, p. 284). The future client was interviewing for counseling; therefore, the situation was natural for both subjects. The second interview occurred between the same therapist and another male therapist. The two therapists were friends and casually discussed a mutual client, which was also a natural situation for both subjects. Based on the data from these two interviews, Duncan proposed a turn-taking system which is built on signals that speakers and listeners give.

In this signalling system, "a speaking-turn unit -- that is, an exchange of the speaking turn" (Duncan & Fiske, 1985, p. 44) consists of three parts: First of all, the speaker stops gesturing¹ and simultaneously gives some kind of turn signal like resuming eye contact with the listener. Secondly, the listener signals that she is taking the turn; this signal could be any number of things such as the use of gesture or resuming eye contact with the person who is now designated the listener. By signalling, the listener takes the turn and is now the speaker. And lastly, the first speaker gives the turn to the new speaker by not talking and by portraying listener signals such as looking at the speaker and nodding in understanding.

¹Gesturing is normally a signal that the speaker should not be interrupted; therefore, cessation of gesturing indicates that the speaker is finished and someone else may take the turn.

Duncan (1972, 1973, 1974) also claims that, because the speaker is the one who must cease talking in order for another participant to become the speaker, the speaker is responsible for the flow of conversation. Therefore, if there is silence or if the speaker seems to be ending his turn but actually continues to speak (resulting in two people talking simultaneously) the speaker is at fault for not properly maintaining the flow of conversation. Duncan also details speaker and listener signals as well as signals to take and give turns, all of which will be discussed in detail later in this chapter.

In contrast to Duncan, whose turn system is based on signals, Sacks et al. (1974) developed a turn-taking model which is based on the sequencing of elements in verbal discourse. Their analysis is based on their research of six years, "using tape recordings of natural conversation" (p. 698). Sacks et al. wanted to develop a turn-taking system that is "context-free and capable of extraordinary context-sensitivity" (p. 699). According to Sacks et al., these two characteristics are essential to a turn-taking system because turn-taking occurs in conversations, and conversations always occur in a context in which specific individuals are involved. In addition, because people manipulate conversation to achieve their individual goals for the discourse, turn-taking is context-sensitive. Thus, the model must be able to accommodate any situation involving any type of person. Sacks et al. hypothesize that their turn-taking

system is applicable to all social contexts and most cultures; they state, however, that this must be empirically tested before this can be stated as fact.

According to Sacks et al., in order for a turn-taking system, and thus the structure of any conversation, to be sensitive to the particular context in which the conversation occurs, and to work in real conversations, the system must accommodate the following characteristics of conversation:

- (1) Speaker-change recurs, or at least occurs . . . (2)
- Overwhelmingly, one party talks at a time . . . (3)
- Occurrences of more than one speaker at a time are common, but brief . . . (4) Transitions (from one turn to a next) with no gap and no overlap are common. . . .
- (5) Turn order is not fixed, but varies . . . (6) Turn size is not fixed, but varies . . . (7) Length of conversation is not specified in advance . . . (8) What parties say is not specified in advance . . . (9)
- Relative distribution of turns is not specified in advance . . . (10) Number of parties can vary . . . (11)
- Talk can be continuous or discontinuous . . . (12) Turn-allocation techniques are obviously used. A current speaker may select a next speaker . . . or parties may self-select in starting to talk . . . (13) Various 'turn-constructional units' are employed; e.g., turns can be projectedly 'one word long', or they can be sentential in length . . . (14) Repair mechanisms exist for dealing with turn-taking errors and violations;

e.g., if two parties find themselves talking at the same time, one of them will stop prematurely, thus repairing the trouble . . .(pp. 700-701).

Thus, Sacks et al.'s approach has some similarities with Duncan's approach, such as expected conventions in turn-taking procedures. Other elements, such as the facts that in conversation the number of people and length of turns is not fixed, I assume to be inherent in Duncan's model. One difference between Duncan and Sacks et al.'s models, however, is Duncan's idea of speaker overlap violating the turn system. Sacks et al. claim that "in contrast to [Duncan's] model, gaps in talk and simultaneous speech are . . . expected, regular features of conversation, not breakdowns in the turn-taking system" (Wiemann, 1985, p. 91). This claim of Sacks et al.'s is more similar to Yngve's idea that overlap may simply be a misreading of the signals.

Another difference between Sacks et al. and Duncan's models is that according to Sacks et al., all participants are responsible for the flow of conversation whereas according to Duncan (1972, 1973, 1974; Duncan & Fiske, 1985), only the speaker is responsible for the flow of conversation (discussed in Wiemann, 1985). Although Duncan & Fiske's model offers some interesting and specific cues for turn-taking and turn giving, Sacks et al.'s model seems to be more flexible and a more accurate reflection of what conversation is actually like.

Another model of turn-taking was developed by Wilson et. al (cited in Wiemann, 1985). This model is a combination of the other two models. Like Yngve, Duncan, and Sacks et al., Wilson claims that "turns are managed by what people do during the course of the conversation" (cited in Wiemann, 1985, p. 95). This implies the use of turn-taking signals previously discussed. Wilson's model, however, does not discuss any original cues for taking or giving turns.

Wilson's turn-taking model is unique, however, in that it places great importance on looking objectively at the context, rather than having a context free model or a model consisting of turn-taking signals. According to Wilson, context consists of three elements: the actual physical environment in which the conversation occurs, the relationship between the participants, and the reasons the conversation is taking place. Duncan & Fiske and Sacks et al. do not consider such factors as the participants' relationship or the physical environment in their models of turn-taking. Rather, they consider only the movements, gestures, and words used in turn-taking. Social factors are important in conversations, and thus in turn-taking, because the relationship(s) between participants, the reasons for the conversation, the physical environment and the "perceived status difference and intimacy level" (Wiemann, 1985, p. 96) all affect the conversation: its length, the topics, the participants' interaction with each other. Thus, Wilson's

model is broader in that it incorporates important social factors.

An additional model for turn-taking was developed by Allwright (1980). Allwright's model, in contrast to the other models already discussed, consists of broad categories of types of turns. In addition, Allwright's model is based on the classroom interaction of ESL students rather than of native speakers. Allwright's analysis of turn-taking was performed on an audiotaping of "two parallel UCLA low-level ESL classes . . . for two of their twenty hours of instruction each week for ten weeks" (p. 169). Following are Allwright's categories for turn-taking:

1. *Turn getting*

1. *Accept* Respond to a personal solicit.
2. *Steal* Respond to a personal solicit made to another.
3. *Take* Respond to a general solicit (e.g., a question addressed to the whole class [or conversational group]).
4. *Take* Take an unsolicited turn, when a turn is available--'discourse maintenance.' [Note that numbers 3 and 4 are two separate and different ways to take a turn.]
5. *Make* Make an unsolicited turn, during the current speaker's turn, without

intent to gain the floor . . .

[backchannel cues].

6. *Make* Start a turn, during that of the current speaker, with intent to gain the floor (i.e., interrupt, make a takeover bid).
7. *Make* Take a wholly private turn, at any point in the discourse (e.g., a private rehearsal, for pronunciation practice, of a word spoken by the teacher). [Note that numbers 5, 6, and 7 are three separate and different ways to take a turn.]
8. *Miss* Fail to respond to a personal solicit, within whatever time is allowed by the interlocutor(s).

II. *Turn giving*

Symbol

- Fade out and/or give way to an interruption.
Make a turn available without making either a personal or a general solicit (e.g., by simply concluding one's utterance with the appropriate terminal intonation markers).
- P Make a personal solicit (i.e., nominate the next speaker).

G Make a general solicit

(Allwright, 1980, p. 168-169).

Allwright admits that these categories are very general and difficult to operationalize and measure. He claims, however, that these categories more effectively "capture things that are interesting" (p. 169) in conversation; more specific categories are easier to measure but may not capture interesting or important details.

In both classroom and casual conversational interaction, turn-taking behaviors may be both verbal and nonverbal. For this reason, turn-taking models must account for both verbal and nonverbal signals. Allwright claims that "the categories . . . are equally applicable to verbal and to nonverbal behavior" (p. 169). For example, the speaker can give a turn to the listener with verbal signals like lowering the voice at the end of the utterance (Duncan, 1972; Orestrom, 1982). The speaker can also use nonverbal signals to give a turn, for example, resuming eye contact with the listener (Kendon, 1967; Duncan, 1972) or nodding his/her head in the direction of the listener. Thus, although Allwright designed these categories for classroom interaction, they can also be used to interpret conversational turn-taking.

A more abstract claim regarding turns can be found in Orestrom's (1982) discussion of turn-taking. Orestrom studied "four dyadic . . . conversations from the London-Lund Corpus of Spoken English [which] has been recorded, transcribed, and supplied with a rich notation of prosodic

and paralinguistic features at University College London" (p. 270). (A description of the entire corpus is available in Svartvik & Quirk, 1983 and Crystal, 1969). The conversations which Orestrom analyzed are "informal talks between colleagues, friends, and between husband and wife, all of them British academics" (p. 270).

According to Orestrom, the listener must be able to perceive when the speaker is finished talking and is ready and willing to relinquish his turn. "The listener is able to identify completed and non-completed stretches in the speaker's ongoing talk and quickly spot . . . completed sequences [of speech]" (Orestrom 1982, p. 269). When the listener comprehends the message that the speaker is conveying, the listener then feels that the speaker's particular sequence of speech is completed. Only at this time can the listener feel free to take the speaking turn. Also at this time, the speaker indicates to the listener, using verbal and nonverbal cues, that she has completed the stretch of utterances and that her turn is over. Orestrom (1982) states that "it is the combination of these two circumstances, the listener's interpretation enabling anticipation of the intended message, and the speaker's signals, that makes it possible [for the listener] to enter [the conversation] with precision and [to] recurrently execute well-timed turn-takings" (p. 270). The idea of the listener interpreting the speaker's signals is similar to Duncan's claims about turn-taking--that signals are essential

to the turn-taking process. However, Orestrom's claim that before the listener can take the turn, she must comprehend what the speaker has said is unique to Orestrom's discussion and is a valid point. It would be difficult for the listener to interact effectively in the conversation if she does not understand what has been said. However, it is possible for the listener to take a turn and to request clarification or to take a turn and say something unrelated in topic to the previous discourse. In either case, the turn could be taken acceptably but without furthering the discourse.

In contrast to all other turn-taking discussions and models, Jaffe and Feldstein (1970) define conversation as "a sequence of sounds and silences generated by . . . interacting speakers" (p. 19). Jaffe and Feldstein's claims are based on three experiments run on a total of 138 subjects, both male and female, between the ages of 16 and 37. The tasks required of the subjects consisted of interviews, questionnaires, and dialogues of various lengths. In analyzing the results of this study, Jaffe and Feldstein focus primarily on whether sound occurs at any given moment--the pure length of time between the end of one speaker's utterance (sound) and the beginning of the next speaker's utterance (sound following a brief silence) rather than the signals that occur at the turn exchange, the comprehension, or the context. In contrast to Yngve (1970), Jaffe and Feldstein claim that a person gains control of the floor by simply uttering a sound and that as soon as the current

speaker is silent and another participant utters a sound, the first speaker loses control of the floor. Unlike Yngve, Sacks et al., and Edelsky (1981), Jaffe and Feldstein do not allow for interaction and turn exchange among speakers while one person has the floor. Rather than really classifying turn exchange as it occurs, Jaffe and Feldstein are more interested in classifying dialogue into categories that a computer could analyze; the categories are solely defined by when one participant is uttering sound, when the same participant is silent and another participant is uttering sound or is silent.

Taking the Turn

According to Jaffe and Feldstein (1970), turns (which Jaffe and Feldstein call speaker-switches) occur after a significant pause. They state that "in most dialogues, a switch occurs after a brief intervening period of mutual silence. A direct transition (i.e., without perceptible pause) from the vocalization of one speaker to that of the other occurs in only about 25% of the exchanges as we measure them. This suggests that an interval of silence is required to transform a listener into a speaker" (p. 10). Jaffe and Feldstein further claim that turn exchange occurs nine times more frequently after an utterance followed by silence than after an utterance not followed by silence.

Likewise, noticeable silence following the completion of a clause, and indicating when a listener can take the turn

and become the speaker is discussed by other researchers (Duncan, 1972; Duncan & Fiske, 1985; Sacks, et al., 1974; Wilson cited in Wiemann, 1985). This concept contradicts Yngve's (1970) claim that turns are often taken without pause between the words of the speakers. Yngve (1970) states that "the turn signal [is not] in the nature of a pause or period of silence, for many pauses, even fairly long ones, come with no turn change, and sometimes the turn changes with no noticeable period of silence" (p. 573). In addition, Orestrom (1982) found that "in the majority of speaker-shifts [59%] there was no pause involved" (p. 272) although 41% of the turns in his data were followed with a pause. This percentage is considerably smaller than Jaffe & Feldstein's 75%. However, for the most part, these researchers do not state the length of pause they are talking about. Without knowing the length of pause being considered, it is difficult to judge which researchers are most accurate in their analyses. It could be that most of the researchers are actually referring to the same length of pause, some considering it to be a significant length for a turn exchange, and some considering it to be insignificant.

In addition to a pause being an indicator of a place for the listener to take the turn, speaker-state signals, at least one of which is displayed at the moment "at which a participant shifts from the auditor to the speaker state" (p. 239) are proposed by Duncan and Niederehe (1974). These signals indicating that the listener is going to take the

turn and thus enter the state of being the speaker are as follows:

1. Shift of Gaze away from Current Speaker:

The listener, who is planning to take the speaking turn, breaks eye contact with the current speaker by moving his head so that he does not directly face the speaker; by doing this, the listener signals that he is going to take the turn (Duncan & Niederehe, 1974). Kendon (1967) first made this same claim--that when taking a turn, the new speaker looks away from the previous speaker. Kendon claims this may be because the speaker is trying to prevent any reaction, such as take-over of the turn, from the individual who was the previous speaker and is now listener. Also, this withdrawal of eye contact, either before or as he begins talking, is a cue to the current listener that the new speaker intends to hold the floor (1967).

2. Noticeable Intake of Breath

"A sharp, audible intake of breath" (Duncan & Niederehe, 1974, p. 240) indicates that the listener is going to take the next speaking turn. Duncan and Niederehe state that "audible and/or visible inhalations do not appear to be a physiological necessity for beginning a speaking turn" (p. 240). For this reason, when the listener audibly draws breath, it is a clear that she is taking a turn. This idea is supported Yngve's (1970) earlier

finding that "intake of breath" (p. 575) is an indication that the listener wants to say something.

3. Use of Gesticulation

When the listener begins to gesticulate, his turn is beginning. According to all of Duncan's work (1972, 1973; Duncan & Niederehe, 1974; Duncan & Fiske, 1985), display of gesticulation by the speaker is a signal that the speaker had the floor and should not be interrupted or stopped.

4. Overloudness

The listener is taking the turn when at least one syllable in a backchannel cue or in a turn beginning has "at least one degree of overloudness" (Duncan & Niederehe, 1974, p. 240). However, Duncan & Niederehe do not explain what they mean by overloudness.

5. Head Tilt

In addition to these cues, Yngve (1970) claims that "a slight tilting of the head" (p. 575) can be a speaker-state signal, thereby signalling that he wants to take the speaking turn.

When the listener displays any one of these cues, according to Duncan & Niederehe (1974), the current speaker should be aware that the current listener wants to change from the state of listener to that of speaker by taking the turn. When the listener begins to take the turn, thus becoming the speaker, the initial speaker should then give the turn to the previous auditor, now the speaker. From this

point, the new speaker has the turn until he chooses to relinquish it and gives the appropriate cues, thus ending his turn (Duncan & Fiske, 1985).

According to Duncan and Niederehe's analysis of Duncan's 1972 data (discussed on page 5 of this chapter), a speaker-state signal is "displayed at 72% of the turn beginnings [examined], and at 9% of the auditor backchannels" (p. 241). Thus, the four speaker state signals appear to be vital to a listener being able to signal to the speaker that he is going to take the turn.

Ending and Giving the Turn

These appropriate cues to end a turn are what Duncan (1972) calls "turn yielding" signals (p. 286). Duncan states that "the auditor may take his speaking turn when the speaker gives a turn-yielding signal" (p. 286). According to Duncan, when this turn yielding rule works effectively, "the speaker will immediately yield his turn" (p. 286) when he has given a yielding signal and when the auditor demonstrates a desire to take the turn by responding to the yielding signal. Duncan classifies turn yielding signals into eleven types:

"intonation . . . paralanguage [drawl] . . . body motion . . . sociocentric sequences . . . paralanguage [pitch/loudness] . . . syntax" (1972, p. 287), eye contact (Duncan & Fiske, 1985), "audible inhalation . . . an unfilled pause . . . [and] a false start" (Duncan & Fiske, 1977, pp. 169-172).

What these signals mean and how they are used need to be clarified:

1. **Intonation:**

In American English, talk normally consists of a series of phonemic clauses ending with intermediate intonation. However, a turn yielding cue is signalled when the intonation of a phonemic clause at the end of a turn rises or falls and is slightly lengthened (Duncan, 1972). Orestrom (1982) also found this: "prosodically completed" (defined as tone units) utterances occurred with 96% of the turns in his data.

2. **"Paralanguage:**

Drawl--Drawl on the final syllable or on the stressed syllable of a terminal clause" (Duncan, 1972, p. 287). In Duncan's definition, drawl means the syllable is lengthened.

3. **Body Motion:**

Any of these body movements performed by the speaker can be a turn yielding cue:

- a) A foot relaxes from being flexed and held perpendicular to the floor (Duncan, 1972).
- b) "The person who is bringing a long utterance to an end does so by assuming a characteristic head posture (which is different for individuals)" (Kendon, 1967, p. 33) or by "turning the head toward the hearer" (Duncan & Fiske, 1977, p. 172).
- c) Any hand gesticulating stops (Kendon, 1967; Duncan, 1972, 1973, 1974; Duncan & Fiske, 1985)

d) A tensed hand, regardless of position, relaxes (Duncan, 1972).

Duncan defines a hand gesture as "hand movements generally away from the body, which commonly accompany" and directly relate to what is being said (1972, p. 287). Therefore, movements such as scratching or nervous habits are not considered gesticulations because these movements have no relationship to the spoken words.

4. **Sociocentric Sequences:**

"The appearance of one of several stereotyped expressions, [for example, 'but uh', or 'something,' or 'you know'] typically following a substantive statement" (Duncan, 1972, p. 287). These "sociocentric sequences" (Bernstein, 1962; cited in Duncan, 1972) frequently follow other turn yielding cues and are often accompanied with a decrease in volume.

According to Peter Ball's (1975) research, a listener is far less likely to take a turn if the current speaker is uttering sociocentric sequences or "filled pauses" (p. 423). Furthermore, Duncan claims that when the listener begins to take the turn during the completion of the current speaker's sociocentric sequence, simultaneous turns do not occur. Rather, this is an instance of simultaneous talk.

5. **Paralanguage:**

Pitch/Loudness: Another cue occurs when a sociocentric sequence is combined with a drop in pitch or volume (Duncan, 1972) during or near the end of a clause. Orestrom (1982) also found this in his research. He discovered that "almost every second instance of turn-taking was preceded by a step-down in loudness as regards the last few words of the speaker's turn" (p. 272). According to Orestrom's report, 45% of the turns in his data follow this loudness reduction pattern.

6. **Syntax:**

A turn yielding cue occurs when the speaker grammatically completes a clause, Duncan's definition of grammatical here being the presence of a subject and a predicate (1972, 1973). Orestrom (1982) found that "syntactically completed" utterances occurred 95% of the time before a turn occurred in his data (p. 271). Opliger (1980) found that grammatical completion correlates significantly with the occurrence of other turn yielding cues (cited in Wilson et al. (1984)). Other researchers (Lee, 1981; Duncan & Fiske, 1985) have also noted that turns occur at grammatical boundaries. In contrast to this, Yngve (1970) says that "sometimes the turn does change in the middle of a sentence" (p. 573), which according to Duncan, is not a grammatically complete utterance.

7. **Eye Contact:**

Somewhere near the end of the turn, the speaker resumes eye contact with the listener until she is finished speaking (Duncan & Fiske, 1985; Kendon, 1967). Also, "by looking steadily at the auditor before he actually finishes speaking", the speaker signals to the listener that he is ending his turn (Kendon, 1967, p. 33) and can also designate who the next speaker should be by looking at an individual at the turn end (Argyle & Cook, 1976). In addition, Argyle & Cook (1976) state that "long glances are used by speaker as full-stop signals, and for other grammatical breaks" (p. 121) which may or may not signal the end of a turn.

8. **Audible inhalation:**

The current speaker takes an audible breath (Duncan & Fiske, 1977). In contrast, Yngve (1970) has indicated audible inhalation to be a signal that the listener intends to interrupt.

9. **Unfilled pause:**

The speaker pauses and is silent. That is, the speaker does not fill the pause with sociocentric sequences, which could indicate, instead, that the speaker was trying to maintain his turn.

10. **A false start:**

The speaker begins an utterance but does not complete it, thus indicating that he has nothing further to say and relinquishing the turn to someone else.

Thus, if the speaker displays one or a combination of several of these cues, the auditor will be aware that the speaker is preparing to stop talking. At this point, however, the speaker can stop the auditor from taking the turn by gesturing with one or both hands, what Duncan calls the "attempt suppressing signal" (1972, p. 287), the "claim-suppressing signal" (1973, p. 38) and "the gesticulation signal" (1974). If this signal is displayed, regardless of any yielding cues the speaker has displayed, the speaker will maintain the turn. Note that Rosenfeld (1978) argues against the strength of this cue: "There are wide individual differences in the form and quantity of gesticulation in the conversational process, indicating that it may not have a strong inherent relationship to conversational control" (p. 320). When the attempt suppressing signal is displayed, the listener rarely attempts to take the turn. However, if any simultaneous turns occur in this situation, it is the speaker's fault for not relinquishing her turn when she had so signalled (Duncan, 1972, 1973, 1974).

In addition, if the listener does not want the turn, he is not required to take it when the speaker exhibits the cues that indicate she is finished with her turn. If the listener does not want the turn, the speaker still has it and must make the next move (Duncan & Fiske, 1985).

To test Duncan's model of turn-taking, Beattie (1983) videorecorded "six natural dyadic interactions involving 12 different speakers" (p. 103). Five of the interactions were

"dyadic tutorials involving a tutor and an undergraduate student. The remaining sample involved two participants of a seminar" (p. 103) who were involved in a discussion with each other. In Beattie's corpus, 13.55% of the turn exchanges "occurred in the absence of any turn-yielding cues" (p. 103). Duncan observed no turn exchanges that occurred with no cues. Beattie found that, of Duncan's turn yielding cues, the completion of a syntactic clause was the most frequently occurring cue (in 61.3% of all exchanges) in his study. "A change in pitch level occurred in 95.03% of speaker-switches preceded by clause completion. . . . In contrast, . . . gesture termination [occurred] in only 8.70% of all smooth speaker-switches" (Beattie, 1983, p. 104). Another interesting difference between Beattie and Duncan's findings is that Beattie found three to be the maximum number of simultaneously used turn yielding cues; Duncan, however, found all six used simultaneously. Beattie concludes his test of Duncan's study with these remarks:

This study tended to lend support to the observations made by Duncan in 1972. The majority of smooth speaker-switches did involve one or more of the cues he [Duncan] identified. However, the results were not nearly so clear-cut as those of Duncan. He did not observe any smooth speaker-switches in the absence of one or more of these cues, but observed 12 speaker-switches involving simultaneous turn-claimings at those points.

In my follow-up study, however, I observed 29 smooth speaker-switches in the absence of turn-yielding cues [Duncan's] model has to be rejected because the linear correlation between number of cues and probability of a listener turn-taking attempt reported in Duncan (1972) was not replicated. The cues identified by Duncan are important, but important in that they operate in special cue combinations to define a possible turn transition point (compare the transition relevance places of Sacks et al.) (p. 105).

Beattie here is referring to Duncan's claim that turns are linear and, therefore, that overlap is a breakdown in the turn system; in addition, Duncan also claims that turn yielding cues are clear cut signals for appropriate times to take and give turns. However, Beattie may have observed more speaker switches in the absence of Duncan's cues because Beattie's discourse was between tutors and students which may contribute less overlap and more orderly turn exchanges.

In contrast to Duncan's system involving very specific cues which indicate an appropriate place for a change in speakers, Sacks et al. (1974) propose a set of rules which considers to whom the turn is given and which synchronizes the turn exchange "so as to minimize gap and overlap" (p. 704). The rules are as follows:

1. The following are true for any turn that occurs at the first possible point for a turn exchange, termed "transition-relevance place", in any utterance:

(a) If the current speaker designates who the next speaker should be, the person so indicated is required to take the speaking turn. The turn is then allocated to the new speaker, appointed by the previous speaker. This rule directly contrasts with Duncan's which says that it is the listener's choice as to whether she wants to take the new speaking turn. According to Sacks et al., it is not the listeners choice, but the current speaker's choice.

(b) If the current speaker does not designate who the next speaker should be, any participant may choose to be the next speaker. The person who speaks first gains the right to the floor and the turn.

(c) Additionally, if the current speaker does not designate who the next speaker should be, she may continue to talk, maintaining control of the floor.

2. If, at the next transition-relevance point of a turn, the current speaker does not designate the next speaker, or if someone does not self-select to speak, but the current speaker continues speaking, then the cycle of rules discussed above (rules 1a, 1b, 1c) begins again until either the current speaker gives up the turn and designates the next speaker, or someone self-selects to speak, thereby switching speakers.

These rules of Sacks et al. appear, initially, to be an adequate representation of turn exchanges. However, Sacks et al. do not adequately define "transition-relevance place", the concept upon which their entire system relies. This

problem is addressed by Beattie (1983) and reiterated by Wilson et al. (1984). According to Beattie, these transition-relevance points often occur at a "clausal boundary" (Beattie, 1983, p. 81) which corresponds with Duncan's turn yielding cue of a syntactically completed clause (1972) and with Sacks et al.'s definition of a "turn-constructural component" (p. 702). All of these characterizations, however, differ with that of Yngve, who says that turns do occur in the middle of utterances, which may or may not be a clausal boundary.

However, Beattie (1983) points out a weakness in Sacks et al.'s system--which clausal boundaries and transition-relevance points are acceptable turn switching points is not defined. In this aspect, Duncan's model is clearer because Duncan provides specific verbal and non-verbal cues that indicate when a turn exchange, and of course a transition relevance place, is appropriate.

Beattie points out another discrepancy between Sacks et al.'s system and Duncan's system--the role of overlap in a turn exchange. "The placement of turn-taking at transition relevance places allows for a minimal overlap, since these are points where a current speaker can or should exit" (Beattie, 1983, pp. 81-82). Beattie astutely observes that, according to Sacks et al.'s transition relevance theory, brief overlaps in conversation are acceptable; this contrasts with Duncan's theory that any type of overlap is "a breakdown in the [turn-taking] system" (Beattie, 1983, p. 82).

Backchanneling

Listeners use certain cues to signal to the speaker that they are listening and following the conversation (Yngve, 1970). Yngve was the first to term these backchannel cues. These cues can be such things as saying "mmhmm, oh really, yes, that's true", finishing the speaker's sentence, asking for clarification, briefly restating the speaker's statement, nodding or shaking one's head, eye contact in certain contexts, or smiling (Duncan, 1972, 1973, 1974; Duncan & Niederehe, 1974; Duncan & Fiske, 1985; Yngve, 1970; Kendon, 1967). Backchannel cues often occur simultaneously with the speaker's words but are not considered interruptive (Yngve, 1970; Duncan & Fiske, 1985; Duncan, 1972, 1973, 1974). In fact, the speaker would think the auditor is not listening if the speaker did not receive these backchannel cues. Duncan & Fiske (1985) further state that without acceptable and timely backchannel cues, the turn-taking system would not be functioning adequately.

To study backchannel cues, Dittman & Llewellyn (1968), audiotaped twenty subjects, all "college-student volunteers" (p. 80). The subjects talked with each other in pairs for a total of about four minutes, with each member of the pair speaking for about two minutes. The subjects were asked to talk about anything that interested them. Regarding turn endings, Dittman & Llewellyn coded three types of pitch at the ends of clauses: sustained pitch, rising, and falling.

According to the data, 20% of the pitch junctures "evoked . . . a vocalization [a backchannel cue], a head nod, or a combination of the two" (p. 80). Dittman & Llewellyn found, in addition, that the rising and falling pitches, which sound most terminal, evoked a response more frequently: rising evoked a response in 27% of the clause endings, and falling in 38%. Further, Dittman & Llewellyn found that 70% of the backchannel cues and head nods occurred when the listener wanted to say something or ask a question or when the speaker had somehow requested feedback from the listener.

Backchannel cues enable people "to synchronize their utterances" (Orestrom, 1982, p. 268) in conversation to enable the turn-taking system to function smoothly. Orestrom claims that backchannel cues are vital to the continuance of the conversation and to maintaining synchronized conversation. Orestrom's discussion of backchannel cues is not unique: Duncan & Fiske and Sacks et al. also consider backchannel cues to be important in the flow of conversation. However, Orestrom's notion of how backchannel cues synchronize conversations is unique and more developed than it is in the other models. Orestrom claims that:

"Without these listener reactions [backchannel cues] the speaker will sooner or later start wondering whether he is being listened to or not, whether the communicative contact has been discontinued. Such items are never picked up and commented on by the speaker but they greatly help to sustain the interaction (p. 269).

Backchannel cues used to sustain interaction are also discussed by Duncan (1972, 1973, 1974). He supplements Yngve's (1970) backchannel signals which consist of cues such as head nods, "'yes' and 'uh-huh'" (p. 568) with three additional backchannel cues: a) The listener completes the speaker's utterance. b) The listener briefly asks the speaker to clarify an idea. c) The listener restates the idea the speaker just made. If the listener displays any of these signals, it is not an attempt to take the turn nor does the speaker feel that her turn is being threatened by the listener's utterance. Rather, without these backchannel cues, the speaker will feel that the listener is not paying attention or is not understanding. Backchannel cues, however, are not given if the listener does not understand or is not familiar with what the speaker is talking about (Yngve, 1970).

Tannen (1983) also discusses these backchannel cues previously introduced by Duncan. Tannen, however, labels these backchannels as types of overlap. Tannen states, "Speakers differ with regard to when they expect overlap, how much they expect, and how they interpret and intend overlaps. . . . there are many speakers who regard overlap as a cooperative device in certain conversational settings" (p. 120). She describes three types of overlap used as cooperative devices in conversation. The first device is overlap used to complete or build onto the speaker's sentence. This is a restatement of Duncan's cue that the

listener completes the speaker's utterance. People who complete others' utterances are communicating to the speakers that they (the listeners) understand perfectly what the speakers are saying, so perfectly that they can complete the speakers' thoughts.

A second type of overlap, again to signal comprehension or to check for meaning verification in conversation, is to quickly repeat a few words the speaker has just uttered or to ask a quick question related to the utterance. This type of overlap is the same as Duncan's second cue: The listener briefly asks the speaker to clarify an idea. Either of these types of overlap signals to the speaker that the auditor is indeed listening and therefore functions as a backchannel cue without disrupting the flow of the discourse.

The third type of overlap proposed by Tannen (1983) also demonstrates that the listener is paying attention to the conversation. In this case, the auditor will repeat, in unison with another listener, something the speaker has just said. This is Duncan's idea that the listener restates the idea the speaker just made. This cue indicates that the listener is alert and willing to participate in the conversation regardless of whether the listener actually understands the topic under discussion. This third type of overlap is especially good for continuing and participating in the conversation. The listener must be enthusiastic about what the speaker is saying; repeating the speaker's utterance

demonstrates enthusiasm for what the speaker has said as well as an interest in maintaining the conversation.

In addition to these types of conversational and verbal backchannel cues, gaze can be a backchannel cue. According to Kendon (1967), any time the speaker wants to check the listener's comprehension, he can look at the listener. In this case, the glance could be a signal to the listener that he needs to give a backchannel cue or respond at that time (Kendon, 1967).

Kendon proposes that gaze can be two types of backchannel cues: the attention signal and the assenting signal. The attention signal occurs when the listener is merely indicating to the speaker that he is paying attention to the discourse. The listener exhibits this attention signal by gazing continuously at the speaker. The assenting signal also occurs when the listener backchannels, but rather than just demonstrating attention, the assenting signal is a cue to the speaker that the listener grants him "the points that he is making" (Kendon, 1967, p. 45), as in a discussion or in the development of an argument. In contrast to the attention, during the assenting signal, the listener breaks eye contact with the speaker.

Duncan and Niederehe (1974) clearly sum up the researchers' definitions and discussions of backchannelling: Whether they indicate understanding, or lack thereof, agreement or disagreement, auditor back channels seem to imply the auditor's continuing attentiveness to the

speaker's message. They appear to provide the auditor with a mechanism for participating actively in the conversation, thus facilitating the general coordination of action by both participants, within the structure of the conversation (p. 237).

Interruption and Overlap

"Interruption," according to Beattie (1983), ". . . [occurs] when speakers lose the floor before they intended to relinquish it, leaving their current utterance incomplete" (p. 110). The majority of researchers would agree that interruption results in an incomplete utterance. However, there is considerable variation in the conceptualization of an incomplete utterance. Is it grammatically complete? semantically complete? Is it complete if the main message is communicated even if the actual utterance is cut off? And is overlapping speech necessarily interruptive?

In order to examine how interruption occurs in natural conversation and how interruption fits into the overall flow of speech in conversation, Carole Edelsky (1981) examined situations which included several native speakers all contributing to answering the same question or developing the same topic. In these situations, "several people seemed to be either operating on the same wavelength or engaging in a free-for-all" (p. 383). Edelsky's data of free-for-alls includes several meetings of a committee made of "seven women . . . and four men" (p. 385), all colleagues, whose

relationships range from very casual co-worker type to close friends (p. 385). In these committee meetings, the atmosphere was very casual: refreshments were available, and they began casually with joking and story telling before getting down to business. Edelsky's data includes examples of both the casual talk that would occur near the beginnings of the meetings and discussions that were the purpose of the meetings.

In both "free for alls" and instances in which the participants are "on the same wave length", there are no clear cut turns and the speakers overlap with each other; this does not appear to offend any of the participants. In addition, they all seem to understand each other, are able to participate in and follow the flow of the conversation. She also claims that speaker-overlap is acceptable if neither party feels interrupted, if all parties can follow and understand the conversation, and that humans are capable of comprehending and attending to more than one thing at a time.

These observations made by Edelsky contradict Duncan & Fiske and Sacks et al.'s notions about turn-taking: that turns are taken in an orderly fashion with very few overlaps. According to Duncan (1972), simultaneous turns occur "when both participants claim the speaking turn at the same time" (p. 286). He differentiates between simultaneous turns and simultaneous talking because simultaneous talking can be backchanneling during which the auditor is not claiming a turn. If, however, the overlap is indeed an instance of

simultaneous turns, this is interruptive and results in the turn system temporarily not working correctly (Duncan & Fiske, 1985). Duncan & Fiske (1985) assert that simultaneous turns occur in one of two situations: 1. The listener tries to take the turn while the speaker is still gesticulating or before a turn signal has been given. 2. The speaker has displayed a turn-signal to which the listener has responded appropriately. However, the speaker does not give up his turn. In either of these two situations, the turn system has broken down, according to Duncan & Fiske.

Sacks et al.'s conception of overlap differs from Duncan's in that Duncan limits interruption to two simultaneous behaviors but Sacks et al. propose situations in which overlap occurs. As discussed previously, in Sacks et al.'s set of turn allocation rules, the current speaker can allow any participant to self-select to be the next speaker. In this situation, because the individual who speaks first wins the floor, if two or more participants begin speaking simultaneously trying to take the turn, overlap occurs. In addition, Sacks et al. state that turns must be taken at transition-relevance places; however, Sacks et al. do not clearly define what transition-relevance places are. If a listener intends to take the turn and begins talking at what she perceives to be a transition-relevance place, but the speaker is not finished talking and does not consider this place to be the end of his speaking turn, overlap will occur. Sacks et al. claim that if overlapping speech occurs in

either of these instances, it will be very brief, although interruptive, and the orderly one speaker at a time set of rules will shortly continue.

Supporting Duncan & Fiske and Sacks et al.'s assertions that interruptions are a small portion of conversation is Orestrom's analysis of interruption in conversation. Orestrom analyzed the turn-taking in four conversations that he defines as "informal talks between colleagues, friends, and between husband and wife" (p. 270). In his analysis, Orestrom discovered the following: In 87% of the turn-taking, no simultaneous talk, during which both both participants claim it is their turn, occurred (p. 271). Orestrom found that overlapping talk occurred in only 13% of the turn-taking he analyzed. This low percentage quantifies Orestrom, Duncan & Fiske, and Sacks et al.'s claims regarding interruption which all contradict Edelsky's assertions that simultaneous turns and interruption are frequent and are not a breakdown in the turn system.

In contrast to Orestrom's research, Beattie's (1983) research supports Edelsky's claim that interruptions occur frequently in conversation. Beattie videorecorded 491 minutes of conversation in non-dyadic tutorial groups at the University of Sheffield. He analyzed these conversations using Ferguson's (1977) classification system of interruptions. Ferguson's classification is a response to Fries (1952) definition of interruptions: "a *perfect speaker-switch* occurs when a change in speaker is effected in such a

way that: (a) there is no simultaneous speech . . . (b) the first speaker's utterance appears to be complete in every way; semantically, syntactically, phonologically, both segmentally and supra-segmentally" (cited in Ferguson, 1977). Some people may argue that Ferguson's four classes of interruptions are actually backchannel cues similar to what Duncan and Tannen have discussed. However, because Ferguson claims these interruptions effect a speaker change, it must be assumed that these are indeed types of interruption. Ferguson classifies these imperfect speaker-switches, or interruptions, in four ways:

1. **Simple interruptions**--"[involve] both simultaneous speech and a break in continuity in the first speakers' . . . utterance; the initiator of simultaneous speech takes the floor . . . [A backchannel cue would not break the continuity of the initial speaker's utterance.]

Example:

(A) . . . and this bit about him being bankrupt and having no money I just don't see how it's possible **because-**

(B) *I haven't heard that*" (p. 296)

(Note that *italics* indicate the overlapping/interruptive portions.) This is not a backchannel because backchanneling does not interrupt the flow of the speaker's talk; here, speaker B cuts off A's sentence in the middle of the word "because".

2. **Overlaps**--"simultaneous speech is present and the initiator of simultaneous speech takes the floor. However, in contrast to the simple interruption, there is no apparent break in continuity in the first speaker's utterance . . .

Example:

(A) . . . I expect you would like to go *with him*.

(Yes) (Yes)

(B) *Well, I'd prefer it, yeah-but then he would want me to go to a Ranger's football match . . .*" (p. 296).

According to Ferguson, speaker B has interrupted; he has taken the floor by saying "Well, I" while A is still saying "with him". According to Ferguson's definition, this is not backchanneling because speaker B has taken the floor; a backchannel utterance would not cause a switch in who has the floor; the initial speaker would continue speaking, unlike what happens in this example.

3. **Butting-in interruptions**--"there is an interruption or break in verbal continuity in one speaker's output. In addition, simultaneous speech is present but here, in contrast to a simple interruption, the initiator of simultaneous speech does not take the floor. Instead, she breaks off before completing her utterance . . .

Example:

(*I think I-*)

(A) I don't know, *I've got mixed* feelings, I think it would be nice to have a baby . . .

Here, the person who "butted-in" and said "I think I" interrupted speaker A but did not get the turn.

4. **Silent interruptions**--"the first speaker's utterance is incomplete . . . but there is no simultaneous speech [and there may not necessarily be silence. Therefore], . . . this non-fluency is called a 'silent interruption' . . .

Example:

(Yes)

(A) It wasn't in ours actually it was a bloke, and um. . .

(B) But anybody who's a bit lazy I suppose, is it, that he used to picks on?" (p. 297).

In this example, speaker B's utterance does not actually overlap with or interrupt speaker A's; however, it appears that speaker A is not quite finished--that he has something else to say; speaker B, however, takes the speaking turn and does not allow speaker A to finish.

Analyzing all interruptions together, Beattie found that interruptions occurred in speaker-switches between 23.5% and 40.4% of the time (mean of 34.3%) (p. 116). The remaining speaker-switches were classified as smooth. This high percentage of 34.4% contradicts Duncan, Sacks et al., and Jaffe & Feldstein's (1970) claims that speakers "speak simultaneously a small percentage of the time" (p. 9). Thirty four percent is not a small percent of all turn exchanges.

In addition, Beattie calculated what percentage of the total interruptions fell into Ferguson's four categories of interruption. The results are as follows: 32.9% of interruptions were simple interruptions; 42.4% were overlaps; 15.1% were butting-in interruptions; and 9.7% were silent interruptions. Beattie found overlaps to be "significantly more common than either butting-in interruptions or silent interruptions . . . $p < 0.01$; 2-tailed [Wilcoxon matched-pairs signed-ranks] test . . . but not significantly more common than simple interruptions" (p. 121).

Beattie also compares interruption in dyadic and non-dyadic conversations, using Beattie and Barnard's (1979) study as the basis for dyadic conversation. According to Beattie and Barnard's study, only 10.6% of turn exchanges in dyadic conversations involved interruption; in non-dyadic conversations, however, interruption accounted for 31.0% of the turn exchanges in Beattie's study. It can therefore be concluded, on the basis of this comparison, that interruption is more frequently used in non-dyadic conversations as a means of taking the speaking turn than in dyadic conversations. This may be because in non-dyadic conversations, there is more competition for the floor than in dyadic conversations. Thus, overall, it would appear from Edelsky and Beattie's studies, that interruptions occur more frequently in conversation than previous studies admitted.

Rather than discussing the frequency of interruption in conversation, Schegloff (1973) and Bennett (1981) discuss

whether a distinction exists between overlap and interruption. The researchers previously discussed seem to interchange these terms.

Schegloff (1973) discusses the differences between overlap and interruption:

By overlap we tend to mean talk by more than a speaker at a time which has involved that a second one to speak[,] given that a first was already speaking, the second one has projected his talk to begin at a possible completion point of the prior speaker's talk [a transition-relevance place]. If that's apparently the case, if for example his start is in the environment of what could have been a completion point of the prior speaker's turn, then we speak of it as an overlap. If it's projected to begin in the middle of a point that is in no way a possible completion point for the turn, then we speak of it as an interruption.

By this definition, an overlap is a break down in the turn-taking system; two people are speaking simultaneously but at a point at which a turn exchange could have occurred. An interruption, on the other hand, is a violation of the system because simultaneous speech occurred at an inappropriate point in the speaker's utterance.

Adrian Bennett (1981), however, contends that Schegloff's distinction between overlap and interruption is inadequate. The first question Bennett raises is what does Schegloff consider to be a possible completion point? Is

this the same thing as Sacks et al.'s "possible completion or transition relevance places" . . . which will expectably produce overlap between a current turn and a next" (1974, p. 707)? Bennett suggests that "there appears to be a tendency to assume the 'management' of talk and the interpretations that arise from it are directly related to various kinds of observable constructional [syntactic and prosodic] 'units'" (p. 173). However, discourse and turn-taking are not as rigidly constructed as Sacks et al. (1974), Schegloff (1973), and Duncan (1972) might suggest. Bennett claims "that specific constructions are capable of being understood in apparently contradictory ways in different discourses" (p. 173).

Bennett (1981) supports her claim by using examples from an audiorecorded dialogue shown on television in 1966, shortly following a riot in San Francisco. The dialogue quickly became a heated argument between the panel members: a white man who was the moderator and several black men who were vehemently objecting to the way they had been treated before and during the riot. Bennett then had several people rate the excerpts of discourse as to whether a speaker had been interrupted or not. According to Schegloff's definition given above, if overlap occurs at a point that is not a transition relevance point (Sacks et al.), the overlap is an interruption. However, Bennett shows that one speaker interjects a sentence while the initial speaker is in mid-sentence--not a transition relevance point at all. The

initial speaker does not feel interrupted, nor is the speaker perceived to have been interrupted by Bennett's raters. This overlap is a kind of cooperative device where the second speaker is signalling that she agrees with the initial speaker. This is actually a type of backchannel device discussed by Duncan; according to Schegloff's definition, however, this is technically an interruption.

In another example in which the structural units are nearly identical to those in the first example, Bennett's raters characterized the overlap as a definite interruption by the second speaker. The second speaker had interjected his comments into a point in the initial speaker's talk when he was determining in which direction he wanted to proceed. An interjection at this point is inappropriate as the speaker has the floor and is deciding what to say next. Bennett supports this claim by saying that the interrupted speaker, later in the same discourse, repeated what had been said immediately preceding the interruption; Bennett also says that the interrupted speaker was leading up to asking a question which had not yet been asked when he was interrupted. For these reasons, according to Bennett, an interjection at this point interrupted the speaker and was inappropriate.

According to Schegloff's definition, both of these overlaps are categorized as interruptions when in fact the raters and the conversation participants considered only one of the overlaps to be interruptive. Thus, concludes Bennett,

"Schegloff's [syntactic] distinction between 'overlap' and 'interruption' fails because these two categories are of logically different types [overlap being a cooperative device], and cannot therefore be distinguished by means of a single set of [syntactic] parameters" (p. 176). Bennett further qualifies interruption: "If we see interruption as an interpretation by people of what is going on as regards participants' handling of rights and obligations in talk, then we are constrained to see an interruption as involving one speaker in conflict with another--in varying degrees of intensity" (p. 176). Therefore, according to Bennett, whether overlapping speech is interruptive or not is dependent on whether the conversation is hindered from or encouraged to proceed with "the creation of the discourse" (p. 186).

Wiemann (1985) supports this idea that whether an utterance is interruptive is dependent on whether the meaning of the message is successfully completed or not. According to Wiemann, a turn exchange requires more than just a grammatically complete sentence; it requires that "the speaker must be given the opportunity to come to a logical completion of the utterance - even if the place where the turn is exchanged is not the speaker's projected point of completion" (Wiemann, 1985, p. 96). This role of a semantically and logically complete utterance is more consistent with the daily conversational speech of native speakers: A native speaker can interrupt in the middle of

the speaker's utterance, which then is not grammatically completed but is semantically completed, and the speaker may not necessarily feel interrupted. However, if a listener interrupts a speaker in the middle of a semantically and logically incomplete utterance, the speaker would feel interrupted (Wiemann, 1985).

In addition, Edelsky (1981) maintains that if the speaker does not feel interrupted, then that person has not been interrupted, and therefore that acceptable turn-taking has occurred. She cites D. Aleguire as saying that "some . . . interruptions are not 'felt' as interruptions while some . . . one-at-a-time 'turns' are" (Aleguire, 1978; cited in Edelsky). A turn is considered finished if both speakers feel that the turn and the message are complete, regardless of whether the turn-taking guidelines of Duncan & Fiske and Sacks et al. have been followed. The participants are able to judge, from the person's expression of a "content message" (Edelsky, 1981, p. 404) and of backchannel cues, whether the turn is complete or not. It is true that sometimes people who follow the guidelines of Duncan & Fiske and of Sacks et al. are felt to have been interrupted, while people speaking simultaneously may not feel they are interrupting each other. (Although it is also certainly true that overlapping speech is considered to be interruptive.) Therefore, Wiemann and Edelsky's conceptualization is more reflective of native speaker conversational turn-taking than are Duncan & Fiske,

Sacks et al.'s in that it considers the importance of context and semantically/logically complete utterances.

Gaze

Gaze is another factor to consider in an analysis of turn-taking. According to Argyle (1976), mutual gaze does not mean the participants are necessarily looking at each other. Rather, mutual gaze means that the participants are mutually attentive to any signals the other participant(s) might give and that "gaze moves rapidly round the other's face" (p. 123).

Before examining turn-taking, however, Argyle and Cook (1976) studied the use of gaze at the beginning of a conversation between people. They state that "when interaction starts between two people there is an immediate tendency to orient towards each other" (p. 101). Therefore, when two people start a conversation, they tend to look at each other and move a little closer to each other. However, during the conversation, the closer in proximity the participants are, the less frequently they will look at each other. The participants in a dyad will adjust their gaze and their proximity to what they feel comfortable with based on their level of intimacy. Also, Argyle and Cook claim that people in a more intimate relationship tend to sit side by side (and therefore not have as much mutual gaze) while people in a more hostile or competitive relationship tend to sit facing each other, with more mutual gaze. This is

because "in an intimate relationship people do not need to monitor one another's behaviour so closely, and may prefer proximity and the possibility of bodily contact" (Argyle & Cook, 1976, p. 102).

Regarding the division of gaze between speaker and listeners, Argyle & Ingham (1972), Beattie (1983), and Kendon (1967) all found that generally, listeners look more at the speakers than the speakers look at the listeners. Argyle and Ingham (1972) studied the use of gaze in seventeen dyads. In this data, they found that listeners tend to look at the speaker more (69% of the time) than the speaker tends to look at the listeners (31% of the time). Beattie (1983) also studied gaze in dyadic conversations. Specifically, he performed a "frame-by-frame analysis of video-recordings of dyadic tutorials [all male pairs] (recorded at Cambridge University) and [analyzed] the relationship between spontaneous speech and speaker eye-gaze" (p. 59). Beattie found that "the mean percentage [of gaze while speaking] was 66.8%". Beattie compared this percentage with Argyle and Ingham (1972) whose percentage was 31% and with Exline and Winters' (1965) who claimed "that amount of gaze in conversation is inversely related to the cognitive difficulty of the topic of conversation" (cited in Beattie, 1983, p. 64).

There is quite a large difference (35.8% difference) between the percentages of looking while speaking in Beattie and Argyle & Ingham's data. Beattie explains this by saying

that since his data was taken from seminars at Cambridge and is therefore more difficult subject matter than most studies examine, the overall gaze would be predicted to be lower. His percentage of gaze, however, was higher than previous studies. Beattie attributes this result to the fact that his subjects knew each other, although not intimately which would result in less gaze, whereas in the previous studies, the subjects were strangers and would therefore not look at each other as frequently.

In contrast to in a dyad, less mutual gaze occurs in a triad, according to Argyle and Cook (1976). If a participant divides his gaze up between the two other participants, there will naturally be less looking at each individual. Also, according to Weisbrod (1956) who studied a seminar involving seven people, "people looked at others 70% of the time while speaking, but only 47% of listening time (cited in Argyle & Cook, 1976, p. 106). Argyle and Cook tentatively explain this phenomenon by saying that in a triad, because there are more participants, and the turn-taking is more complex, the participants need to more closely monitor the turn interaction and exchanges between all the participants.

How gaze is utilized at and near the start of a turn was studied by Charles Goodwin (1981). To gather data for his study, Goodwin videotaped nearly fifty hours of conversation which occurred in natural situations such as group and family parties and gatherings. According to Goodwin's (1981) research, when a speaker begins talking, she wants the

listener's gaze near the beginning of the turn. If the listener does not gaze at the speaker soon enough, quite often the speaker will stop talking, then restart the utterance when she has the gaze of the listener. An alternative behavior to restarting the utterance is that the speaker may simply pause in mid-utterance, a means of requesting the listener's gaze, until she receives the listener's gaze. Goodwin distinguishes these two behaviors as follows:

"Restart: [Fragment] + [New Beginning]

Pause: [Beginning] + [Pause] + [Continuation]"

(p. 69).

Because the speaker's talk restarts or pauses without the listener's gaze, the turn-taking is hindered. However, if when the speaker begins her turn, she tries to establish eye contact with the listener too soon in the turn and the listener is not looking, this is not the listener's fault. Thus, according to Goodwin, it is not simply the mutual gaze at turn beginnings that is important, but the timing of the gaze. The listener needs to look at the speaker near the beginning of the turn, but the speaker should not expect the listener's gaze too soon.

The use of gaze within turns was examined by Kendon (1967). His analysis is based on seven dyadic conversations in which thirteen different people were involved. Kendon's data shows that within turns, the speaker utters more words when the listener is gazing than when the listener is not

gazing. This generalization is true only for longer utterances, since Kendon examined only longer utterances. Similarly, "glances are used by listeners to indicate continued attention and willingness to listen" (Argyle & Cook, 1976, p.121). Listeners should look at the speaker at specific points during the discourse so the speaker is constantly aware that the listeners are paying attention and understanding the messages. If the listener deliberately avoids looking at the speaker, this can signal disinterest in or disagreement with what the speaker is saying (Argyle & Cook, 1976). In this case, the speaker may adjust what she is saying or give the turn to a new speaker.

Kendon states that the amount of time any participant spends in gaze varies greatly with individuals. For most of Kendon's subjects, during silent periods, the speaker gazes for a longer period of time at the listener than the listener does at the speaker. Also, when the speaker resumes talking after a silent period, he is not as likely to look at the listener as he is at the end of a turn. Also the listener looks at the speaker "during fluent speech much more than he does during hesitant speech (50% of the time speaking fluently, as compared to only 20.3% of the time spent speaking hesitantly)" (Kendon, 1967, pp. 39-40). The speaker is more likely to gaze at the listener near the end of long utterances than near the beginning of them. But the speaker looks at the listener when he asks the listener a

question and when the listener has interrupted and they are fighting for control of the floor.

On the other hand, Kendon (1967) purports that resuming eye contact with the listener at the end of a turn may be the speaker's way of showing the listener he's finished talking, is still paying attention to the listener, and expects a response from the listener. Kendon exemplifies the importance of appropriate eye contact with his research. On 71% of the occasions when the speaker did not look up at the end of utterances, the listener either did not respond or responded more slowly than the speaker expected. In addition, when the speaker gave the listener "an extended look" (Kendon, 1967, p. 36), (the length of which Kendon does not quantify), at the end of a turn, 29% of the time the listener either delayed his reaction or failed to react at all to the speaker. Argyle (1976) reiterates this: "Gaze at the end of an utterance is a means of collecting feedback from the speaker, but also acts as a full-stop signal for the listener; if there is no terminal gaze there will be a pause before the other replies" (p. 122).

To test Kendon's claims about the use of gaze in turn exchanges, Rutter et al. (1978) conducted a study which consisted of twenty-minute, videotaped, dyadic conversations (36 subjects). "The first, middle, and final 3 [minute] periods of each" conversation were analyzed (p. 17); 195 floor changes were counted. Rutter et al. found the following results: In the "195 floor changes . . . 65.6 per

cent of floor changes began with the speaker Looking, 75.9 per cent with the listener Looking, and 51.3 per cent with both Looking; 68.7 per cent ended with the new speaker Looking, 66.1 per cent with the new listener Looking, and 48.4 per cent with both Looking" (p. 18). Their findings are consistent with Kendon's (1967) findings. However, none of these percentages are statistically significant according to an analysis of variance. Since the statistics are not significant, Rutter et al. claim that the percentages they found are not sufficient to confirm Kendon's claims about the use of gaze in turn-taking.

Turn-taking of Non-Native Speakers

The research on the turn-taking of native speakers of English is quite extensive. What is lacking is research on the turn-taking of non-native speakers (NNS) of English. Allwright, who was previously discussed in this chapter, presented an analysis and a taxonomy of the turn-taking of NNSs in an ESL classroom. In addition, he closely examined the classroom turn-taking behavior of one student, Igor. Igor was selected for the case study because in the data, he takes more turns than anyone else in the class.

During the one class hour under analysis, the teacher attempted to have a natural conversation with the students on various topics. Allwright presented a few interesting conclusions: Igor, in the classroom discussion, appeared able to initiate changes in topic without difficulty.

However, Allwright hypothesizes that this may "depend more on [Igor's] inability to make himself understood than on any ability to develop a topic. In fact, he misses many opportunities to elaborate, and when all the repairs on the original proposition have been done, he lets the topic go in spite of the fact that the teacher invites development by introducing a new angle" (p. 185). Thus, it appears that Igor gives up and changes topics when his ability to express opinions on the first topic is exhausted.

In addition, Allwright claims that although Igor gets many turns, this is because Igor does not in fact know how to successfully take and give turns, according to the standards of English NS. He obtains more turns for three reasons: 1. The teacher asked him more questions than were asked of other students. 2. Igor responded more frequently than other students to general solicits to the class. 3. Igor took "advantage [twice as] often of opportunities for discourse maintenance" (p. 173). Allwright, however, does not discuss what he means by discourse maintenance. Therefore, Igor does not necessarily obtain more speaking turns because his turn-taking behaviors are better than the other students'.

That NNSs have difficulty in conversational turn-taking due to their lack of competence in native-like turn-taking skills is a claim made by Nancy Lee (1981) in her study. Lee studied "transcripts of first and second year students of

Kyushu University" (p. 107).² Lee (1981) maintains that NNSs have difficulty with turn-taking in English because they are not familiar with the structure of turn-taking among NSs. According to Lee (1981), NNSs may be accustomed to speaking grammatically complete utterances and assume that a turn consists of a grammatically complete utterance; this is consistent with other turn-taking taxonomies (Duncan; Orestrom; Sacks et al.) previously discussed in this chapter; in fact, NSs do not necessarily take or give turns in speaking according to grammatically complete boundaries. If a NNS has indeed been trained that a complete turn consists of a grammatically complete utterance, she will not know when to give up her turn, nor when to take a new turn (Lee, 1981). A turn that could be problematic, for example, could be when a NS stops mid-sentence because he has finished and it is semantically necessary for him to complete his utterance; also problematic could be an utterance ending with a transition word like "so" or "anyway" which may grammatically indicate to the NNS that the NS is not finished speaking.

Lee also discusses several other reasons why NNSs may be reluctant to participate in conversations. The speakers may not be able to distinguish word boundaries or "the sound sequencing of word groups where [there is a difference in

²However, Lee has not described the specific details of her study nor any characteristics of her subjects. The specific data and type of discourse on which her claim is based are not clearly described or quantified in any way. For this reason, the validity of her claims is questionable. However, because studies on NNS turn-taking are severely lacking, Lee's claims must be considered here.

meaning in words such as] the strain and this train; NNSs may also not recognize phonemes that differ from their own language. They may not be familiar with the way intonation affects the meaning of English utterances, for example, when a statement becomes a question simply because of rising intonation at the end of the sentence. All of these reasons may make a NNS feel uncomfortable with his English abilities and therefore not participate in conversation. Another major problem a NNS who is not very fluent may encounter is not knowing how to respond or what to say at the correct time. For example, a person may have a perfect sentence formed in his mind, but by the time he formulates this sentence, it is no longer relevant to the current context. Thus, because these NNSs do not feel comfortable with their English abilities, they do not have the ability to fluently and effectively enter conversation (1981).

As a result of this lack of awareness of accepted turn-taking conventions, NNSs do several things during conversation that differ from what NSs do, according to Lee. First of all, NNSs lose their conversational turns much more frequently than do NSs. Second, NNSs may appear to talk in soliloquies and to disregard interruption or turn-getting strategies from other participants. Third, NNSs may insist on taking and giving turns based on the grammatical completion of a statement. Fourth, NNSs may attempt to get a turn, and thus be perceived as interrupting, much more frequently than do NSs (Lee, 1981). Therefore, NNSs'

frustration level is increased when they do not participate in conversations as NSs expect them to; NNSs will feel like they are unable to communicate when in fact they may be able to communicate; they simply have difficulty with knowing when to take and give speaking turns. However, according to Lee's studies of NNS turn-taking, as NNSs participate in conversations and become more fluent in English, their turn-taking also becomes more native-like. They compete for the floor more like NSs do and also win more turns than they lose.

Often NNSs are perceived to talk to themselves "in individual soliloquies [sic] without concern for turn attempts taken by the other members of the group" (Lee, 1981, p. 110). To a NS, interaction like this often appears to not be cohesive discourse; in addition, it appears that the participants are not communicating any information.

In addition, Lee observed that NNS are perceived to interrupt frequently in attempting to get a turn. Lee explains that because native English speakers are "oriented toward one speaker at a time" (p. 111), when either NS or NNS discourse overlaps excessively, NS often perceive this to be interruptive. Lee says that in native English speaker turn-taking "overlap and floor competition are accepted forms of conversation style . . . [if] these encounters are . . . brief lasting only a few seconds and do not seriously interfere with communication" (p. 109-110). In contrast, NNSs of English participate in excessive floor competition

and are perceived by NSs to be uncooperative and interruptive in conversation. Lee reiterates that if a NS is interrupted, he will generally allow the interrupter to take the turn. However, Lee found that "the non-native speaker . . . did not give up easily and often made a number of attempts to enter the conversation" (p. 118), thus being perceived as pushy and rude by the NS.

According to Lee, if a NNS does not permit or use the proper amount of time in giving and taking a turn, or if a NNS does not utilize the turn-taking cues and procedures outlined in this chapter, she will be perceived as rude. It appears to NSs that NNSs do not know when the appropriate times are to take and give turns. In fact, the NNSs are frustrated with not being able to get turns when they want to speak. As a result, many times NNSs simply do not participate in conversations if they do not know when it is their turn to speak (Lee, 1981).

NSs unconsciously know when it is appropriate to speak because of the cues exhibited by the speaker, as have been discussed in detail in this chapter. NSs know that to take a turn, they could display one or more of several signals: break eye contact with the speaker, thus signalling the desire to speak; take an audible breath in preparation to speak; gesture as they begin talking; backchannel loudly; tilt their heads.

Once the speaker has successfully obtained the turn by exhibiting these cues, he expects the listeners to

backchannel, either verbally or non-verbally. If the listeners do not backchannel, the speaker may pause to determine if the listeners are following the conversation. Once the speaker has the listeners' attention, he will resume speaking. One way the speaker knows he has the listeners' attention is if the listeners are looking at the speaker. Listeners tend to gaze at speakers more than speakers gaze at listeners; however, the the speakers expects to have the listeners' gaze when he looks at them. In addition, most speakers expect that their turn will not be interrupted. However, overlap to contribute to the conversation or to backchannel is generally accepted by most speakers.

Finally, when the speaker is ready to end the turn and give it to someone else, he can display one or more of the following cues: raise or drop clause-final intonation; decrease clause-final volume; lengthen clause-final syllable; relax the foot; stop gesturing; utter a socientric sequence such as "but uh" or "you know"; grammatically complete the clause; resume eye contact with the listener.

Turn-taking is a potentially problematic area for people speaking English as a second language if they do not know, at least unconsciously, these mechanism of NS turn-taking. It is important, if ESL teachers are to teach their students how to communicate with native speakers, that first the teachers know how their students' communication differs from that of native speakers. However, very little research on this problem has been done. This study seeks to contribute to the

little research in this field. However, this study is limited to one language group-Mandarin speakers of English. This study describes what these ESL students do in their communication in English and how that behavior differs or is similar to that of native speakers.

CHAPTER III

METHODS OF THE PILOT STUDY AND OF THE MAJOR STUDY

The Pilot Study

Because the turn-taking of NNSs greatly affects their ability to effectively communicate with each other and with NSs, it is important to examine their turn-taking behaviors. This is important in order for ESL teachers to effectively help their students learn to communicate in English. In order to do this, however, the teachers must first understand the turn-taking patterns of their students. If NNSs can not take and give conversational turns appropriately, their communication skills will be hindered, and therefore their opportunities to communicate with NSs will be severely limited.

Because the turn-taking of NNSs has not yet been adequately studied, this was examined initially in a preliminary pilot study followed a the main study, both of which will be discussed in this chapter. The research in the pilot study explores the following questions: Does general proficiency affect the turn-taking of NNSs? How do the NNSs use gestures? Is there a relationship between the proficiency of a student and the number of appropriate and

inappropriate turns he takes? Is there a relationship between the number of months a NNS has been in the U.S. and her turn-taking behavior? The basic hypothesis for this pilot study states that there is a relationship between Mandarin graduate students' TELP dictation scores (a quantified measure of oral proficiency) and their abilities to appropriately take and give turns in casual conversation.

The TELP is Oklahoma State University's "Test of English Language Proficiency" given to incoming international graduate students to determine if their English is proficient enough for them to succeed in graduate school. The TELP consists of three sections: a cloze passage, a dictation passage, and a structure section. The dictation score was used for this study for two reasons: First of all, the norming population for the cloze section was American high school students which is not appropriate for this population of NNSs, and therefore is not a valid measure of the students' proficiency. Secondly, dictation generally measures oral skills of which turn-taking is a part; cloze generally measures non-oral skills. The cloze and structure sections were not selected because they do not measure constructs even remotely related to oral skills: cloze measures reading ability and structure measures the ability to answer grammatical questions.

Each section of the TELP is worth 100 points; 70 is considered passing level. Students that score less than 70 on any one section or who have an overall score of less than

210 must take a writing course, English 0003, designed for international graduate students. The cloze and structure sections are multiple choice items which are machine scored at the testing office. The English Department scores the dictation section. Errors are considered to be any incorrect word, incorrect word form, and spelling errors that alter the meaning of the word. The total number of errors are counted and a score out of 100 given based on the score conversion table. (Refer to Appendix A for the scoring procedures and scoring key.)

Subjects

Because the pool of all ESL students is too large for a pilot study, this study is limited to examining graduate students, who have generally spent more time studying and less time interacting in English than undergraduate students. The subject pool was limited even further to that of one language group, NSs of Mandarin, because Mandarin speakers of English seem to have difficulty getting turns in conversation with English NSs. In addition, Mandarin speakers in general have more difficulty with oral proficiency and becoming fluent in communicating in English than do students of many other language groups.

Chinese graduate students from the PRC served as the pilot group. To look at different proficiency levels, the subject pool was divided into two groups, a high group and a low group, based on their dictation scores at the time of

their admission to OSU. The dictation scores of the high group are 70 or above. The low group's scores are 55 or less. After determining the boundaries for these groups, four subjects, two with high scores and two with low scores, were randomly selected from the pool. While analyzing the data for appropriate and inappropriate turns, the rater did not know which subjects were in the high and which were in the low groups. The following table presents specific information about the four subjects.

TABLE I
PILOT STUDY: SUBJECTS' PERSONAL INFORMATION

Subject	Gender	TOEFL Score	Dictation Score	Major/Degree	Took English 0003	# Months in U.S.
June	female	507	78	MBA	no	54
Chris	male	603	83	PhD Plant pathology	no	9
May	female	530	50	MS Statistics	no	13
Shelly	female	560	50	PhD Math	yes	4

NOTE: The names reported in this study are fictitious names used to preserve the anonymity of the subjects.

This table shows that three of the subjects were female, one was male. Two of them had scored below 550 on their TOEFL, 550 being the requirement for admission into graduate

school without special circumstances. They are studying in various fields. Only one of them took English 0003. They have been in the United States from four to 54 months. As a whole, the group is very diverse as far as individual characteristics reported in the table.

Procedure

The four subjects were contacted to determine if they were willing to participate in the experiment. They all agreed. They were told that they would be given a listening test. When the subjects arrived in the tester's office, an observer told them the tester was running behind schedule and they would have to wait a few minutes. In the office in which they waited, a video camera was set up. The observer was present to get the conversation started and to try to keep the subjects speaking in English. The subjects sat in comfortable seats and waited for fifteen minutes. When the tester returned, the students took a short listening test. (See Appendix B for the test.) On the form of the test were questions asking personal information about each subject; they were asked to explain how much and in what contexts they interact with NSs. (See Appendix B for the questionnaire.)

The only materials required to conduct this study were the videorecording equipment: a camera, a blank videotape, and a microphone. In order to determine which turns were acceptable and which were unacceptable, a set of criteria

were established based on the literature discussed in Chapter II. Turns which were categorized as appropriate had one or more of the following criteria:

1. The listener waits until the speaker stops talking before he/she begins the turn.
2. If the speaker is gesturing, the listener does not begin his/her turn until the speaker stops gesturing.
3. The speaker waits until he/she has the gaze of the listener before he/she continues with the main message.
4. When the speaker pauses, the listener should look at the speaker.
5. Any listener answers a question directed to the group.
6. The listener should speak when the speaker indicates that he/she wants the listener to speak.
7. The listener waits until the speaker resumes eye contact with him/her.
8. The speaker gives way when someone interrupts.
9. A turn occurs at a syntactically complete boundary.
10. The listener waits until the speaker decreases volume.
11. A listener responds in a timely manner to a general or personal solicit, other than responding to a question. The solicit may be made by eye contact, gesture, or a verbal cue.

Inappropriate turns are classified as those that do not follow the above guidelines. Some important features of an inappropriate turn are that the listener starts talking while

the speaker is still talking/gesturing/has no eye contact/or still speaks with loud volume.

For example, a turn would be rated as appropriate if the listener waited until the speaker was finished talking before beginning the turn. A turn would also be appropriate if the listener both waits for the current speaker to stop talking and to resume eye contact. On the other hand, a turn would be rated inappropriate if the listener did not wait until the speaker was finished talking before beginning the turn.

Analysis

Before performing any quantitative analyses of the subjects' turn-taking, general trends in each subject's turn-taking were observed as well as the amount of interaction with native speakers that each subject reported.

On the questionnaire, June reported studying English for many years at university in China before coming to the U.S. She also reported interacting with Americans at least twice weekly outside class in social activities like parties, camping, visiting Americans' homes. June is part of the high dictation score group and the high length of stay group. June does not always wait for the speaker to stop speaking before she takes a turn; however, she usually waits for the utterance to be semantically complete. She gives way to interruptions. June took the most turns (48) but has the largest number of inappropriate turns and the smallest number

of appropriate turns. June's inappropriate turns tended to be interruptions of other speakers' turns. Although her turn-taking generally appeared more native-like, the overall impression is that she interrupts more than NSs would.

Chris reported studying English for eight years in China. Before coming to OSU, he studied at OU. He reported never interacting with Americans outside of class and the lab. Chris is also part of both the high dictation score group but is part of the low length of stay group. Chris appropriately looks away from the listener when he has stopped talking, thereby successfully giving his turn away. He takes turns when the speaker is soliciting him to be the next speaker. His use of gesturing is native-like. Once he interrupted the speaker by raising the volume of his voice. Chris took half as many turns (19) as May did (37), but their percent of appropriate and inappropriate turns is the same.

May studied English for seven years in China. She reported interacting with Americans once a week at church and in her friends' homes. May is part of the low dictation score group but part of the high length of stay group. May does not gesture much. I think this may be a characteristic of her personality rather than of her turn-taking skills. When she does gesture, it is appropriate. She uses eye contact and gesturing successfully to designate who should take the next turn. May also stops talking when interrupted.

Shelly studied English for fifteen years in China. She does not interact with Americans outside class. Shelly is

part of the low dictation score group and the low length of stay group. Shelly's gesturing and eye contact are native-like. She also takes solicited turns appropriately. She makes eye contact with all group members when giving a general solicit. Shelly took almost the same number of turns (38) as May (37) but she had a slightly smaller number of appropriate turns than did May.

To determine the trends for each subject in number of appropriate and inappropriate turns, the researcher calculated the total number of turns for each subject and the percentage of appropriate and inappropriate turns. The information is displayed in Table II below.

TABLE II
PERCENTAGES OF APPROPRIATE AND INAPPROPRIATE TURNS

Subject	Total # of Turns	Appropriate Turns		Inappropriate Turns	
		#	%	#	%
June	48	38	79	10	21
Chris	19	17	89	2	5
May	37	35	95	2	5
Shelly	38	35	92	3	8

June took the largest number of turns, with the largest percentage of appropriate and also inappropriate turns. May

and Shelly both took a very similar number of turns, and had very close percentages of both appropriate and inappropriate turns. Chris took the fewest turns. It is interesting to note that June has been in the United States significantly longer than any other subject and also took the most inappropriate turns.

One factor involved in turn-taking is the use of gesture. This study did not examine gestures in detail; however, the percentage of the number of turns was calculated in which gestures were used appropriately--that is gesturing during the turn but stopping at the end of the turn. (No subjects used gestures at inappropriate times.) See Table III below.

TABLE III
NUMBER AND PERCENT OF TURNS CONTAINING GESTURES

Subject	Total # of Turns	Total # of Turns Containing Gestures	% of Turns Containing Gestures
June	48	21	44
Chris	19	8	43
May	37	6	16
Shelly	38	16	42

June took the largest number of turns and used the most gestures. May and Shelly's number of turns were very close, with Chris taking the fewest turns. The number of gestures used by Chris and Shelly were very close to June's, with May using less than half the number of gestures of any subject.

In addition to these percentages, Chi-Square tests were performed. To determine if there is a relationship between the TELP dictation score (high and low groups) and the number of appropriate and inappropriate turns, the Chi-Square statistical test was applied. See Table IV below.

TABLE IV
RELATIONSHIP BETWEEN TELP DICTATION SCORES AND
NUMBER OF APPROPRIATE/INAPPROPRIATE TURNS

	High Dictation Scores Group	Low Dictation Scores Group	Total
# Appr. Turns	55	70	125
# Inappr. Turns	12	5	17
Total	67	75	142

$p = .039$

Phi Coefficient = $-.173$

Pearson Chi-Square value = 4.245

1 degree of freedom

29.929% of variability of turn-taking ability is
accounted for by the dictation score.

The Pearson Chi-Square value is 4.245 with 1 degree of freedom. $p = .039$. Therefore, there is a significant

relationship between the TELP dictation score (high and low groups) and the student's ability to appropriately take turns. However, the Phi coefficient is $-.173$ which means that although the relationship is significant, it is negative: as the variable of dictation score increases, the variable of appropriate turns decreases. This is because the high dictation group took the fewest appropriate turns (55) and the most inappropriate turns (12); the low dictation group took the most appropriate turns (70) and the fewest inappropriate turns (5).

Another major variable to be examined in this study was the number of months each subject had been in the United States. To determine any relationship between the length of stay in the U.S. and the number of appropriate and inappropriate turns, the Chi-Square test was again applied to the data. (See Table V on the following page.) The subjects were divided into two length of stay groups. The high group were the two subjects who had been in the U.S. longer (67 months combined; 33.5 average) and the low group were the two who had been here less time (13 months combined; 6.5 average). The Pearson Chi-Square value is $.925$ with 1 degree of freedom. $p = .336$. Therefore, there is not a significant relationship between the number of appropriate and inappropriate turns and the length of stay in the U.S.

TABLE V

RELATIONSHIP BETWEEN LENGTH OF STAY IN U.S. AND
NUMBER OF APPROPRIATE/INAPPROPRIATE TURNS

	High Group- Length of Stay	Low Group-Length of Stay	Total
# Appr. Turns	73	52	125
# Inappr. Turns	12	5	17
Total	85	57	142

$p = .336$

Pearson Chi-Square value = .925 1 degree of freedom

Discussion

These subjects do not have many serious problems with the major elements of turn-taking, like taking turns inappropriately. The most noticeable problem observed was that the subjects had trouble getting a turn when other participants were talking a lot. When the speaker solicited turns from specific listeners, the listeners did not have trouble taking the turns. However, when a listener wanted to say something, but the speaker did not stop and solicit a turn, the listeners often had difficulty jumping into the conversation in an acceptable manner.

Based on the Chi-Square results for the relationship between number of appropriate and inappropriate turns and the TELP dictation score, my research hypothesis appears to be supported by this study. That is, there is a significant relationship between each subject's TELP dictation score and

the subject's ability to appropriately take turns ($p = .039$). However, this relationship is inverse (Phi coefficient = $-.173$). This negative relationship between TELP dictation score and appropriate/inappropriate turns may have been skewed by June: She interrupted two to three times more frequently than any other subject, which may have contributed her more native-like turn-taking. This, accompanied by the fact that Chris, the other person in the high dictation group, took the fewest total turns, both appropriate and inappropriate, may have caused the negative relationship between these two variables. Although this relationship is significant, it may be simply a result of the individuals in the high dictation score group and therefore is not necessarily characteristic of all NNSs who would fall into the group of high dictation scores.

Between the variables of number of appropriate and inappropriate turns and length of stay in the U.S. exists a relationship that is not significant ($p = .336$). This result is surprising as it would seem logical that the longer a NNS is in the U.S., the more appropriately the person will be able to take turns. This surprising statistic may possibly be explained by June's length of stay in the U.S. June has lived in the U.S. for 54 months, more than four times longer than May, the other person in the high length of stay group. June's disproportionate length of stay in the U.S. may have skewed the statistic to result in this relationship that is not significant. Because of the individual differences of

the particular subjects in this high length of stay group, particularly June's length of stay, it is difficult to determine if this non-significant relationship between length of stay and appropriate turn-taking ($p = .336$) is typical of all NNSs.

In addition to having been in the United States longer than the other subjects, June also reported interacting the most with native speakers outside of class. It is logical that the amount of interaction would affect the subjects' turn-taking as well. For this reason, it is a strong possibility that one reason June's turn-taking was most native-like is because she interacts the most with NS. For this reason, in the main study to be discussed in this thesis, interaction is also a variable.

In addition to these problems, there is also a problem with the turn-taking criteria used in this pilot study. The scope of the criteria is limited in that they rather rigidly depict NS turn-taking. In fact, NS turn-taking is much more flexible than these criteria allow. For example, in these criteria, interruption is categorized as an inappropriate turn-taking behavior. However, NSs interrupt each other in casual conversation and no one is offended by these interruptions; they are considered, within a reasonable number, to be a normal part of casual conversation between peers. This set of criteria does not allow for that, however. Because of the rigid criteria used, the

appropriateness/inappropriateness of turns categorized in this pilot study may not be accurate.

Because of these problems with the criteria, the idiosyncrasies of the subjects, and because of the limited number of four subjects, another study was conducted to examine in more detail the English turn-taking of Mandarin speakers of English. The study is discussed in the following section.

The Major Study

The purpose of this study, like that of the pilot study, is to analyze the turn-taking of Mandarin speakers of English who are participating in casual conversation in English. The study examines the relationship between Mandarin graduate students' abilities to take and give turns in casual conversation and three variables: a current TELP dictation score, their length of stay in the United States, and the amount of interaction they have had with NSs. In addition, more specific features of turn-taking such as backchanneling, successful and unsuccessful turn attempts, interruption, gesturing, and speaker and listener gaze are analyzed. Because these are all important features of turn-taking, the scope of the pilot study was severely limited because it did not examine these features. This study examines these features to determine a more accurate view of the turn-taking behaviors of Mandarin speakers of English with the end goal

of better enabling ESL teachers to teach their Chinese students to exhibit more native-like turn-taking behaviors.

Subjects

The subjects for this study were nineteen native speakers of Mandarin, all of them graduate students enrolled at OSU. In addition to the nineteen selected subjects, there was an additional participant who was not included in the sample. This participant was the wife of one of the selected subjects; she accompanied her husband to this research project without being asked and has been in the United States for two months, not the length of stay of the group in which she participated. For this reason, she was not included in the sample or in any of the analyses.

Because length of stay in the United States is an independent variable in this study, subjects were selected from groups of students matriculating at OSU at five different semesters: fall 1989 (group 1), spring 1990 (group 2), fall 1990 (group 3), spring 1991 (group 4), and fall 1991 (group 5). Four subjects matriculating each semester were randomly selected from the list of TELP (Test of English Language Proficiency) results for the respective semesters. The TELP list is a comprehensive list of all international graduate students arriving at OSU each semester; all arriving international graduate students are required by the OSU Graduate College to take this exam.

As mentioned at the beginning of this chapter, the TELP consists of three sections: cloze, dictation, and structure. The dictation section is relevant to this study. Because dictation measures listening comprehension, a part of oral and therefore conversational proficiency, the dictation score was used to select subjects. For each semester of matriculation, four subjects were selected: one scoring 70 or higher on the dictation section and three scoring 55 or less on the dictation section. During the process of randomly selecting subjects for the first three groups, because of the small number of available subjects with high dictation scores, one high and three low dictation score subjects were selected. This 3:1 ratio was unintentional. However, in selecting the fourth and fifth groups, subjects were intentionally selected to fit this ratio in order to reduce the possibility of a different ratio affecting the statistics. This 3:1 ratio of failing to passing is approximately the ratio of all the graduate students (all language groups) who fail and pass the TELP each semester. Therefore, this proportion is representative of the overall international graduate student population at OSU.

The nineteen subjects were randomly selected from the pool of all students from the People's Republic of China who took the TELP exam and who met the criteria described above--four from each semester; within each group, one high and three low dictation scores. After the subjects were selected, they were contacted by telephone and asked to

participate in the study. They were told they would be given a dictation test for the purposes of studying the listening comprehension of Mandarin speakers for this thesis and that the participation time would be thirty minutes. When contacted, some subjects refused to participate; therefore, other subjects had to be randomly selected from the respective lists. For the groups arriving the spring and fall 1990 (groups 2 and 3, respectively) and the spring and fall 1991 (groups 4 and 5, respectively), four subjects agreed to participate. However, for the fall 1989 group (group 1), only three subjects could be found who were willing to participate. For this reason, the target of twenty subjects was not reached.

The nineteen selected subjects (excluding the wife) consisted of twelve males and seven females. They are studying in a variety of fields, with engineering being the most common (11 majoring in some type of engineering). (See Table VI for pertinent information about each subject.)

TABLE VI

THE STUDY: SUBJECTS' PERSONAL INFORMATION

Subject	Gender	Major/ Degree	Group	TOEFL Score	D1	D2	# Months in U.S.	Took English 0003
George	male	MS Chemistry	1	567	50	91	26	no
Jennifer	female	MS Chemistry	1	607	72	95	26	yes
Tim	male	PhD Economics	1	577	50	70	26	yes
Linda	female	MA Technical Writing	2	633	94	100	22	no
Jane	female	PhD Agricultural Enqn.	2	557	50	93	22	yes
Shane	male	MS Environmental Enqn.	2	607	50	83	22	yes
Heidi	female	MS Mechanical Enqn.	2	557	50	93	22	yes
Ian	male	PhD Mechanical Enqn.	3	573	50	87	14	yes
Hilda	female	MS Agricultural Enqn.	3	600	50	85	14	yes
Sean	male	MS Chemical Enqn.	3	577	50	83	14	yes

TABLE VI (continued)

Subject	Gender	Major/ Degree	Group	TOEFL Score	D1	D2	# Months in U.S.	Took English 0003
Joy	female	MA Technical Writing	3	667	98	100	14	no
Wayne	male	MS Mechanical Engn.	4	573	50	95	10	yes
Rick	male	MS Mechanical Engn.	4	587	50	78	10	yes
Lynn	female	NA	4	NA	NA	63	2	NA
Mindy	female	MA TESL	4	577	89	97	10	yes
Doug	male	MS Electrical Engn.	4	600	50	85	10	no
Jim	male	MS Civil Engn.	5	597	50	50	2	yes
Joe	male	MBA	5	590	50	89	2	yes
Nick	male	MS Mechanical Engn.	5	573	50	87	2	yes
Lou	male	MS Bio- chemistry	5	630	91	93	2	no

NOTE: Abbreviations for majors are as follows:
 engn. = engineering
 TESL = Teaching English as a Second Language

Their TOEFL scores range from 667 to 557, with a mean score of 592, median or 587, and two modes of 573 and 557 (both occurring three times). Their scores on the first dictation (taken upon arrival at OSU) ranged from 50 to 98 with a mean of 60, a median of 50, and a mode of 50 (fourteen occurrences).

The breakdown of these scores for individual groups is as follows. The mean TOEFL score for group 1 (fall 1989) is 584; the range of scores on the first dictation is 50 to 72 with a mean of 57. The mean TOEFL score for group 2 (spring 1990) is 589; the range of scores on the first dictation is 50 to 94 with a mean of 61. The mean TOEFL score for group 3 (fall 1990) is 604; the range of scores on the first dictation is 50 to 98 with a mean of 62. The mean TOEFL score for group 4 (spring 1991) is 584; the range of scores on the first dictation is 50 to 89 with a mean of 60. The mean TOEFL score for group 5 (fall 1991) is 598; the range of scores on the first dictation is 50 to 91 with a mean of 60. Note that these TOEFL scores are from tests taken at some unknown time before each student arrived at OSU; therefore, the TOEFL scores are not necessarily what the students' present TOEFL scores would be. In addition, the dictation scores are from the TELP dictation taken upon arrival at OSU and again do not necessarily reflect what the students' present scores would be. (See Table VII on the following page for a visual representation of these scores, as well as for the results of the second dictation.)

TABLE VII
MEASURES OF CENTRAL TENDENCY FOR TOEFL
AND D1 FOR EACH GROUP

	Group					
	1 Fall 1989	2 Spring 1990	3 Fall 1990	4 Spring 1991	5 Fall 1991	whole group
Measure						
TOEFL						
range	567- 607	557- 633	573- 667	573- 600	573- 630	557- 667
mean	584	589	604	584	598	592
median						587
mode						573, 557
D1						
range	50-72	50-94	50-98	50-89	50-91	50-98
mean	57	61	62	60	60	60
median						50
mode						50

An undocumented subjective observation of these subjects in general is that when the researcher spoke with individuals who had been in the United States for a longer time, in particular group 1, they understood on the phone what they were told much more completely than did the subjects who had arrived more recently. The group 1 and 2 subjects in particular asked more questions when their help was being

elicited on the phone. And upon arrival at the testing site, most of them had a much clearer idea of what they were going to do than did the more recent arrivals, particularly those in group 5.

Procedure

The subjects were actually needed for two purposes: one, the dictation test, of which the subjects were notified in advance in the telephone conversation; two, a videotaping of their conversation with the other group members. The subjects were not informed in advance that they would be videotaped. The rationale for this is that if the subjects knew in advance that their conversation was going to be recorded and analyzed, the subjects might not talk or their conversation may not have been natural. As it happened, most of the subjects talked freely and naturally. Some subjects did not participate in the conversation; the reasons for this are unknown.

The procedure was as follows: The subjects arrived at a specified time at the researcher's office. In the office, the video camera was set up in advance, and refreshments were available for the subjects. An intermediary party was present in the office to ask the students to sit down and wait. A comfortable sofa and chairs were arranged in a curved line so that everyone could be seen in the videorecording. The intermediary party (a male native Arabic speaker who is fluent in English for fall 1990, and spring

and fall 1991 groups; a female native speaker of English for fall 1989 and spring 1990 groups) was there to elicit English conversation from the Chinese subjects while remaining as quiet as possible: that is, to allow the subjects to speak as much as possible. The intermediary parties told the subjects that the researcher was currently with another group and would return in a short time. The intermediary did not appear to have an effect on any group's conversation. That is, the presence of one intermediary as opposed to the other one did not appear to affect the conversations.

The subjects waited in the office and conversed for fifteen minutes. After fifteen minutes, the researcher returned to the room, thanked the subjects for waiting and took the group to another room to take the dictation test. This way, another group could be waiting and conversing while the first group was taking the dictation. The dictation room was a seminar room containing a conference table and comfortable chairs at which the students sat. Before taking the dictation, the students were told about the videorecording and the purpose of this study. They were asked for their permission to use the recording, and they were guaranteed anonymity. All the subjects agreed for the recording to be used. The subjects then took the dictation test which lasted 8:22 minutes. (See Appendix C for the dictation passage.) The dictation test was scored according to the standard scoring instructions and scoring key used for administrations of the TELP each semester by OSU's Graduate

College. These were used to ensure as much reliability as possible between the dictation score of the TELP each subject took upon matriculation and the dictation scored received for this research project. (See Appendix A for the scoring instructions and scoring key.)

Finally, the subjects completed a questionnaire containing questions regarding interaction with native speakers and personal information. On the questionnaire also was a place for the students' signatures indicating consent for the videorecording to be used. (See Appendix D for the questionnaire.) The total process of being recorded, taking the dictation, and completing the questionnaire was finished within thirty minutes, as the students were told.

After obtaining the videotapes, the conversations were transcribed and analyzed. The analysis consisted of counting several elements of turn-taking: number of appropriate turns, successful interruptions, unsuccessful turn attempts or interruptions, simultaneous non-interruptive turns, backchannel cues used, speaker and listener gaze, and gesture. These categories are derived from the set of established criteria of what constitutes acceptable turn-taking. The criteria are listed in the following section.

Criteria for Analyzing Turns

These criteria for acceptable turn-taking are a combination of two elements: 1. what previous researchers

(Argyle; Duncan; Duncan & Fiske; Edelsky; Ferguson; Goodwin; Kendon; Sacks, et al; etc) of NS turn-taking claim regarding NS turn-taking. Refer to Chapter II for an explanation of what individual researchers have stated about NS turn-taking.

2. what the researcher observed during the analysis of the pilot study data. As previously discussed, the criteria used in the pilot did not accurately depict what NSs do during turn-taking. This new set of criteria contain behaviors and cues that were not included in the pilot study. The additional criteria depict more completely and accurately the turn-taking of NSs.

The criteria used for this study are divided into several categories: general conversational behavior, taking a turn, ending a turn, interruption, overlap, gaze, and backchannel cues. The use of gesture is a part of several of these categories. Note that * indicates behaviors and cues that were not part of the criteria for the pilot study and that make this set of criteria more exemplary of NS turn-taking behavior. The criteria are as follows:

General Conversational Behavior

- *1. When a group starts interacting, they all orient towards each other by looking or moving closer together.
2. A listener responds in a timely manner to a general or personal solicit.
3. Any listener answers a question directed to the group.

4. The listener should speak when the speaker indicates that he/she wants the listener to speak.
5. By gesticulating, the speaker maintains the turn, even after having given one or more turn yielding cues.

Taking a Turn

6. The listener waits until the speaker stops talking before he/she begins the turn.
7. The listener does not attempt a turn while the speaker is gesticulating.
- *8. The listener signals the desire to take the turn by establishing eye contact with the speaker. When the speaker looks at the listener and signals he will end his turn, the listener, now the speaker, begins talking and looks away from the previous speaker. Also at this time, the new speaker may begin gesturing to signal he still wants and has the turn.
- *9. The listener may also audibly inhale and/or slightly tilt the head to indicate he is going to take the turn.
- *10. A listener steals a turn by taking a turn for which another listener had been solicited by the speaker.

Ending a Turn

11. Before the speaker ends the turn, he grammatically and/or semantically completes the utterance.
- *12. The speaker's intonation rises or falls (differs from the main part of the utterance) at the end of a turn.

- *13. The final (stressed) syllable is longer as the speaker finishes the turn.
- *14. Hand gesturing stops as the speaker stops talking.
- *15. A tensed hand relaxes when the speaker is ending the turn.
- *16. A sociocentric sequence (you know, but uh, anyway, etc.) sometimes occurs at the end of a turn.
- 17. Volume decreases towards the end of an utterance.
- *18. As the speaker ends the turn, he looks again at the listener--mutual gaze--indicating that she is finished and the listener may now take the turn.

Interruption: The listener makes a turn attempt during the turn of the current speaker.

- *19. In a simultaneous turn, the listener takes a turn while the speaker is still gesticulating or the speaker gives a turn yielding cue but does not give up the turn.
- *20. Interruption occurs where it is not possible for the point to be the end of the utterance.
- 21. The speaker gives way when someone interrupts.

Overlap: Overlap does not interfere with the flow of communication.

- *22. Simultaneous talking occurs (self monitoring) that is not interruptive.

Gaze

23. The speaker waits until he/she has the gaze of the listener before he/she continues with the main message.
24. When the speaker pauses, the listener should look at the speaker.
- *25. The listener looks at the speaker while the speaker is talking.

Backchannel Cues

- *26. The listener uses backchannel cues appropriately so the speaker does not have to stop speaking. Backchannel cues can be as follows:
 - a. utterances like uh-huh or yes
 - b. The listener completes the speaker's sentence.
 - c. The listener asks for clarification.
 - d. The listener restates the speaker's utterance.
 - e. The listener nods.
- *27. The speaker glances at the listener when he receives a backchannel cue.

These criteria were used to analyze the transcribed conversations. In each conversation, only the last five minutes were analyzed. The exception to this was group 3, fall 1990, for which the total amount of conversation in English was only five minutes; this English dialogue was dispersed throughout the fifteen minutes of recorded

conversation. For group 3, all the English conversation was analyzed to have the same length of time as the other groups.

The following items were counted for each subject: successful turns obtained without interruption; successful turns obtained with interruption; unsuccessful turn attempts; simultaneous turns; backchannel cues; speaker gaze at the beginning of a turn/to take a turn; constant speaker gaze while the speaker is talking; speaker gesture during a speaking turn; constant listener gaze directed at the current speaker. In addition, the presence and absence of the following items were counted: backchannel cues; constant speaker gaze while the speaker is talking; speaker gesture during a speaking turn; constant listener gaze directed at the current speaker. In addition to analyzing these turn-taking behaviors, the interaction of each subject was analyzed based on the information obtained from the questionnaire responses.

To clarify what is meant by each of these items which were counted in the data, examples of each item are included in the following section.

Examples of Turn-taking Behaviors Counted in the Data

In these examples, "Inter" designates the intermediary for that group.

[] indicates overlapping speech.

Successful Turns Obtained without Interruption

Group 2, spring 1990

Inter: annotated bibliographies and those stuff*

Jane: fifty sources on the SOS, gosh.

Here Jane successfully took the speaking turn without interrupting the previous speaker. *Inter's intonation fell at the end of the word "stuff", indicating the end of the turn.

Successful Turns Obtained with Interruption

Group 4, spring 1991

Inter: electronics and things [like that]*

Doug: [there are many graduate students] in my department. I think maybe more than one hundred.

Here, Inter was in the middle of an utterance when Doug interrupted with a statement related to the topic several turns earlier. *The intonation while Inter was saying "like that" was steady, neither rising nor falling, indicating he had more to say and was not finished with the turn. Because Inter was not finished speaking when Doug began speaking, Doug's utterance is considered to be an interruption. Although Doug interrupted, his turn attempt was successful.

Unsuccessful Turn Attempt

Group 1, fall 1989

Jennifer: You don't have any idea about the test.

Inter: No.

George: *I guess Becky . . .

Inter: **I don't think it's anything you should worry about.

In this example, George started speaking at what seems to be an acceptable place and without interrupting Inter, but he did not get the speaking turn. *George's interruptive words were not on the topic being discussed; he was going to start a new topic. **Inter disregarded George's interruption and continued with the current topic. In an unsuccessful turn attempt, the individual begins speaking but for some reason is not given the floor by other participants; in this case, it appears to be because George's comment was not on topic.

Simultaneous Turns

Group 1, fall 1989

George: Are you going to [take it?]

Jennifer: [I take it] next Saturday.

In this sequence, Jennifer answers George's question while he is still asking it. They both speak simultaneously, and they both have speaking turns simultaneously, but Jennifer has not interrupted George because the flow of conversation is not disrupted. Although this may be an example, also, of

completing a speaker's utterance, perhaps as backchanneling, this is a simultaneous turn.

A second example will clarify simultaneous turns:

Group 4, Spring 1991

Wayne: Children will learn fast.

Inter: yeah, pick it up fast, yeah, and they speak it with
[a perfect accent]*

Wayne: [but the most]* important is to to give him the
kids development

In this example, Wayne spoke simultaneously with Inter, not completing his utterance, but adding to the topic of conversation. However, this is not an interruption, but both parties contributing to the development of the topic.

Backchannel Cues

Group 3, fall 1990

Inter: You understand each other [no no] difficulty.

Jane: [yeah sure]

Here, Jane is acknowledging that what Inter has said is true and that she is following the conversation.

Group 5, fall 1991

Lou: biochemistry

Inter: biochemistry?

Lou: yeah biochemistry

In this example, Inter has backchannelled and Lou has also backchannelled to signal that Inter did indeed understand correctly.

Speaker Gaze at Turn Beginning/to Take a Turn

Group 1, fall 1989

George: You see they can understand me when I'm speaking
 (As soon as George begins saying "you", he looks up at the listeners to indicate he is taking the turn. When he says "When", he looks away from the listeners to indicate he has the floor.)

English but if they have difficulty to understand me even though but sometimes I just ask them to repeat.

Constant Speaker Gaze while Speaking

Group 4, spring 1991

Mindy: I mean pronunciation is quite different from each other and the local broadcasting is given in Cantonese.

Here Mindy maintains her gaze at Inter throughout the entire utterance.

Speaker Gesture During a Speaking Turn

Group 4, spring 1991

Mindy: only in that district people speak Cantonese.

While Mindy said "in that district people speak", she waved her hand in the air.

Constant Listener Gaze Directed at the Current Speaker

Group 4, spring 1991

Wayne: That's a problem. You know I try to find a kindergarten for him you know but my problem is right now I have no car. I try to buy a car, but right now I have no car.

The whole time Wayne is saying this, Rick is looking directly at Wayne.

All these cues that have been exemplified are elements exhibited by these Mandarin speakers during their conversation. Chi-Square and Spearman tests were performed on various combinations of these turn-taking behaviors, length of stay, interaction, and the two dictation tests. In addition, general trends in the conversation of each group were noted. The specific results of these analyses are discussed in the following chapter.

CHAPTER IV

RESULTS AND DISCUSSION

Once the students arrived for the study, several problems with the groupings emerged. First of all, in most groups, there was one individual who, for whatever reason, did not participate in the conversation. In group 1, fall 1989, the subject was Tim. In group 2, spring 1990, the subject was Linda. In group 3, fall 1990, it was Hilda. In group 4, spring 1991, everyone participated. In group 5, fall 1991, the non-participant was Lou. Because these individuals did not participate in the conversation, they either have no or very few (three or fewer) turns; for this reason, in the statistical analyses of the turn-taking, these non-participating subjects are not included, which reduces the number of subjects in group 1 to 2; in groups 2, 3, and 5 to 3; and the total number of subjects to 15.

Although all subjects in group 4 participated, two additional problems arose with this group. First of all, Wayne, Rick, and Rick's wife Lynn arrived thirty minutes late; this means that Mindy and Doug were in a group conversing by themselves and Wayne, Rick, and Lynn by themselves. In the statistical analyses, however, Wayne, Rick, Mindy, and Doug are combined since they are in the same length of stay group. This causes the total number of turns

for group 4 to be larger because the turns did not have to be divided between three conversational participants.

In addition to this problem of Wayne, Rick, and Lynn arriving late, the presence of Lynn in group 4, spring 1991, is a problem. Unlike the actual subjects in this group, Lynn has been in the United States for two months (the length of time group 5 has been here). Lynn participated in the conversation and took the dictation test. However, because her length of stay in the U.S. is shorter than that of the group she participated in, her turns are not included in any of the statistical analyses.

Another problem arose with group 3, fall 1990. Three subjects participated in the conversation. However, they did not speak in English very much. Of the fifteen minutes of recorded conversation, only five minutes were in English. In the remaining ten minutes, the subjects spoke in Chinese or were silent. Any questions or comments made by the intermediary were answered with brief answers. The subjects did not converse freely in English like the other groups did.

The subjects scores on the TOEFL and both dictation tests cover a wide range. The nineteen selected subjects (excluding Lynn, the wife of a subject in group 4) scored from 50 to 100 on the second dictation (D₂), given for this study. The mean score is 87, the median 89, and the mode 93 (three occurrences).

See Table VIII below for a detailed breakdown of all the subjects' scores.

TABLE VIII
 MEASURES OF CENTRAL TENDENCY FOR TOEFL, D1, D2,
 AND LENGTH OF STAY FOR EACH GROUP

	Group					
	1 Fall 1989	2 Spring 1990	3 Fall 1990	4 Spring 1991	5 Fall 1991	whole group
Measure						
TOEFL						
range	567- 607	557- 633	573- 667	573- 600	573- 630	557- 667
mean	584	589	604	584	598	592
median						587
mode						573, 557
Length of Stay (# of months)	26	22	14	10	2	14.8
D1						
range	50-72	50-94	50-98	50-89	50-91	50-98
mean	57	61	62	60	60	60
median						50
mode						50
D2						
range	70-95	83-100	85-100	78-97	50-93	70-100
mean	85	92	89	89	80	87
median						89
mode						93

The breakdown of these scores for individual groups is as follows. For group 1, the range of scores on D₂ is 70 to 91 with a mean of 85. For group 2, the mean is 92; the range of scores on D₂ is 83 to 100 with a mean of 92. For group 3, the range of scores on D₂ is 83 to 100 with a mean of 89. For group 4, the range of scores on D₂ is 78 to 97 with a mean of 89. And for group 5, the range of scores on D₂ is 50 to 93 with a mean of 80.

To test the correlation of D₂, taken for the purposes of this test, with D₁, taken upon arrival at OSU, and with the length of stay, the Spearman Rho correlation test was applied. It was expected that the two tests would have a strong positive relationship. However, D₁ and D₂ correlated with a rho value of .670 which results in probability of < .01, with 19 subjects. This low correlation is very surprising considering the fact that these two forms of the dictation test purport to measure the same construct. Although the probability is < .01, there is not a very strong positive relationship. This low correlation may be because most subjects' scores on D₂ are much higher than on D₁. There is a strong possibility that the second dictation test is much easier than the first dictation test which would cause a ceiling effect on the scores; in addition, except for the fall 1991 group, D₁ was taken quite some time ago, allowing time for improvement in the subjects' English proficiency.

Because D₂ was taken, for all but the fall 1991 group, after spending at least one semester in the United States, it was expected that there would be a relationship between this test score and the subjects' length of stay in the United States. It was expected that the longer a person has been in the U.S., the higher their score on D₂ would be. However, there is not a significant relationship between the subjects' performance on D₂ and how long they have been in the United States. The rho coefficient is .138, which with nineteen subjects, results in $p > .05$. So the length of stay in the United States does not seem to have an affect on the subjects' performance on D₂. This result is surprising. This may be explained by the fact that everyone's scores, with the exception of one, on D₂ were quite a bit higher than their scores on D₁. Perhaps D₂ is easier than D₁. Some of the subjects did make this comment after finishing D₂. It is interesting to note that the scores on D₂ are generally higher for students who have been in the United States longer, as would be expected since the longer they are attending classes and interacting with NSs, the more their listening comprehension will improve; in spite of this, however, the correlation was not significant.

Another possible cause for the insignificant relationship between the subjects' performance on D₂ and how long they have been in the United States is differences in interaction. It is logical that the more interaction with NSs the subjects have, the more their listening comprehension

and overall proficiency will improve. For this reason, subjects who have been in the U.S. longer but who do not interact with NSs very much could have scored lower on the second dictation test.

In addition to correlating the two dictation tests, the turn-taking in the latter five minute segment of each videotape was analyzed in detail. The latter five minute segment was selected because in some groups, one or two subjects arrived up to five minutes late. The latter five minute segment section, therefore, would involve all the participating subjects and would also occur during ongoing conversation rather than near the beginning introductory section of the conversation.

Before discussing the specific quantitative results obtained from the analysis, general trends in the turn-taking and conversation of each group will be discussed. Group 1, fall 1989, were the most native-like in their conversation. They readily interacted with the intermediary. They asked questions, responded with long discourses at times, backchannelled at appropriate moments, and freely spoke English with each other. Near the end of the fifteen minutes when Tim arrived for the first time and began speaking English with George, Jennifer immediately turned to the intermediary and began a conversation.

Group 2, spring 1990, was quieter than group 1; this may have been caused in part by the personalities of the individuals who seemed to be less talkative by nature. This

group, unlike group 1, did not take any long turns and did not converse as freely in English, although they did not speak in Chinese at all. Their overall backchannelling and eye contact appeared acceptable, but they gestured less.

Group 3, fall 1990, spoke as little as possible in English. When asked a question by the intermediary, the members would respond as succinctly as possible. None of the subjects took a long speaking turn in English. The majority of the fifteen minute session consisted of the subjects speaking in Chinese. On this videotape, during the Chinese discourse, the backchannel cues used appear to be very similar to that of NS of American English--head nods, eye contact, utterances such as mmhmm and ohh. When speaking in Mandarin, they, however, appeared to gesture less frequently than English NSs perhaps would.

Mindy and Doug in group 4, spring 1991, each exhibited different trends in their conversational behavior. Mindy took turns and participated in the conversation very freely, with native-like backchanneling and eye contact. Doug, however, did not speak freely and appeared to be uninterested in any of the conversation. His backchannelling did not appear to be as native-like as that of Mindy. Doug may be a quieter and less interactive individual than Mindy to begin with.

The other part of group 4, Wayne, Rick, and Lynn, were also mostly very native-like. Wayne and Lynn (although she had only been in the U.S. for two months) were more native-

like than Rick. They both backchannelled freely, interacted freely in the conversation, and aggressively took part in the conversation. Rick, on the other hand, did not participate as much; again, this is possibly a personality factor.

For each of the five groups, the following turn-taking behaviors were counted: successful turns obtained without interruption; successful turns obtained with interruption; unsuccessful turn attempts; simultaneous turns; backchannel cues; speaker gaze at the beginning of a turn/to take a turn; constant speaker gaze while the speaker is talking; speaker gesture during a speaking turn; constant listener gaze directed at the current speaker. In addition, the presence and absence of the following items were counted: backchannel cues; constant speaker gaze while the speaker is talking; speaker gesture during a speaking turn; constant listener gaze directed at the current speaker. These are the turn-taking behaviors found to be important based on the pilot study and on claims made by other researchers as discussed in Chapter II, as discussed earlier in this chapter. (Refer to Appendix F for tables detailing these specific behaviors for each group.)

Overall, group 4, spring 1991, took the highest number of successful non-interruptive turns--52; however, it must be remembered that group 4 was divided into two different segments thereby probably giving each participant a larger number of turns. In addition, group 4 did not have an individual who did not participate in the conversation.

Group 2, spring 1990, had the second largest number--39; groups 1 and 5--30; and group 3--25. (Appendix F)

Groups 3, fall 1991, and 1, fall 1989, exhibited the largest number of turns obtained through interruption. Groups 4 and 5, fall 1991, exhibited the largest number of backchannel cues excluding listener gaze. Groups 5 and 2 exhibited the most listener gaze. Overall, various groups exhibited various numbers of each behavior and type of turn. A generalization cannot be made from these numbers in Appendix F as to which group has the most native-like turn-taking.

After counting these types of turns and behaviors, many Chi-square tests were run on various combinations of these successful and unsuccessful turns, backchanneling, and non-verbal cues. The Chi-square tests provided some interesting results, some which were predictable and some which were very surprising.

First of all, two Chi-Square tests were performed to determine the relationship between the number of successful and unsuccessful turns for all the subjects and 1. the presence vs. absence of speaker gesture at turn beginnings and 2. the presence vs. absence of constant speaker gaze while speaking. Neither test produced significant results. (See Table IX below.) Therefore, it can be concluded that Mandarin speakers do not take turns more or less successfully depending on whether a speaker gestures while taking a turn or whether the speaker constantly gazes at the listener.

TABLE IX

RELATIONSHIP BETWEEN THE PRESENCE/ABSENCE OF TWO VARIABLES
AND NUMBER OF SUCCESSFUL VS. UNSUCCESSFUL TURNS

Variables	Test	Value	df	Probability
Presence/absence of speaker gesture at turn beginning vs. # successful/unsuccessful turns for all subjects	Chi-Square	1.107	1	p = .29275
Presence/absence of constant speaker gaze while speaking	Chi-Square	.6662	1	p = .41437

One of the major purposes of this study was to determine if there is any relationship between the dictation score obtained upon matriculation at OSU and the turn-taking. A Chi-square comparing high and low dictation score groups for D₁ (a score of 70 or more being high and a score of 55 or less being low) was run. See Table X below.

TABLE X

RELATIONSHIP BETWEEN D₁ SCORE (HIGH AND LOW GROUPS) AND
NUMBER OF SUCCESSFUL VS. UNSUCCESSFUL TURNS

Group	# Successful	# Unsuccessful	Total
High Group	49	0	49
Low Group	132	6	138
Total	181	6	187

NOTE: In this test, successful turns include both interruptive and interruptive turns that were successfully obtained.

Pearson Chi-Square = 2.201 1 degree of freedom
p = .138

According to the Chi-square test, the probability of the dictation score affecting the turn-taking was .138, which is far from significant. These results are not particularly surprising, however, considering that the dictation score is indicative of listening comprehension and not the oral production skill. That is, an individual could be a very good listener but be a very unnative-like speaker. In addition, this dictation score, for the majority of the subjects, is no longer indicative of their current proficiency because, for some groups, the test was taken more than a year previously. That is, many of the subjects who fell into the low group on the first dictation results no longer fall into this low category.

Another Chi-Square was computed for D₂ high and low scoring groups and the number of successful vs. unsuccessful turns. For this test, since most subjects scored above 70 on the second dictation, the groups were divided differently: The high group contained the seven subjects with the highest scores (range from 50 to 87; mean = 79) and the low group the seven subjects with the lowest scores (range from 91 to 100; mean = 95). The table follows.

TABLE XI

RELATIONSHIP BETWEEN D₂ SCORE (HIGH AND LOW GROUPS) AND
NUMBER OF SUCCESSFUL VS. UNSUCCESSFUL TURNS

Group	# Successful	# Unsuccessful	Total
High Group	107	5	112
Low Group	67	1	68
Total	174	6	180

NOTE: In this test, successful turns include both interruptive and interruptive turns that were successfully obtained.

Pearson Chi-Square = 1.17683 1 degree of freedom
p = .278

Again, in this test, there is not a significant relationship between dictation score and successful turns. A problem with both of these Chi-Squares is that there are cells with less than five; for a Chi-Square to be completely reliable, all cells must contain at least five. In any case, it can be concluded that there is not a relationship between performance on a dictation test and ability to take conversational turns.

This test does not support Lee's (1981) claim that proficiency affects turn-taking. According to Lee, as discussed previously in Chapter II, the more proficient subjects will take turns more like NSs because they can better identify grammatically complete utterances and other

turn-taking cues. This data, however, contradicts Lee's claim. According to this test, proficiency, as measured by the dictation test, does not affect the number of successful and unsuccessful turns taken by the subjects.

The primary independent variable in this study, however, is length of stay. The hypothesis is that the length of time a person has lived in the United States and been exposed to native speaker discourse has a direct bearing on a person's ability to take native-like turns in conversation. Native-like turns, in this study, are characterized by the criteria set forth at the end of Chapter III. The assumption is that native speakers for the most part exhibit these behaviors when participating in conversation. To determine whether length of stay has a significant relationship with any of these turn-taking factors, several Chi-Square tests were run.

According to the statistics, there is a significant relationship between length of stay and the number of successful (both uninterruptive and interruptive) turns vs. the number of unsuccessful turns. See Table XII on the following page.

The Chi-Square analysis resulted in p of .041. This is significant at the .05 level. For this test, the phi coefficient is .231 which indicates that approximately 23% of the variance in this relationship is accounted for by the length of stay. So there is a significant relationship between length of stay and successful vs. unsuccessful turns. This would indicate that perhaps length of stay does affect

the number of successful turns a person can obtain in conversation.

TABLE XII

RELATIONSHIP BETWEEN LENGTH OF STAY (LOS) AND NUMBER OF SUCCESSFUL VS. UNSUCCESSFUL TURNS

LOS--Group	# Successful	# Unsuccessful	Total
1, Fall 89	32	4	36
2, Spring 90	39	1	40
3, Fall 90	25	0	25
4, Spring 91	55	0	55
5, Fall 91	30	1	31
Total	181	6	187

NOTE: In this test, successful turns include both interruptive and non interruptive turns that were successfully obtained.

Pearson Chi-Square = 9.956
p = .041

4 degrees of freedom
Phi coefficient = .231

However, two problems exist. First of all, because group 4, spring 1991, had four subjects, more than any other group, they have a larger number of total, successful, and unsuccessful turns. This factor alone may have artificially inflated the cells and caused the results to be significant. Secondly, because all of the unsuccessful turn cells contain

less than five, the results of this test are quite weak. Therefore, it would only tentatively appear that length of stay does have a significant effect on Mandarin speakers' turn-taking.

Because of the variation in number of subjects in each group, and because of the statistically suspect results of the Chi-Square between length of stay and number of successful vs. unsuccessful turns, it was decided to control for group size. The groups were divided into two: groups with two subjects (fall, 1989; one part of spring, 1991) and groups with three subjects (spring, 1990; fall, 1990; fall 1991). On the combination of length of stay (by group) and size of group, several tests were run. Refer to Table XIII on the following page for the test results.

The results of these Chi-Square analyses are interesting. It was predicted that, because length of stay, regardless of group size, significantly affected successful turns, that with the same number of subjects in each group, there would also be a significant relationship between turn-taking cues and length of stay. However, these results indicate that when group size is accounted for, length of stay does not affect turn-taking behaviors.

It is also interesting to compare the results of these dyadic and non-dyadic groups with what Beattie (1983) claims about group size and interruption. As previously discussed in Chapter II, Beattie claims that interruption is more frequently used in non-dyadic groups than in dyadic groups.

In the data from this study, however, the opposite is true. In the two dyadic groups, a total of three interruptions occurred whereas in the groups of three, only one interruption occurred. These numbers are, of course, far too small to be able to make generalizations and are probably also affected by length of stay and amount of interaction. However, the numbers here directly contradict Beattie's claim.

TABLE XIII

CHI-SQUARE TESTS DETERMINING RELATIONSHIPS BETWEEN LENGTH OF STAY/SIZE OF GROUP AND SEVERAL VARIABLES

Variables	Test	Value	df	Probability
Length of stay/two person groups vs. # of successful/unsuccessful/simultaneous turns	Chi-Square	5.350	2	p = .0689
Length of stay/two person groups vs. # of successful/unsuccessful turns	Chi-Square	4.349	1	p=.0370**
Length of stay/two person groups vs. # successful non-interruptive/interruptive turns	Chi-Square	.5192	1	p = .4712
Length of stay/three person groups vs. # successful non-interruptive/interruptive turns	Chi-Square	1.390	2	p = .4991
Length of stay/three person groups vs. # successful/unsuccessful turns	Chi-Square	.7643	2	p = .6823
Length of stay/three person groups vs. # successful/unsuccessful/simultaneous turns	Chi-Square	2.152	4	p = .7079

**Although this Chi-Square value is $< .05$, it is not considered significant because one cell consisted of 0 and another cell consisted of 4.

In addition to the combination of length of stay and group size, the relationship between overall length of stay and several variables, many of them the same as what were examined by group size, was examined. The results follow in Table XIV.

TABLE XIV

CHI-SQUARE TESTS DEMONSTRATING INSIGNIFICANT
RELATIONSHIPS BETWEEN LENGTH OF
STAY AND OTHER VARIABLES

Variables	Test	Value	df	Probability
Length of stay vs. presence/absence of backchannel cues	Chi-Square	6.479	4	p = .16612
Length of stay vs. presence/absence of constant listener gaze	Chi-Square	3.523	4	p = .47442
Length of stay vs. # successful/unsuccessful turns with speaker gaze	Chi-Square	5.79	4	p > .10
Length of stay vs. # successful/unsuccessful turns with speaker gesture	Chi-Square	8.029	4	p = .09051
Length of stay vs. # of successful/unsuccessful/simultaneous turns	Chi-Square	14.71	8	p = .065
Length of stay vs. # successful non-interruptive/interruptive turns	Chi-Square	3.633	4	p = .458

Again, no significant relationships between turn-taking behaviors and length of stay were found. Based on these analyses, it is clear that because a variety of variables have been tested with length of stay, and all the combinations produced insignificant results, that length of stay does not have the strong relationship on turn-taking that was expected. Regardless of whether all groups or groups of the same size are considered, how long an individual has lived in the United States does not affect a Mandarin speaker's turn-taking ability, except for the number of successful and unsuccessful turn attempts. This result is quite surprising but may be explained by the fact that a similar number of turn-taking behaviors, as examined in the Chi-Square tests, are exhibited by all subjects, regardless of their length of stay in the U.S.

In addition to dictation scores and length of stay, another major variable in this study is the amount of interaction with NSs that the Mandarin speakers report. The amount of interaction was determined from the subjects' responses to the questionnaire. (Refer to Appendix D for the questionnaire.) As with any self-reporting technique, the responses to this questionnaire may or may not be an accurate depiction of the type and amount of interaction these subjects actually have with NSs. However, for the purposes of statistical analysis, this questionnaire was perhaps the most logical option.

The questions were divided into two groups: 1. interaction with NSs and 2. exposure to NSs and to NSs speaking English. (See Appendix E for which responses were assigned to which category.) Further, each possible multiple choice response to each question was designated as being high interaction, low interaction, high exposure, or low exposure. For example, the response to Question 10 "In my house in Stillwater, I speak . . ." indicates high or low interaction with English or NSs. If the subjects chose answer (c) "only English", the response was coded as high interaction; if the subjects chose (a) "Chinese all the time" or (b) "mostly Chinese, but occasionally English", the response was coded as low interaction. On the other hand, the response to Question 5 "Did you take or are you currently taking English 0003?" indicates exposure to English or NSs. If the subjects answered yes, the response was coded as "high exposure to English"; if the answer was no, the response was coded as "low exposure to English".

The high and low interaction and exposure responses were tabulated in the following way for each subject. The subjects were assigned three numbers: a low interaction/exposure score; a high interaction/exposure score; and an overall interaction score. The low and high scores were obtained by adding the raw number of responses selected that fit into the low and the high categories. A high "low interaction" score indicates that the subject does not interact frequently with NSs. A high "high interaction"

score indicates that the subject does interact frequently with NSs. In addition, the overall interaction score was calculated by adding one point for each high interaction/exposure response and subtracting one point for each low interaction/exposure response. A high "overall interaction" score indicates that the subject interacts frequently with NSs and a low "overall interaction" score the opposite. Refer to Table XV on the following page for the three interaction scores assigned to each subject.

TABLE XV
INTERACTION SCORES FOR EACH SUBJECT

Subject	Group	Overall Interaction	High Interaction Score	Low Interaction Score
George	1	-2	8	10
Jennifer	1	2	10	8
Tim*	1	1	13	12
Linda*	2	13	18	5
Jane	2	-3	7	10
Shane	2	-6	6	12
Heidi	2	-4	7	11
Ian	3	-7	6	13
Hilda*	3	-9	5	14
Sean	3	-6	6	12
Joy	3	-1	12	13
Wayne	4	-2	8	10
Rick	4	-6	5	11
Mindy	4	5	15	10
Doug	4	-3	8	11
Jim	5	-4	4	8
Joe	5	-11	4	15
Nick	5	-8	2	10
Lou*	5	-7	6	13

* indicates non-participating group members.

After determining the overall interaction score for each subject, the relationships between interaction with NSs and specific elements of turn-taking behavior were examined. It was predicted that the more interaction a subject has with NSs, the more successfully he will take turns and use gaze and backchannel cues. Therefore, Chi-Square and Spearman tests were conducted to determine the relationships. The test results were significant as shown in the following tables.

TABLE XVI

SIGNIFICANT RELATIONSHIPS BETWEEN OVERALL INTERACTION
AND VARIOUS TURN-TAKING BEHAVIORS

Variables: Overall interaction score for all 15 subjects vs.:	Test	Value	Probability
# of successful turns	Spearman	.7288	p = .002
# of speaker gaze at turn beginning	Spearman	.7968	p = .0003
# of backchannel cues used	Spearman	.6030	p = .017

These Spearman tests indicate that the amount of interaction with NSs a Mandarin speaker has greatly affects the turn-taking behaviors. That is, the more a Mandarin speaker interacts with NSs, the more native-like the turn-taking will be. High interaction results in more successful turns, more frequent use of speaker gaze to obtain and keep a

speaking turn, more backchannel cues used. The Chi-Square test also produced significant results. See Table XVII.

TABLE XVII

OVERALL INTERACTION (HIGH/LOW GROUPS) AND PRESENCE/ABSENCE OF BACKCHANNEL CUES IN ALL TURNS

Group	Presence of Backchannel Cues	Absence of Backchannel Cues	Total
High Interaction	89	25	114
Low Interaction	58	34	92
Total	147	59	206

Pearson Chi-Square value = 5.62494
Phi coefficient = .16524

p = .01771
1 degree of freedom

For this Chi-Square, and for other following tests dividing overall interaction into high and low groups, the seven subjects with the highest scores constitute the high group and the seven subjects with the lowest scores constitute the low group, with the middle score being omitted. This Chi-Square shows that both groups use backchannel cues more than they do not use backchannel cues; however, backchannel cues are absent in only 28% of the high group's turns, while they are absent in 59% of the low group's turns. This seems strange, because as mentioned

earlier in this chapter, backchanneling in Mandarin appears to be very similar to English. It appears that the Mandarin speakers do not readily carry over their backchanneling behaviors into English. However, the more the NNSs interact with NSs, the more they backchannel.

In addition to significant relationships, some tests resulted in insignificant results between overall interaction and turn-taking behaviors. Refer to Table XVIII for the test results.

TABLE XVIII
RELATIONSHIP BETWEEN OVERALL INTERACTION SCORE
AND THREE VARIABLES

Overall interaction score vs.:			
Variable	Test	Value	Probability
# unsuccessful turns	Spearman	.081	p = .774
# speaker gesture	Spearman	.235	p = .399
# constant listener gaze	Spearman	-.007	p = .980

It is logical that the more an individual interacts with NSs, the more successful their turn-taking will become; thus, the insignificant relationship with unsuccessful turns. In addition, speaker gesture is a cue that the speaker is not giving up his turn, but this cue is not essential to

effective turn-taking. And finally, NSs tend not to look constantly at the speaker while listening to him, which the last correlation indicates the NNSs do not do. Therefore, because these Spearman tests correlate interaction with non-native-like turn-taking behaviors, it is a good indication that none of the correlations are significant.

One last combination of variables was tested. The overall interaction score was multiplied with the number of semesters each individual had been in the United States, thereby creating a number combining length of stay and interaction (termed lint). The purpose of doing this was to determine any effect that interaction and length of stay together have on turn-taking, since length of stay alone did not significantly affect turn-taking but interaction alone did. The results follow:

TABLE XIX

SPEARMAN RESULTS: SIGNIFICANT RELATIONSHIPS BETWEEN LINT AND USE OF BACKCHANNEL CUES; # OF SUCCESSFUL TURNS; USE OF SPEAKER GAZE

Length of stay/interaction vs.:	Test	Value	Probability
# of successful turns	Spearman	.539	p = .038
# of backchannel cues used	Spearman	.612	p = .0153
# of speaker gaze at turn beginning	Spearman	.537	p = .039

All of these results reinforce the hypothesis previously stated that length of stay alone does not result in more native-like turn-taking; it is interaction along with length of stay that affects the turn-taking. According to this table, interaction and length of stay together significantly affect the number of successful turns taken, the use of backchanneling, and the use of speaker gaze to obtain a turn.

Two tests did not produce significant results. The following table displays the results.

TABLE XX

SPEARMAN RESULTS: NO RELATIONSHIP BETWEEN LINT AND USE OF CONSTANT LISTENER GAZE; SPEAKER GESTURE

Length of stay/interaction vs.:	Test	Value	Probability
# of constant listener gaze	Spearman	.250	p = .368*
# of speaker gesture	Spearman	.211	p = .450*

Again, these insignificant correlations are good results of these particular tests; that is, they are indications of more native-like behaviors. Because NSs do not typically exhibit constant listener gaze, it is good that the first test is not significant. If it were significant, it would indicate that the subjects did exhibit constant listener

gaze, which is not native-like behavior. Regarding gesture, many NSs do not gesture a lot, so this cue of gesture to maintain a turn is not necessarily essential to keeping a speaking turn.

In conclusion, some interesting results were revealed from all these analyses. First of all, the statistical tests showed that the TELP dictation test does not in any way predict a Mandarin graduate student's ability to take and give turns in conversation. Statistical tests did not indicate any significant relationship between successful vs. unsuccessful turns and scores on dictation tests.

The statistical tests also indicated that length of stay does not have a strong effect on turn-taking. The only significant relationship is between length of stay and total number of successful and unsuccessful turns, $p = .041$. But the results of this Chi-Square are questionable since five of the cells are less than five.

The statistical tests support this idea that turn-taking improves with interaction. Specifically, the tests indicate that interaction significantly increases the number of successful turns and reduces the number of unsuccessful turns; that interaction significantly increases the use of backchannel cues in conversation; and that interaction with NSs increases the use of speaker gaze by Mandarin speakers to take a turn. It can be concluded from these results, then, that interaction with NSs has a strong affect on the conversational turn-taking of Mandarin graduate students.

CHAPTER V

IMPLICATIONS FOR FOR FURTHER RESEARCH AND FOR ESL/EFL CLASSROOMS

In spite of the significant findings reported in Chapter IV, there were some problems with the study. First of all, the statistics only included fifteen individuals, a very small sample size on which to base any conclusions. Second of all, the groups ended up being different sizes: two people in group 1, since the third person arrived two minutes before the taping ended; three people in groups 2, 3, and 5, since one individual in each of these groups did not participate in the conversation; group 4 was divided into two sessions, one being a dyad and one being a triad, including one subject's wife. However, in a study involving human beings, these factors of whether a person will talk or arrive on time are nearly impossible to control.

Another potential problem with this study was the use of a self-reporting questionnaire which may not have obtained reliable results as far as the actual amount of interaction each subject actually has with NSs.

The scope of this study is limited due to the small number of subjects (15) and the problems with the study. More extensive research is necessary to produce more reliable and generalizable results. First of all, this study should

be replicated using a larger sample of Mandarin subjects to test the validity of the results obtained here. In order to be able to realistically generalize the results to all ESL students, subjects from various language backgrounds should also be studied.

Furthermore, it is generally true that native speakers of a language other than English usually do not converse together in English. It was unnatural for these Mandarin speakers to talk together in English. (For this reason, the intermediary was present.) Therefore, to study NNS turn-taking in a more valid situation, it is necessary to examine NNSs conversing with whom they would naturally speak English--NNSs of English or NNSs English speakers of various native languages. In addition, it is essential to compare NNS turn-taking with NS turn-taking under similar conditions to obtain a clear picture of whether the NNS turn-taking behaviors actually interfere with communication with NS or not.

In spite of the obvious need for more extensive research on the turn-taking of NNSs and the problems with this study, the study produced some interesting results which can be summed up with three basic conclusions. First of all, a Mandarin speaker's TELP dictation score does not predict her turn-taking abilities. However, this is not surprising since dictation tests measure different constructs than what are needed for conversational turn-taking. For example, dictation tests measure general proficiency which includes the ability to hear and write the grammatically complete

sentences that were dictated. This demonstrates the construct of understanding grammar rules and the structure of the language. While a grammatically complete utterance can be a signal for an acceptable turn exchange point, this cue is just one of many. Turn-taking abilities require, for example, an understanding of the non-verbal cues displayed by the speakers and listeners; these cues are entirely unrelated to understanding the structure of English. In spite of the different constructs required, it would be expected that an individual with better general English proficiency would also be more successful at participating in conversation.

According to the statistics, however, this is not true.

Secondly, the analyses showed that length of stay only significantly affects the number of successful and unsuccessful turns attempts, not the more specific turn-taking cues and behaviors measured. Although length of stay affects the number of successful turns taken in a conversation, simply residing in the United States probably does not contribute to more successful turn-taking. That is, for an individual to improve in turn-taking behaviors probably requires interaction with NSs, more than simply residing in the U.S.

If a person has lived in the U.S. for a longer time, it is also assumed that the person has interacted more with NSs, thereby being exposed to NS turn-taking. However, this is not necessarily true as exemplified by the subjects in this study. The subjects who have been in the United States the

longest did not have the highest interaction scores, nor did they exhibit the largest number of native-like turn-taking behaviors. In fact, among all nineteen of the subjects, there was no specific trend for who interacted the most or for who exhibited the most native-like turn-taking behaviors.

The third overall conclusion is that interaction significantly affects the turn-taking of Mandarin graduate students. Specifically, interaction affects the number of successful turns taken, the use of speaker gaze to obtain a turn, and the use of backchannel cues. These three conclusions combined reveal some interesting implications for ESL/EFL classrooms.

First of all, most ESL/EFL teachers probably assume that the longer a person lives in the United States, the more native-like their conversation, and therefore their turn-taking, will become. But this study showed that length of stay in the United States results only in a larger number of successful turns, not an increase of particular turn-taking behaviors such as backchanneling, gesture, and eye contact. For this reason, ESL/EFL teachers need to realize that their students may not absorb the NS conversational skills as easily as would be hoped. This indicates that the teachers need to expose their students to NS conversations and turn-taking skills.

ESL/EFL may do this in a variety of ways. If the setting is an ESL classroom, finding conversational settings for the students will be much easier than in an EFL setting.

For example, the teacher could send the students to observe NSs conversing with each other and instruct the students to note conversational and turn-taking behaviors that differ from their native culture. Initially, simply observing would be more effective than sending the students to talk and observe turn-taking behaviors simultaneously; it is sometimes difficult to objectively observe while trying to interact in conversation with someone. After observing several times, the students could then talk to a number of NSs, in diverse settings, about various topics, and for different lengths of time to observe a broader sample of NS conversation and turn-taking.

The teacher could also plan in-class activities to expose the students to turn-taking behaviors. The teacher could show videotapes of television programs, talk shows, and natural conversations and have the students note the turn-taking behaviors. In addition, the teacher could have the students participate in various role plays and activities where they would actually have to talk and practice taking conversational turns in English. Role plays and activities involving natural conversation would also provide natural contexts for discussing what works and what does not work when trying to get a speaking turn in English.

The teacher must be aware that "normal" classroom activities do not require turn-taking. For example, during a discussion in which the teacher calls on students or even in which the teacher waits for the students to contribute, turn-

taking is not really required. The teacher elicits turns from the students by calling on them, in one case, and in the other case, before speaking, the students generally wait until there is silence or until the teacher elicits a response using eye contact. These types of discussions are sufficient as part of developing general oral fluency, but not for eliciting and encouraging the practice of turn-taking behaviors.

Regardless of the type of activity exposing the students to NS conversational turn-taking, the teacher must discuss the cues, for example backchanneling and gesture used by the NSs. So after the students have observed NSs or have talked to NSs, the class and the teacher could discuss the behaviors they observed. The teacher should point out differences between English and the native culture to increase the students' awareness of how English turn-taking differs. It would not be practical or beneficial to the students, however, to provide rules for what they must do when talking in English or to use the discourse terminology such as backchannel cues; native speakers are not even able to thoroughly discuss these ideas.

Simply discussing and pointing out the behaviors, however, is not sufficient to enable NNSs to more effectively converse in English. Practice is essential. Role plays, discussions, and conversations should be part of the curriculum to teach turn-taking. The teacher could videotape

the students, then have the students watch themselves and discern how their turn-taking differs from that of NSs.

These activities are very general and are by no means comprehensive ways to teach students about NS conversation and turn-taking. However, ESL/EFL teachers should be aware that the more exposure to and practice with conversational behaviors the students have in the classroom, the more effectively they will be able to communicate with NSs in real situations outside of the classroom.

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APPENDICES

APPENDIX A

METHOD OF SCORING AND TELP SCORING KEY

METHOD OF SCORING

The dictation test consists of a passage of approximately 90 words.

Step One:

In scoring a passage, circle all the errors as follows:

- a. each word deleted
- b. each word inserted
- c. each word distorted, either phonologically or morphologically
- d. every word or phrase transposed (e.g., "They seem all to agree" instead of "They all seem to agree.")

(Note: Ignore capitalization and punctuation errors.

Omission of word-endings like "-ly" or tense-markers like "-s" or "-ed" are errors, not spelling mistakes.)

Step Two:

Use the TELP Scoring Key to obtain the score for the dictation test.

TELP SCORING KEY

Number Wrong	Score
0	100
1	97
2	95
3	93
4	91
5	90
6	89
7	87
8	85
9	83
10	80
11	78
12	75
13	73
14	70
15	68
16	65
17	63
18	60
19	57
20	54
more than 20	50

APPENDIX B

PILOT STUDY: QUESTIONNAIRE AND TEST

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOUR BACKGROUND.
YOUR RESPONSES WILL REMAIN CONFIDENTIAL.

Name _____

TOEFL score: _____ Major: MA/MS or PhD _____

Country you are from: _____

Native language: _____

How many months have you been in the U.S.? _____

If you've been in the U.S. longer than this semester, what were you doing (i.e. working, intensive English, etc)?

And where did you live? _____

Number of years you studied English
before coming to the U.S.: _____

At what kind of school(s) did you study
English in your home country? _____

Do you have an American roommate? _____

Do you spend time with Americans outside of your classes? _____
If you do, in what situations do you interact?

And how frequently do you interact with them?

Would you be willing to participate in a follow up experiment
during the beginning of the fall semester? _____

This is a test of your listening comprehension skills. Your ability to understand university level academic lectures will be tested. You will listen to one short lecture and will answer multiple choice questions about it. Then you will listen to another lecture, slightly longer than the first one, and again answer multiple choice questions about the second lecture.

Before listening to each lecture, you will be allowed to read a brief description of the background to that lecture.

You may take notes on the paper provided. You may also refer to the notes while you answer the questions about the lecture. You may not refer back to your notes for the first lecture after you have begun working on the second lecture.

Lecture One: Body Waves

Background: This lecture is from a geology class. The professor has been talking about earthquakes and the different waves used to measure earthquakes. Immediately prior to this lecture, the professor has talked about surface waves which move only on or near the surface of the earth.

DIRECTIONS: Choose the letter that corresponds to the answer that best completes the sentence. Base your answers on the content of the lecture you just heard. You may refer to your notes.

1. Body waves move _____ a substance.
 - a) over
 - b) under
 - c) through
 - d) around
2. In addition to compressional waves, another type of body wave is _____ waves.
 - a) sheer
 - b) shiny
 - c) clear
 - d) primary
3. Another name for compressional waves is _____ waves.
 - a) primary
 - b) secondary
 - c) sequential
 - d) progressive
4. Compressional waves are made of _____.
 - a) a string of unattached air molecules.
 - b) a string of attached air molecules.
 - c) one long air molecule.
 - d) one air molecule divided into sub-molecules.
5. The movement of the air molecules in compressional waves when someone is speaking is like the movement of _____.
 - a) a rubber ball bouncing on the floor.
 - b) water spilling off a table.
 - c) billiard balls on a pool table.
 - d) a soccer ball rolling slowly across the field.
6. When someone speaks, the vibrating vocal cords produce energy which moves a molecule. This molecule then _____.
 - a) dissolves into many atoms.
 - b) attaches to another air molecule.
 - c) hits a nearby air molecule.
 - d) combines with a nearby molecule.

7. The path in which compressional waves travel from me to you when I am speaking is a _____.
- a) straight line.
 - b) curvy line.
 - c) circle.
 - d) parallel line.
8. The motion of the actual waves following the path from me to you when I am speaking is _____.
- a) circular.
 - b) back and forth.
 - c) vibrating.
 - d) up and down.
9. Compressional waves can be transmitted through _____.
- a) only gas.
 - b) only liquids.
 - c) only solids.
 - d) any material.

Lecture Two: The Marketing System

Background: This lecture is from an introductory marketing class which discusses the basic concepts in marketing. You need to know that an exchange is when two people trade something they have for what the other person has (like money for a book).

DIRECTIONS: Choose the letter that corresponds to the answer that best completes the sentence. Base your answers on the content of the lecture you just heard. You may refer to your notes.

10. A person must _____ to succeed in the marketing system.
 - a) rely on other people.
 - b) rely on their own ideas.
 - c) rely on chance opportunities.
 - d) rely on their immediate boss.

11. I wear size ten shoes. I go to a store that only has size four shoes and smaller, but that are inexpensive. For me, this store:
 - a) has price utility.
 - b) does not have price utility.
 - c) has form utility.
 - d) does not have form utility.

12. I live in New Orleans and want some snow skis in November. The store has time utility if it tells me:
 - a) they can order the skis from Denver.
 - b) they have the skis I want.
 - c) the skis will not be available until March.
 - d) skis are not available through them.

13. I need my skis by November. I go to a store in New Orleans, where I live, that sells skis. They do not have the skis I want but they can order them from Denver. This store has:
 - a) form utility but not place utility.
 - b) price utility but not time utility.
 - c) time utility but not place utility.
 - d) place utility but not time utility.

14. A store has place utility if it is located where _____ can occur.
 - a) marketing
 - b) possession
 - c) exchange
 - d) financing

15. I find shoes which are the right style, size, and price. As I prepare to pay, however, the clerk tells me I can not write a check. I do not any cash or credit cards with me. This store does not have _____ utility:
- a) form
 - b) possession
 - c) place
 - d) price
16. Anything that prevents a successful exchange lacks _____ utility:
- a) form
 - b) possession
 - c) place
 - d) time
17. Businesses who forget about the _____ do not last for long.
- a) consumer
 - b) boss
 - c) time
 - d) price
18. If _____ occurs, all utilities are present to some degree.
- a) marketing
 - b) trust
 - c) exchange
 - d) financing
19. Form utility is created by the _____:
- a) consumer.
 - b) store.
 - c) marketing system.
 - d) manufacturer.
20. Possession, place, and time utilities are created by the _____:
- a) consumer.
 - b) store.
 - c) marketing system.
 - d) manufacturer.

APPENDIX C

DICTATION PASSAGE

Although many students quickly learn how to use a computer, they actually have little knowledge about the development of these modern machines. In this chapter we present a brief historical development of computers and introduce some important computer concepts and terminology. We feel that a general knowledge about computers will help the student judge what can actually be accomplished with the aid of these machines.

APPENDIX D

MAJOR STUDY: QUESTIONNAIRE

Name _____ TOEFL Score _____

Are you working on your MA/MS or PhD? _____

What is your major? _____

What were your majors for your previous degrees? _____

I agree for the videorecording to be used. I understand that my name will not be used.

Signature _____

DIRECTIONS: For each question, please circle the letter of the response that is the most true for your experience.

1. My native language is
 - a. Mandarin
 - b. Cantonese
 - c. other _____ (name)
2. With my family in China I speak
 - a. Mandarin
 - b. Cantonese
 - c. a local dialect _____ (name)
3. I have been in the United States since
 - a. spring 1989
 - b. fall 1989
 - c. spring 1990
 - d. fall 1990
 - e. spring 1991
 - f. fall 1991
4. I took the TELP exam
 - a. spring 1989
 - b. fall 1989
 - c. spring 1990
 - d. fall 1990
 - e. spring 1991
 - f. fall 1991
5. Did you take or are you currently taking English 0003?
 - a. yes
 - b. no

6. In the courses in my major, most of my classmates are:
 - a. Americans.
 - b. international students.
7. In my classes, I sit near and talk with
 - a. Chinese students as much as possible.
 - b. American students as much as possible.
 - c. non-Chinese international students as much as possible.
 - d. I very rarely talk to the students in my classes.
8. I study for exams and other course requirements with
 - a. Chinese students as much as possible, and we speak Chinese.
 - b. Chinese students as much as possible, and we speak English.
 - c. American students as much as possible.
 - d. non-Chinese international students as much as possible.
 - e. I almost always study by myself.
9. In Stillwater, I live with
 - a. Chinese students only.
 - b. Chinese and American/other international students.
 - c. one or more American students.
 - d. one or more non-Chinese international students.
 - e. my family.
 - f. my family and one or more Chinese students.
10. In my house in Stillwater, I speak
 - a. Chinese all the time.
 - b. mostly Chinese, but occasionally English.
 - c. only English.
11. When I was in China, I had at least one American friend with whom I spoke English quite frequently.
 - a. true
 - b. false
12. When I attended university in China, I had
 - a. at least one American teacher.
 - b. two American teachers.
 - c. three American teachers.
 - d. more than three American teachers.
 - e. no American teachers.
13. When I attended university in China, I had
 - a. at least one British teacher.
 - b. two British teachers.
 - c. three British teachers.
 - d. more than three British teachers.
 - e. no British teachers.

- If you *did not* have American or British teachers for any classes in your university in China, go to #21.
- If you *had* American or British teachers for English or other courses in your university in China, answer #14, 15, 16, 17, 18, 19, 20.
14. I had American or British teachers for
 - a. one English language course.
 - b. more than one English language course.
 - c. courses in my major only.
 - d. English language courses and courses in my major.
 15. My American or British teachers held discussions in their classes
 - a. never.
 - b. once a week.
 - c. more than once a week.
 - d. every day.
 16. When these teachers held discussion in class, I participated
 - a. never.
 - b. once a week.
 - c. more than once a week.
 - d. every time there was a discussion.
 17. When participating in class discussions in English in China,
 - a. I talked a lot.
 - b. I gave short responses.
 - c. I did not participate.
 18. For courses in my major in China that were taught by American or British teachers, the teachers taught
 - a. only in English.
 - b. only in Chinese.
 - c. using an equal amount of English and Chinese.
 - d. No courses in my major were taught in English.
 19. I talked to these American and British teachers outside of class
 - a. only about schoolwork.
 - b. about schoolwork and about topics not related to schoolwork.
 - c. only about topics not related to schoolwork.

20. I talked to these American and British teachers outside of class
- once a day.
 - once a week.
 - several times a week.
 - once a month.
 - never.

If you do not have a job in Stillwater or at OSU, go to #27.

If you have a job in Stillwater or at OSU, answer #21, 22, 23, 24, 25, and 26.

21. Currently I work as
- a research assistant.
 - a teaching assistant.
 - a grader.
 - a different job on campus _____
 - a job off campus _____
22. In my job, I speak English
- only when I need to get help with something.
 - only on topics related to my work.
 - when I talk about work related topics **and** when I joke and have fun.
23. In my job, I speak **English** mostly
- with my professor.
 - with my colleagues who are not professors.
 - with both my professor and my colleagues.
24. In my job, I talk to **Americans**, both **students** and **professors**,
- several times a day, every day.
 - several times a day, but not every day.
 - once a day, every day.
 - more than once a week but not every day.
 - once a week.
 - never.
25. In my job, I have to speak English in order to get my work finished.
- yes
 - no
26. In my job, I never have to speak English.
- true
 - false

Everyone should answer the remaining questions.

27. When I worked in China, I had to speak in English
- a. never.
 - b. very rarely.
 - c. sometimes.
 - d. frequently.
28. In Stillwater, I have _____ American friends that I interact with outside of work and classes.
- a. one
 - b. two
 - c. 3-5
 - d. 5 or more
 - e. All the Americans I know I work with or have classes with.
29. I talk to my American classmates outside of class
- a. sometimes.
 - b. every day.
 - c. never.

APPENDIX E

QUESTIONNAIRE RESPONSES CATEGORIZED AS HIGH AND LOW
INTERACTION WITH NATIVE SPEAKERS AND HIGH
AND LOW EXPOSURE TO NATIVE SPEAKERS

High Interaction	Low Interaction	High Exposure	Low Exposure
		5a	5b
		6a	6b
7b, 7c	7a, 7d		
8c, 8d	8a, 8b, 8e		
9b, 9c, 9d	9a, 9e, 9f		
10c	10a, 10b		
11a	11b		
		12b, 12c, 12d	12a, 12e
		13b, 13c, 13d	13a, 13e
		14b, 14c, 14d	14a
		15c, 15d	15a, 15b
16c, 16d	16a, 16b		
17a	17b, 17c		
		18a, 18c	18b, 18d
19b, 19c	19a		
20a, 20b, 20c	20d, 20e		
		21b, 21c	21a
22c	22a, 22b		
23a, 23b, 23c			
24a, 24b, 24c	24d, 24e, 24f		
25a	25b		
26b	26a		
		27d	27a, 27b, 27c
28c, 28d	28a, 28b, 28e		
29b	29a, 29c		

APPENDIX F

A COUNT OF THE TURN TYPES, BACKCHANNELING, AND
NON-VERBAL CUES FOR EACH GROUP DURING
THE VIDEOTAPED CONVERSATION

GROUP ONE, FALL 1989

	Successful Turn, with No Interruption	Successful Turn, with Interruption	Unsuccessful Turn Attempt	Simultaneous Turn
George	17	1	4	3
Jennifer	13	1	0	0
Tim (non-participant)	3	0	0	0
Group Total	30	2	4	3

	Backchannel	Speaker Gaze	Constant Gaze while Speaking	Speaker Gesture	Listener Gaze
George	9	7	4	12	11
Jennifer	12	16	2	1	11
Tim (non-participant)	0	0	0	0	0
Group Total	21	23	6	13	22

GROUP TWO, SPRING 1990

	Successful Turn, with No Interruption	Succussful Turn, with Interruption	Unsuccessful Turn Attempt	Simultaneous Turn
Linda (non-participant)	3	0	0	0
Jane	12	0	1	0
Shane	11	0	0	0
Heidi	16	1	0	1
Group Total	39	1	1	1

	Backchannel	Speaker Gaze	Constant Gaze while Speaking	Speaker Gesture	Listener Gaze
Linda (non-participant)	0	1	0	0	0
Jane	10	8	0	2	19
Shane	10	5	0	4	14
Heidi	8	11	0	0	15
Group Total	28	24	0	6	48

GROUP THREE, FALL 1990

	Successful Turn, with No Interruption	Successful Turn, with Interruption	Unsuccessful Turn Attempt	Simultaneous Turn
Ian	7	0	0	0
Hilda (non-participant)	1	0	0	0
Sean	3	0	0	0
Joy	15	0	0	0
Group Total	25	0	0	0

	Backchannel	Speaker Gaze	Constant Gaze while Speaking	Speaker Gesture	Listener Gaze
Ian	2	1	0	0	8
Hilda (non-participant)	2	0	0	0	6
Sean	2	1	0	0	7
Joy	8	8	1	0	8
Group Total	12	10	1	0	22

GROUP FOUR, SPRING 1991

	Successful Turn, without Interrupting	Successful Turn, with Interrupting	Unsuccessful Turn Attempt	Simultaneous Turn
Wayne*	11	0	0	1
Rick*	5	2	0	2
Lynn (wife)*	10	2	2	1
Mindy**	20	0	0	1
Doug**	16	1	0	0
Group Total	52	3	0	4

*together in one group

**together in another group

	Backchannel	Speaker Gaze	Constant Gaze while Speaking	Speaker Gesture	Listener Gaze
Wayne	26	5	10	8	21
Rick	6	2	3	2	18
Lynn (wife)	10	2	6	2	16
Mindy	14	12	18	5	16
Doug	10	8	0	0	17
Group Total	56	27	31	15	72

GROUP FIVE, FALL 1991

	Successful Turn, with No Interruption	Successful Turn, with Interruption	Unsuccessful Turn Attempt	Simultaneous Turn
Jim	17	0	1	0
Joe	8	0	0	0
Nick	5	0	0	0
Lou (non-participant)	0	0	0	0
Group Total	30	0	1	0

	Backchannel	Speaker Gaze	Constant Gaze while Speaking	Speaker Gesture	Listener Gaze
Jim	25	2	2	2	21
Joe	9	2	10	10	11
Nick	4	2	1	1	22
Lou (non-participant)	0	0	0	0	0
Group Total	38	6	13	13	54

ALL GROUPS

	Successful Turns with Simultaneous Speaker Gaze	Successful Turns with Simultaneous Speaker Gesture	Unsuccessful Turns with Simultaneous Speaker Gaze	Unsuccessful Turns with Simultaneous Speaker Gesture
Group 1	23	13	4	3
Group 2	24	6	1	0
Group 3	10	0	0	0
Group 4	27	15	0	0
Group 5	13	8	1	0

NOTE: The non-participants' numbers are not included in the group total since they did not participate in the conversation. Likewise, the wife's numbers are not included because she is not the same length of stay as the other members of her group.

VITA (

Rebecca S. North

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Master of Arts

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