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INDIVIDUAL DIFFERENCES IN FOREIGNER TALK: FACTORS IN SUCCESSFUL COMMUNICATION WITH NON-NATIVE SPEAKERS

by

Tracey M. Derwing

A THESIS

SUBMITTED TO THE FACULTY OF

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Individual Differences in Foreigner Talk:

Factors in Successful Communication with Non-Native Speakers

Abstract

This thesis sought to address the following questions: a) are there significant individual differences in foreigner talk adjustments (FT) and, if so, can they be attributed to personality traits and/or experience with non-native speakers (NNSs); b) do NNSs differ from native speakers (NSs) in communicating with less proficient persons; c) what effect do various FT adjustments have on communicative success and d) are successful FT speakers good language learners themselves.

Subjects were eight experienced ESL teachers, eight naive NSs and eight high intermediate NNSs. Each subject was paired with a NS to obtain baseline data, and with a low proficiency NNS. The 48 dyads completed a two-way task (Find the Difference) and a one-way task (a film narrative) in which communicative success was measured through comprehension questions. The 16 NS subjects also completed the *Jackson Personality Inventory* and a questionnaire regarding their own language learning experiences.

The data from both tasks were coded for several conversational adjustments. Measurements were also made on the adjustment of lexical frequency in the film task. In addition, rate of delivery and information-type measures were made on the narratives of the 16 NS subjects. Finally, the NS subjects were divided into two personality categories in order to make comparisons based on group membership.

In answer to a) above, the relative contributions of experience and personality were not clearly isolated in the study; nonetheless, some systematic individual differences were shown to have an impact on communicative success.

Second, NNS subjects did not follow the NS FT pattern in that they made extensive use of conversational adjustments not only with NNSs, but also with their NS partners. NNSs made no adjustments in lexical frequency, unlike the NS subjects.

Overall, no conversational adjustments and only one measure of lexical frequency correlated significantly with success. A slowing of speech rate had a negative effect on communicative success, as did an increase in the proportion of background detail information. Finally, no relationship was found between successful FT speakers and good language learners.

The findings are discussed in light of current language acquisition theory and suggestions for further research are made.

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results were written, she read them through with an attention to detail and an eye for errors that I can only envy. Her companionship and our long discussions over countless pots of tea are deeply appreciated. Whenever I needed advice on statistical matters David Pearce of the department of sociology was willing to see me at a moment's notice. Janet Schwegel's meticulous formatting of the tables and text relieved me of an arduous task as well as considerable anxiety.

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which Bruce deserves) I am indebted to him for challenging me. When I became interested in applied linguistics, he encouraged me and it was he who taught me the value of the scientific approach to the investigation of language.

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CHAPTER ONE

INTRODUCTION

1.1 RATIONALE

This thesis is concerned with individual differences in the use of simplified registers, with particular reference to foreigner talk (FT), the speech adjustments made by native speakers (NSs) for the benefit of non-native speakers (NNSs). The importance of FT is reflected in the attention given to it in recent years by a number of scholars (in particular, Long 1980, 1981a, 1983a,b,c; Gaies 1977, 1981; Hatch 1978). This interest grew out of earlier studies in first language acquisition related to the input mothers provide for their children, as illustrated in the literature on what has been variously termed Baby Talk, Motherese, and, most recently, Caregiver Speech (CS).

A recent incident heightened my own interest in FT and led me to investigate individual differences in the degree of speech adjustments made for NNSs. Along with several other instructors, I was teaching ESL in a large adult education programme for recent immigrants. On the evening in question, a colleague, the teacher who had the beginners class, took in the front page of a newspaper — the headline of which was BUS STRIKE STARTS TOMORROW. She spent approximately forty-five minutes discussing the strike with her class, explaining carpools and the acceptability of hitchhiking during a transportation strike, rehearsing work and home addresses, etc. Since nearly all of the students depended on the bus to get to work, and since none of them had anything but the most rudimentary knowledge of English, this information was not only

timely, but extremely important to them. Furthermore, most of the students had no other source to tell them of the strike and the effect it was to have on them personally. After class, the teachers returned to their office. An individual who was teaching an intermediate level class noticed the props that the beginners' teacher had used that night and expressed absolute incredulity: "How ever did you tell them about the bus strike? I didn't say anything to my students. I didn't know how I could possibly explain a *strike* to them."

I wondered how long her students would wait for the bus the next morning. I also wondered why one person felt no hesitation in explaining information necessary to her students, regardless of their extremely limited English, while another avoided the subject altogether for fear of being unable to express it adequately, despite the fact that her class had a much better grasp of basic English.

Prior to this event I had noticed that certain teachers relished low level classes while others simply dreaded them. I was also struck by the predictable reaction of casual acquaintances upon hearing that I taught ESL. The first question was always with regard to the number of languages that I spoke; they invariably had difficulty with the notion that English is the only language necessary in a beginner class of varied backgrounds.

These incidents convinced me that a study of individual variation was warranted; moreover, if as I suspected, there turned out to be significant differences among individuals in the use of FT, I wanted to understand the nature and origins of these differences. It occurred to me that experience with NNSs would have a bearing on speech adjustment, but it was clear from my observations of long-time ESL teachers that experience alone

could not fully explain differences in speaker behaviour. Informally, I attempted to identify shared characteristics of the persons whom I knew to be successful communicators in beginner classrooms, and came to the conclusion that a study of personality traits might shed some light on other factors that contribute to the extent and success of speech adjustments made by an individual.

I also wondered if ESL teachers, either as a result of experience alone, or a combination of experience and personality traits, differed from speakers who have no regular contact with NNSs. Although several studies in the past have examined ESL teachers' speech, these have usually been conducted in the context of the classroom, while studies involving non-teachers have generally been either naturalistic observations at a place of employment (e.g., recorded telephone enquiries) or in what Long (1980) has termed quasi-experimental settings in which a practical compromise is reached between natural and fully controlled experimental settings. In order to isolate the effects of "teacher talk" as opposed to FT, I decided to compare ESL teachers and naive NSs under the same quasi-experimental lab conditions, in which unacquainted NSs and NNSs were brought together.

There may or may not be differences in the degree of speech adjustments made by ESL teachers and other NSs, but from previous studies (e.g., Henzl, 1973; Gaies, 1977; Long, 1980) we know that the adjustments themselves are of much the same types. We also know that simplifications are made by speakers of languages other than English (Meisel, 1977). It appears that the ability to adjust for another person is universal; however, is this skill the province of the NS alone? There is a

study (Porter, 1983) that indicates an ability on the part of NNSs to accommodate their speech to less proficient students of English; unfortunately, all NNSs in the experiment shared the same linguistic background, and this may have had an influence on the results. It is conceivable that the subjects were relying on their mutual knowledge of L1 in order to communicate effectively. It is not yet clear what the extent is of the control L2 learners have in gauging the needs of, and, in turn, making adjustments for less proficient learners whose first language is not the same as their own. For this reason, I asked a group of high intermediate L2 learners to participate in the same tasks I had given the ESL teachers and naive NSs. Their partners were advanced beginner students, whose first languages were unrelated to those of the subjects.

A finding of significant individual differences in FT would have far-reaching implications. FT is only one type of simplified register, along with CS and the speech addressed to aphasics, the deaf, mentally retarded, and other linguistically deficient persons. Although each of these registers has characteristics which are directly related to the nature of the respective addressee, they can all be viewed as manifestations of the same global skill. Thus, at the most pragmatic level there may well be individuals who are better suited than others for communicating with low level language learners or any other group of less competent speakers. This would suggest that educational and extended care institutions might consider training prospective employees in register-change skill if they are to be dealing with people who have severe linguistic limitations of any kind, regardless of source.

Clearly, a key value of "good" FT lies in successful communication.

Krashen (1980, 1981, 1985) has suggested, however, that FT has a second, equally important role: the promotion of language acquisition in adults. Just as CS has long been thought to benefit first language acquisition in childhood, Krashen's chief justification for his claim is based on the many similarities of FT and CS in contrast to adult NS-NS speech. He assumes that the arguments made for the impact of CS on L1 acquisition (e.g., Cross, 1977; Furrow, Nelson & Benedict, 1979) hold equally for FT and L2. Since the characteristics of slower rate, lower type/token ratio, overall wellformedness,[1] and reduced propositional complexity are common to both registers, Krashen argues that their purpose is also the same. Aside from citing the now familiar arguments made for a CS "rough-tuned" to the child's comprehension level, so as to provide optimal input for language acquisition, the principal evidence Krashen proffers in support of FT is anecdotal. Although his hypothesis is intuitively plausible, there is actually very little evidence to substantiate it. Nor were the experiments undertaken here designed to show a relationship between input and acquisition; they do, however, provide a basis for tantalizing speculation. Specifically, if there are significant individual differences in NSs' ability to communicate with foreigners, even in the ESL classroom, then we may unwittingly be experimenting with variations in the adequacy of input to the ESL student population. Krashen argues that comprehensible input is the primary factor in the acquisition of any language, whether by a child or an adult. Individual variation on the part of the NS, whether as a result of personality traits,

[1] In this discussion Krashen ignores the studies which cite extensive ungrammaticality in FT.

social background, or features of the interlocutor thus may provide a clue as to the relationship of successful communication and language development.

1.2 OVERVIEW

The remaining chapters of this thesis are organized as follows: In Chapter 2 I present a review of the characteristics of FT. The catalysts or "triggers" of FT are also discussed, as are studies of individual differences in register variation. Finally, investigations of the efficacy of register adjustment are outlined. Chapter 3 then provides an explication of the questions to be addressed in this thesis, while the actual experiments and the main experimental findings are discussed in Chapter 4. The final chapter contains an interpretation of the results of the experiments and a discussion of the practical implications for register adjustment skill. Suggestions for further research are also made.

CHAPTER TWO

REVIEW OF FOREIGNER TALK

2.1 RELATION TO OTHER SIMPLIFIED REGISTERS

The extensive CS/input studies undertaken in the 1970's in the field of L1 acquisition have had a major influence on research directions in the newer discipline of L2 acquisition. The findings of systematic modification of language addressed to young children are all the more interesting in light of the discovery that NSs also alter their speech for adult L2 learners. The first investigations of speech modification in both CS and FT were concerned with the description of the linguistic nature of the adjustments themselves. Initially it seemed as though CS and FT were very different in kind: numerous studies confirmed that CS is characterized by a high degree of wellformedness, "here and now" content, phonological clarity, brevity, high pitch, etc. (Newport, Gleitman & Gleitman, 1977; Furrow, Nelson & Benedict, 1979; Garnica, 1977), whereas early studies of FT identified ungrammatical sequences, content unrestricted in terms of space and time, increased volume, and exaggerated pronunciation (Ferguson, 1975; Wagner-Gough & Hatch, 1975). However, as more investigations of FT were undertaken, it became apparent that CS and FT do have many common features, some linguistic and some pragmatic, not the least of which is a shared underlying motivation to enhance communication. As interest in these simplified forms of speech grew, researchers concerned with the language training of language deficient NSs, such as aphasics, the deaf and the mentally retarded, began to examine the linguistic input provided by hospital staff,

speech pathologists, etc. In each instance there was evidence of modification to accommodate the communicative abilities of the interlocutor.

Ferguson (1971, 1977) has called FT and CS "simplified registers", which he suggested are available to all NSs. The definition of register often accepted in the L2 literature is that of Halliday *et al.* (1964, p. 87): "a variety of language distinguished according to use, where the critical differences rest in the grammar and the lexicon". Hasan (1973) elaborates in suggesting that register can vary along five dimensions in a given discourse: subject matter, situation type, participant relationship, mode (speech acts), and medium. According to Hasan, a change in any single factor would result in a register shift, and although any one factor may vary independently of the others, there is naturally considerable interaction. Ferguson (1977) has identified FT and CS as simplified registers under the assumption that a modified, simpler version of the standard register is activated because of certain characteristics of one of the participants in a discourse (e.g., an L2 learner or a young child).

It would seem, then, that there is a difference in kind between FT (and CS etc.) and the registers studied by sociolinguists such as Labov (1966, 1970), whose work focuses largely on registers which differ in degree of formality according to situation and medium, among speakers of rough parity in competence. The primary intent in employing a simplified register is to ensure basic comprehension, whereas social registers impart information at a much finer level. This is not to say that the register dimensions identified by Hasan do not influence simplified registers: CS and FT are distinguished to a significant extent by both the

differences in participant relationships and by subject matter. However, the linguistic adjustments of the NS for a less competent individual (a child, an L2 learner or a language-impaired person) appear to be of a unified type; one of the principal factors which determines differences in degree of adjustment seems to be the skill of the NS in the use of the simplified registers.

The following sections will describe research into FT. The characteristics of NSs' simplified language in various situations will be reviewed, as will the factors which trigger it. The number of studies which directly address individual differences in adjustments is relatively small, but there is a substantial amount of indirect evidence which indicates that research in this area is warranted. The investigations which demonstrate considerable individual variation within a simplified register are examined here. There has been a great deal of debate concerning the efficacy of simplified registers, particularly CS. Although few would dispute their communicative value, the possibility that they may enhance language learning is a contentious issue. The arguments and evidence brought to bear in this matter appear at the conclusion of this chapter.

2.2 CHARACTERISTICS OF FT

The approaches to describing FT have changed considerably since Ferguson (1971) first took a serious interest in the phenomenon. He saw the study of simplified registers as a possible key to underlying representations; that is, he was convinced that the study of FT would provide insights for theoretical linguistics. Now, fifteen years later, there

is still an interest on the part of a group of scholars as to the theoretical implications of FT and its relationship to the general process of simplification (see Andersen, 1983), but the main thrust of much of the current FT research is in relation to L2 acquisition. Along with this change in focus there have been changes in the data collection methods employed, which in themselves have had an impact on results. A study by Snow, van Eeden & Muysken (1981) is a case in point. Although there is clearly a considerable degree of uniformity in terms of syntactic measures of FT across a variety of procedures, Snow *et al.* found an interesting discrepancy when they compared two common methods of data collection. They discovered that the preferred word order in Dutch FT differed depending upon whether the NS was asked to imagine a situation with a NNS, or whether the NS was actually recorded in conversation with an L2 learner.

The means of data collection is not the only basis of disparities between studies, however. There is a noteworthy portion of the literature which has identified ungrammatical features as typical of the simplifying adjustments made by the NS, while another large body of research has found no indication of ungrammaticality in FT, although syntactic, phonological, lexical and conversational adjustments are regularly cited.

The following sections provide an overview of both grammatical and ungrammatical FT studies and the explanations which have been posited for the findings noted.

2.2.1 Ungrammatical FT

Ferguson is most closely associated with the type of ungrammatical FT (sometimes referred to as Tarzan Talk, e.g., by Hatch, 1983b; and Long, 1983a) represented in novels, radio dramas and the like. He conducted a study (1975) in which introspective data were elicited from college students who were asked to rephrase sentences in order that they might be understood by illiterate foreigners. Ferguson augmented his data base with instances of FT taken from a C.S. Lewis novel in which the protagonist conversed with a Martian. Ferguson found several unique linguistic features in these data, the most striking aspect of which was the extensive ungrammaticality: both sources gave many examples of determiner, auxiliary and copula deletions, missing inflections, ungrammatical negation, the use of infinitives rather than the inflected verb form, and the appearance of overt subject pronouns in imperatives. Using Ferguson's elicitation technique, Meisel (1977) replicated the study in three other languages (Finnish, German and French) and obtained similar results.

Hatch, Shapira & Gough (1978) also encountered ungrammatical FT in recorded exchanges between NSs and low proficiency NNSs. In the case of two NSs who had had ample exposure to NNSs, the authors noted that the NSs tended to copy certain aspects of the learners' speech: both employed it-deletion consistently in sentences such as 'Is important' and 'I don't think is good'. The authors also found evidence of features that had been identified earlier by Ferguson (1971, 1975): uninverted questions, missing inflectional morphology, and no+Verb negatives appeared with regularity in the NSs' speech. Copula deletion, one of

Ferguson's main features of FT, did not occur with any consistency in the speech of one of the subjects, though it was a relatively frequent adjustment made by the other one.

Snow *et al.* (1981) noted that many of the adjustments that Ferguson had found in English FT were characteristic of Dutch FT as well. Determiner, auxiliary and copula deletion, infinitive verb forms and pronoun deletion occurred to a varying extent in tape-recorded conversations between NS municipal employees and foreign workers in Amsterdam. Other features of FT, however, such as simplified negation, and provision of the subject pronoun in an imperative, were not evident in Snow *et al*'s data.

Additional evidence for ungrammatical FT has come out of Europe's *gastarbeiter* nations. Pfaff, (1981) for example, in a study of the sociolinguistic problems faced by guestworkers in Germany, reports that certain aspects of L2 speech, such as omission of inflections, substitution of infinitives for inflected verb forms, and the use of semantic extensions are also embodied in FT. The Heidelberger Forschungsproject "Pidgin Deutsch" (HPD) is a research group devoted to the study of the language of both the guest workers in Germany and the NSs who come into contact with them. They have found that although the features of German FT cited above superficially resemble L2 speech, many other speech characteristics of the NNS are not incorporated into the NS's simplified register which suggests that NSs are not simply 'matching' the NNS's output.

Clyne (1977, 1981) has reported similar findings in Australia, where the speech of non-English immigrants and their NS coworkers has been

compared. Although many L2 syntax characteristics are evident in Australian FT (copula deletion, missing auxiliaries and articles, etc.), they do not occur in the same proportions. In addition to the syntactic adjustments, Clyne has also identified phonological adaptations in FT where NSs adopt a foreign intonation pattern, as well as making certain segmental adjustments (e.g., some diphthongs are monophthongized, voiced fricatives and stops are devoiced, interdental fricatives become dental stops, etc.). Evidence for these adjustments comes not only from factory workers but also from the second generation families of non-English immigrants. In keeping with the finding that FT syntactic adjustments are related to but distributed differently from L2 speech errors, Clyne has found that the phonological adjustments in FT remain constant, regardless of the language background of the NNS addressee.

The studies discussed up to this point are representative of the literature on ungrammatical FT. They encompass several contexts (classroom, government offices, the industrial workplace, family conversations), various elicitation techniques (recorded conversations, NS intuitions, and text counts), and five different languages (Dutch, English, Finnish, French and German). The next section reviews grammatical FT.

2.2.2 Grammatical FT

One of the first investigations of FT showing no indication of ungrammatical sequences is that of Henzl (1978). In a study prompted by Ferguson's (1971) claim that FT is a simplified register, Henzl compared Czech speakers in controlled conversations with English-speaking students of Czech and with other NS Czechs. She found that the subjects

adapted their speech substantially for the benefit of the language learners in several respects: simplified syntax; phonological adjustments such as slow rate, increased volume and careful articulation; and simple, basic lexis. An unforeseen finding was the total lack of ungrammatical utterances: "all speakers without exception tended to speak to the foreign students in short, well-formed sentences" (p. 211). In a replication, Henzl (1979) found similar adjustments in the speech of English and German language instructors. Henzl concluded that the speech variety she had described was a form of FT, as defined by Ferguson (1971), but that it had an added situational constraint which precluded ungrammaticality. The very fact that her subjects were in a classroom setting was seen as a restriction on their linguistic output.

Hatch *et al.* (1978) were curious as to whether familiarity with learners provoked, if not an exact mirroring, at least a partial matching of their speech. Consequently they decided to conduct a study in which three NNSs placed telephone calls to typists, restaurant staff, and airline ticket agency staff. Interestingly enough, the service personnel did not employ ungrammatical constructions, although they did make many conversational adjustments for the L2 learners. Repetitions, paraphrase, a slower speaking rate, and checks for comprehension appeared in each of the telephone conversations. The authors speculated that perhaps ungrammatical sequences in FT are brought about by a combination of familiarity with L2 speech, good language learning aptitude and/or empathy towards the NNS.

Gaies (1977), intrigued by the studies of input to L2 learners, decided to conduct an experiment in order to assess whether ESL teachers use

particular communication strategies in addressing NNSs. He recorded two teachers for each of the four proficiency levels in an ESL program. He also recorded the same eight teachers talking to their peers in an ESL practicum course. Not only was there evidence of syntactic simplification (shorter sentences, fewer subordinate clauses, etc.), but the degree of simplification was positively correlated with the language level of the students. (Ellis, 1985 and Kleifgen, 1985 have also found evidence of a gradation of FT that is related to the linguistic proficiency of the learner.) Furthermore, Gaies noted three strategies or conversational devices which were particularly prevalent in the teachers' speech to low proficiency students: 1) repetition, 2) prompting and prodding, and 3) modelling (which entails both fragments – partial repetitions of students' responses and expansion of students' utterances). Gaies argues that these adjustments are parallel to simplifications and communication strategies in CS, and that the resemblance of the two registers implies a common language teaching function. He also maintains that the three strategies are less likely to be found in natural conversation between NSs and NNSs because of their pedagogic intent; he contends that their relative frequencies would distinguish ESL classroom language from natural conversation between a NS and an L2 learner.

A problem with this study lies in the differing natures of the NS-NNS language samples. We are not told what proportion (if any) of the samples from the classrooms is based on conversation as opposed to drills (which clearly constitute a substantial part of the data if Gaies' examples are representative). It is fairly safe to assume that the NS-NS data did not include formal drills of any type. It may be, then, that the three strategies

are in general characteristic of teacher language, regardless of the linguistic status of the addressee. A teacher conducting drills in a NS arithmetic class may exhibit as much reliance on these strategies as Gaies' L2 teachers. If, on the other hand, the strategies are indeed typical of ESL teachers' interactions with low level NNSs, we cannot conclude that other NSs will not make use of them with very low proficiency NNSs. Gaies did not collect data from 'natural' language situations, but assumed that the pedagogic value of the strategies would limit their usage in general conversation.

Gaies' suggestion that similar linguistic characteristics of CS and FT are indicative of the same language teaching function has been addressed by Freed (1981). She collected 100 utterances each from eleven NSs in conversation with NNSs, all of whom were students of approximately the same age and social background. Freed then contrasted these data with a comparable corpus of CS taken from a 1976 study by Newport. Both samples demonstrated highly intelligible, well-formed, simple, relatively brief utterances. In accordance with the assumptions of classical transformational-generative grammar (TGG), Freed interprets the finding that the children were exposed to a higher proportion of yes/no questions and imperatives than were the L2 adults as evidence for greater syntactic complexity in CS.[1] However, this difference aside, Freed argues that FT

[1]The notion that CS is syntactically complex is exemplified best in the work of Newport, Gleitman & Gleitman (1977). When the authors flatly assert that "mothers do not simplify syntax" (p. 130), they mean specifically that they do not do so in the direction indicated by generative grammar, more or less along the lines of the already defunct derivational theory of complexity. Newport et al. do concede that although they found no indication of simplified syntax (other than the obvious limitations imposed by low MLU), CS has numerous effects on the development of the child's syntactic system; for instance, the child's development of the auxiliary correlates positively with the number of Yes/No questions in CS and negatively with the number of imperatives.

and CS bear a strong syntactic resemblance. The crucial distinction between the two registers, she argues, has to do with their respective functions. Freed claims that the major function of CS is behaviour management, although she also credits CS with a language instruction function whereas she sees the purpose of FT as strictly information exchange. Freed suggests that although the difference in function of the registers is not clearly reflected in the syntactic adjustments made by adult NSs, it does become obvious in the choice of topic. She argues that FT is unrestricted in content, while CS topics are limited by the cognitive capacities of the child.

2.2.3 FT Discourse

The majority of the studies of FT conducted in the 1970's dealt with the adjustments made by the NS on behalf of the NNS, but without any real recognition of the role played by the NNS; in other words, as has been pointed out by Long (1980), the earlier FT studies are about input to the NNS rather than about interaction. As discourse analysis gained proponents in linguistics and L1 acquisition, a parallel interest in a broader approach to FT developed in L2 acquisition. The characteristics of the NS-NNS conversation became the focus of many investigations, and a new concentration on discourse related phenomena, which had largely been ignored, became the norm. For instance, Gaskill (1980) compared the NS's other-correction behaviour (overt correction of the interlocutor's language) in NS-NNS conversations with the correction patterns between NS-NS, as outlined by Schlegloff, Jefferson, and Sacks (1977). Gaskill

examined a 50 page transcript of four NSs' conversations with the same NNS. He found very little other-correction (as is usually the case in NS-NS interactions). There were two types of repair, however, that Gaskill claims appear more frequently in NS-NNS interactions than in NS-NS conversations; namely, correction for word search and correction of syntactic structure. In the former instance the NS is inclined to "fill in the blank" for a NNS who is obviously struggling to find an appropriate lexical item, while the latter involves a restatement of the NNS's utterance in a more standard form, as in the following example:

NNS: dependent with distance

NS: uh huh, it depends on the distance

Although Gaskill concedes that it is difficult to distinguish between syntactic corrections and restatements of the type sometimes made in NS-NS conversations, he nonetheless claims that many of the recasts can be interpreted as corrections. It is quite conceivable, in fact, that restatements, such as the example cited above serve an agreement function; alternatively, the NS may be checking his own comprehension through the use of a confirmation check, rather than consciously correcting the NNS. One solution to this identification problem may be to examine the intonation patterns of restatements: a confirmation check would presumably have rising intonation, a correction might evidence exaggerated stress on the changed portion of the utterance, while a simple agreement would undoubtedly have declarative intonation.

Gaskill's study raises more questions than it answers. Does the incidence of NS other-correction vary depending on the proficiency level

of the NNS outside the classroom environment? (Gaskill found that, of his four subjects, only the two ESL teachers made use of restatements, but he believes that other NSs also employ restatements.) Do individuals who themselves use ungrammatical FT ever correct a NNS's syntax?

In an attempt to verify the hypotheses that speakers make adjustments on the basis of accent, and that the adjustments promote communication, Arthur, Weiner, Culver, Lee & Thomas (1980) conducted a discourse oriented study in which they recorded telephone conversations held between 120 airline ticket agents, 6 NSs, and 6 NNSs. The conversations were all based on a script in which was embedded the question "What kind of plane is that?". Once the agent responded with the name of the plane, the caller asked "What kind of a plane is a (name)?". When the recordings from the NS and the NNS groups were compared, significant differences were found on the following measures: response length – utterances addressed to NNSs were shorter; grammatical complexity – though all utterances in both samples were grammatical, the language meant for the NNS was less complex; and type/token ratio – agents limited their vocabularies when talking with NNSs. In contrast with several other studies, Arthur *et al.* found no adjustment of speech rate for NNSs. Another measure, total number of "information bits", also differed significantly for the two groups of callers. NNSs were given less information overall, and the information they did receive was conceptually simpler than the information given to NSs. For example, agents were inclined to describe the plane to NNSs in terms of size or type (e.g., jet), but they provided NSs with complex information considerably more often; one or more of the following were specified nearly twice as often for the

NS: seating capacity, name of manufacturer, comparison with a specific aircraft, number and placement of engines, and seating arrangement. Arthur *et al.* concluded that the FT adjustments made by the NSs are systematic, and that they are made in order to aid the NNS's comprehension.

Abunahleh *et al.* (1981-2) identified a unique feature of FT in a study of repair. The authors had six NSs and twelve NNSs place ten phone calls each to a total of 180 randomly selected adults. The callers explained that they were doing a survey on food and nutrition as a class assignment and then proceeded to ask the subjects a series of seven questions. The callers all answered two of the responses with the phrase "Pardon me?" which, as the authors point out, can be used either when the listener has missed the utterance because of inattention or interfering noise, or when the listener has heard but has not understood the utterance. Abunahleh *et al.* hypothesized that the subjects would repair more of the utterances in question for NNSs than for NSs. They also thought that the subjects would assume a comprehension problem in the NNSs, and a hearing problem in the NSs. The first hypothesis was not borne out – there was no significant difference in the scope of overall repair; however, NSs did make different assumptions as to the cause of the communication breakdown, depending on whether they were speaking to a NS or a NNS. Nearly 65% of the repairs to NNSs were elaborations while only 50% of the repairs addressed to NSs fell into the elaboration category and 50% were simple repetitions. The authors took this finding to indicate an assumption on the part of the subjects that the NNS was more likely to have misunderstood and that therefore a simple repetition would be

inadequate. The repairs to NNSs were distinct in two other ways: they were significantly slower and louder than repairs addressed to NSs. Another measure, length of pause prior to repair, demonstrated that subjects tended not to pause before responding to either a NS or a NNS. The authors suggest that their findings are indicative of the automatic nature of FT, claiming that the lack of a pause signifies an unconscious response to a request for repair, rather than a considered assessment of the type of repair required. The finding that NSs increase the volume of the repair more often for NNSs is seen as additional evidence for the automaticity of FT. It is somewhat curious, given the authors' argument that the subjects assume a hearing or inattention problem more often in NSs, that volume is increased significantly more often for NNSs. It may well be the case that subjects are consciously making adjustments on a number of levels precisely because they do not know the nature of the communication failure. It may be easier to change several potentially relevant aspects of an utterance, (volume, content, speech rate, etc.) than to determine the precise source of the problem. The fact that there are more adjustments made for the NNS may point to the conscious realization on the part of the speaker that an L2 learner is more likely to have comprehension difficulties than is a NS. (It should be noted that Abunalfleh *et al.* did not ask the subjects whether they realized that their interlocutor was a NNS.) The degree of awareness of speech adjustment certainly cannot be estimated solely on the basis of the data in Abunahleh *et al.*'s investigation.

By far the most extensive investigation of the characteristics of FT discourse is Long's (1980) dissertation. Long was interested in

contrasting NS-NS and NS-NNS interactions to determine 1) what structural differences exist between them; 2) how such differences in the interactions affect language addressed to the NNS; 3) whether the type of interaction affects the nature of the input; and 4) whether there is a correlation between relative frequencies of certain morphemes in the NS's input and the NNS's acquisition of the same forms. In order to answer these questions, Long had 16 NS-NS dyads and a corresponding 16 NS-NNS dyads perform six tasks. First the subjects were introduced and asked to "get to know each other" for three minutes. Next they were asked to tell each other about their favourite movies. Then each individual was asked to play the game 'Odd Man Out' for five minutes. (This game consisted of ten lists of four words or names, one of which did not belong, e.g., Burt Reynolds, Woody Allen, Clint Eastwood, and Michael Caine, and the subjects were to arrive at a consensus as to which item(s) did not fit through negotiation.) A second game was then introduced, called 'Spot the Difference'. (This task involved two pictures which, although similar, differed from each other in twelve respects, and the subjects were asked to locate the differences without consulting each other's pictures.) Another set of measures was made on the speech of the NSs, who were asked to explain the instructions for the two game tasks to their partners. Finally, the dyads were asked to speculate as to what they thought the purpose of the study was. Long suggests that the six tasks can be categorized as 1) interactive tasks (the spontaneous conversation and the games) in which there is an exchange of information, and 2) non-interactive tasks (the movie narrative, the discussion of research and the instructions for the games) in which there is not necessarily an exchange

of information; that is, the information may go in one direction only.

Long examined the interaction structure through the use of NS measures such as conversational frames (boundary markers like 'well now'), confirmation checks (the NS's verification that s/he understands correctly), comprehension checks (to determine whether the NNS in fact understands), clarification requests (the NS asks for additional information), self-repetitions, other-repetitions and expansions. In addition, Long recorded grammatical information; syntactic complexity as measured by length and number of S-nodes, type/token ratio (TTR), sentence type, relative frequency of nine grammatical morphemes, and temporal marking of verbs.

In answer to Long's first research question, major differences in the shape of the interaction of a NS-NS dyad versus a NS-NNS pair were found. When talking with a NNS, NSs use significantly more confirmation checks, clarification requests, comprehension checks, repetitions (both self and other) and expansions. There was not, however, a difference in the use of conversational frames; in fact, extensive use of frames was found in language addressed to NSs and NNSs alike. (This need not imply that conversational frames do not facilitate the learner's comprehension. They may indeed assist the NNS in identifying new topics and the like, but they are not a unique feature of FT.). When he examined the spontaneous conversations, Long found a tendency in the NSs to talk to the L2 learners in the present more often than they did with NS interlocutors. He reasons that events or topics rooted in the present are easier for the NNS to follow. Gaies (1981) reports similar findings.

The answer to Long's second question, whether the interaction differences have an effect on the input to the NNS, was not as clear as the first. Although utterances tended to be shorter in speech addressed to NNSs, as has been noted in several studies (e.g., Gates, 1977; Henzl, 1979), there were various other measures, including TTR, relative frequencies of nine grammatical morphemes, and lexical frequency, for which there was no difference. Long (1981) argues that

> clearly, input and interaction often are related, but equally clearly, modification in one is possible without modification in the other (p. 268).

The purpose of the interaction appeared to have an effect on the adjustments made by the NS. Long combined the measures for each of the interactive tasks and compared them with the combined figures from the noninteractive tasks. The extent of the differences between speech to NSs and NNSs varies according to whether or not there is a need to exchange information. The interactive tasks evidenced more adjustment on the part of the NS in terms of both conversational features and grammatical complexity. However, no one adjustment was statistically significant across all of the interactive tasks.

Finally, the data indicate that NSs do not modify their use of grammatical morphemes when talking to NNSs. The input frequency order, although significantly correlated with Krashen's (Bailey, Madden & Krashen, 1974) proposed "average order" of acquisition, also correlated with the input frequency order for NSs.

In a detailed comparison of the use of questions in FT versus NS-NS speech, Long (1981b) found additional support for his position that it is the interaction that is substantially modified in NS-NNS conversations, and that as a consequence some of the linguistic forms may be modified. However, it is also possible that the forms themselves may not differ from those used in corresponding NS-NS exchanges. For instance, one of the characteristics which distinguishes NS-NNS interaction from NS-NS conversations is the former's almost complete reliance on questions in topic-initiation. NSs changed topics using questions 96% of the time when addressing NNSs, but only 62% of the time when talking with another NS. Of the 96% of topic-initiating questions, 50% take the form of WH questions; 40% are normal inverted Yes/No questions; 4% are uninverted Yes/No intonation questions, and 2% are tag questions. Although the rank ordering of question frequency is the same for NSs, the figures in the first two categories are dramatically lower: 30% WH questions, 20% inverted Yes/No questions, 4% uninverted Yes/No questions and 2% tag questions. In a comparison of the relative proportion of questions, declaratives and imperatives in NS-NS versus NS-NNS discourse overall (not just topic-initiating), Long found that fully 66% of the utterances to L2 learners were questions, 33% were declaratives, and 1% were imperatives, in contrast to the following figures for NSs: 16% questions, 83% declaratives, and 1% imperatives. This difference can be attributed in part to the high rate of topic-initiation in FT (50/261 utterances), as opposed to the NS-NS situation in which topic-continuing utterances were far more prevalent (606 out of a total of 656 utterances).

Long explains the NS's reliance on questions in "managing" a conversation with a NNS as a means of alleviating the burden on the L2 learner. He invokes many of the same arguments that have been made in CS research (Garnica, 1977) for the facilitative effects of questions: the question markers may signal the NNS's turn; questions compel participation; and questions provide at least a partial model for the expected response.

2.2.4 Summary of Characteristics

On reviewing the literature on FT it becomes apparent that there are numerous discrepancies across studies. Several researchers report instances of ungrammatical FT and suggest that certain patterns, such as copula deletion and it-deletion, constitute rule-governed behaviour. Other studies find grammatical utterances at all times, although simplified syntax, morphology, and several discourse adjustments are evident. It has been claimed that altering the structure of the language, i.e., simplifying the input, benefits the learner in two ways: 1) it improves communication and 2) it promotes language development (Hatch, 1983b). Others have argued that it is not input adjustments that are crucial, but the adjustments to the interactions. How can all of these seemingly conflicting facts and arguments be reconciled? At least part of the answer lies with the factors that elicit FT. In the next section the so-called 'triggers' which have been posited for FT are examined, and the explanations that have been put forward regarding the apparently contradictory data are discussed.

2.3 TRIGGERS

Brown (1977), in assessing the CS processes described by Ferguson (1977), claims that CS consists of two components -- a communicative clarification component and an affective expressive component. Furthermore, he argues that each component can be employed independently, resulting in two other registers, notably FT (the communicative clarification component alone), addressed to cognitively mature but linguistically inferior persons, and affective talk, addressed to lovers, pets, plants, etc. How does the NS identify a 'linguistically inferior' person? Brown does not elaborate, but in the last few years many others have attempted to establish just what it is that triggers the use of FT. The suggestions range from features pertaining to the NNS, to familiarity of the interlocutors and the conversational setting, to the nature of the topic under discussion. Each of these proposed causal factors is outlined below.

2.3.1 Features of the Non-Native Speaker

NSs' reactions to NNSs' limited language abilities have been measured both in terms of affective response (Johansson, 1978; Albrechtson *et al.*, 1980; Eisenstein, 1983; Ryan, 1983) and NS speech accommodation (FT). The former have implications for the quality of the NS-NNS interaction, and undoubtedly have far-reaching, complex effects. As Taylor & Gardner (1969) found, ethnic stereotypes are closely tied to accent, and are most often viewed negatively (Kalin & Rayko, 1978; Sebastian, Ryan & Corso, 1978; Kalin, Rayko & Love, 1979). Gumpert & Cathcart (1983) suggest that the media contribute to negative images or stereotypes and, in turn,

stereotypes and, in turn, foster an urge to "demean and vilify other groups of people" (p. 110). Although this type of NS reaction to NNSs is not the central concern of this thesis, clearly it is not unrelated to speech adjustment. Bodemann & Ostow (1975) have suggested, for instance, that ungrammatical FT is motivated, not so much by a need to simplify, but as a means for expressing contempt for the NNS. Valdman (1981) goes even further. He argues that one purpose of FT is to prevent the acculturation of NNSs; it "not only keeps them at arm's length" but "effectively prevents them from acquiring total communicative competence" (p.43). Long (1980) has also noted that ungrammatical FT has sometimes appeared in contexts where the NS perceives the NNS to be of a lower social standing. Not only does social status appear to influence the adjustments made by the NS, but Beebe & Giles (1984) also point out that linguistic status ("status of the input due to relative nativeness", p. 21) also affects the NS-NNS interaction. The very fact that the NS is more expert in the language puts him/her in a position of superiority in relation to the NNS. The authors cite Long's (1981) finding that NSs tend to manage the NS-NNS conversation as evidence for their claim that it is the NSs' linguistic status that allows them to control NS-NNS interactions.

Another factor which has been claimed to have an effect on FT is the age of the L2 learner. Scarcella & Higa (1981) found that adult NSs made more adjustments for NNS children aged 8.5 - 9.5 years in comparison with adolescents aged 15.5 - 16.5 years, despite the fact that all NNSs tested at approximately the same proficiency level. According to the authors, NSs "provide larger quantities of simple input, a more supportive atmosphere for children and constantly check to see that the input the

child receives is both attended to and understood" (p. 429). They argue that the triggering factor for FT is the age of the child and suggest that since the children spoke much less (contributing 28% of the utterances) than the adolescents (54%), NSs must have been adjusting their own speech to the children in the relative absence of feedback. It is unfortunate that Scarcella & Higa used adult NS-NS dyads in order to collect baseline data for comparative purposes, since age may indeed be a factor, but its relationship to the input for an L2 learner is not clear. The only way to assess whether the NSs were reacting to age as opposed to verbal facility is to compare subjects in the same task with NS children and adolescents. Given the authors' data, it could well be argued that although the children did not verbalize as often as the adolescents, they provided sufficient feedback in terms of both speech and non-verbal responsiveness for the NS to make appropriate adjustments on the basis of language proficiency. The authors note that the adolescents' own verbal behaviour was very different from that of the children, not only with regard to total output, but also in terms of their willingness to initiate topics, to repeat NS utterances, and to use conversational fillers. Perhaps the written exam and the informal, teacher-conducted interview that Scarcella & Higa used as proficiency measures do not adequately reflect the conversational abilities of the adolescents as compared to those of the children. The arguments for age as a trigger of FT, then, are inconclusive, and further research must be undertaken in order to determine its relative effect on NS speech adjustments.

One aspect of the NNS's speech that has been shown to elicit FT in the absence of other triggers is accent. In two separate studies NNSs and NSs

have used identical scripts in addressing NSs over the telephone. The language in the scripts was grammatical, standard English, yet the NNSs were recipients of simplified input (see Arthur *et al.*, 1980; Abunahleh *et al.*, 1981-2). Warren-Leubecker & Bohannon (1982) also found that NSs made register adjustments in response to a foreign accent, although they argue that the NNS's comprehension level has a more powerful effect. They had 40 NS subjects meet individually with a Spanish/English bilingual accomplice. The researchers designed four conditions which involved the manipulation of NS expectation and NNS feedback. In the first, the accomplice greeted the NSs in heavily accented ungrammatical English. She asked each of the subjects a series of questions and while the NS was responding, she signalled comprehension difficulties with cues such as "What?" "Huh?" and puzzled looks. In the second condition, the accomplice's English was still heavily accented, but she gave cues of understanding to the NS, like "Yes" and "Okay". In the third and fourth conditions, the accomplice introduced herself and asked questions in slightly accented, grammatical English. She signalled comprehension problems in condition three, and indicated that she understood in condition four. The authors wanted to discover whether the expectations set up through initial contact would override the comprehension cues given as feedback. They measured the MLU, the number of repetitions or restatements and the number of questions in the NSs' speech and found that feedback was the primary determinant of the degree of adjustment made, although expectations established through manipulation of accent also affected the NSs' FT.

Varonis & Gass (1982) argued that the NNS's comprehension level may reinforce a NS's use of FT, but that it is the comprehensibility of the NNS's speech (especially in terms of pronunciation and grammaticality) that actually elicits a register shift. They based their argument on an experiment in which NSs were approached on the street by low level ESL students, advanced ESL students, NSs, and NSs who feigned foreign accents. The NS subjects were asked to supply directions to the train station. They provided directions to other NSs without hesitation; however, in the case of the NNSs (and the NSs feigning foreign accents), regardless of their level of proficiency, the subjects generally repeated part of the original request. Varonis & Gass interpreted the repetitions to be any or all of the following: 1) stalling for time, 2) a confirmation check, or 3) a means of negotiating the topic, that is, " the topic of the conversation is not immediately obvious" (p. 118). The authors stressed that the difference the NSs displayed in responding to NNSs versus other NSs must be related not to the NNSs' comprehension levels, but to the comprehensibility of the NNSs' own speech, since the NSs had no opportunity to assess the L2 learners' comprehension. They argued that accent and grammar of the L2 learner are two crucial elements in determining the degree of FT adjustment. They conducted additional experiments to try to identify the separate contributions of these two variables to overall comprehensibility, and found that NSs had difficulty in isolating the two. In a pronunciation rating task, for instance, NSs perceive pronunciation "in the mid-range ... of ability" to be poorer if the sentence itself is ungrammatical. This effect does not extend to pronunciation which has been independently rated as being either very

good or very poor. In those instances grammaticality did not significantly affect NS judgements of pronunciation. NSs were also asked to rate a set of grammatical/ungrammatical sentence pairs for comprehensibility. Grammatical sentences were almost always rated as more comprehensible, and furthermore, the comprehensibility ratings correlated positively with sentences that had received 'good' pronunciation ratings. Varonis & Gass concluded that the comprehensibility of the NNS's speech to the NS is "the most important factor" (p. 132) in triggering FT.

Long (1983a) has taken issue with the Varonis & Gass position in favour of the view that NSs' adjustments are made in response to a combination of several factors, only one of which is comprehensibility. He rejects the notion that the learner's comprehension level is irrelevant; on the contrary, Long suggests that learner comprehension may be the key trigger of FT. Because Varonis & Gass examined only the first NS utterances in their corpus, Long is justified in arguing that the fact that they found an initial NS adjustment based on comprehensibility does not indicate that subsequent adjustments are necessarily in response solely to the L2 learner's production proficiency. Most people have had the experience of talking with an L2 learner whose utterances are grammatical, whose accent is slight, and whose comments are occasionally inappropriate because of a comprehension failure. The NS is not oblivious to comprehension problems such as these, nor to verbal and non-verbal comprehension cues, as the Warren-Leubecker & Bohannon (1982) experiment demonstrated.

Gass & Varonis (1985a) conceded that the NNS's comprehension level is a determining factor of FT upon a reanalysis of a subset of the Abunahleh *et al.* (1982) data. By examining the number of negotiation sequences on two separate questions, Gass & Varonis found evidence of NSs reassessing the proficiency level of the NNS callers. They argued that only pronunciation, fluency and comprehension levels were influencing the NSs' assessment of the callers "since other variables such as grammar, vocabulary and appearance were controlled for" (p. 53). There was, however, considerable backchanneling on the part of the callers that was not in the script, some of which was ungrammatical, as in the data excerpt which appears on page 41 of their study.

The importance of comprehension cues is clear. For instance, Long (1983b) discusses one CS and two FT studies in which speakers were deprived of feedback from the learner. In each case the adjustments were minimal, although the same NSs' speech was substantially altered in the presence of feedback. This finding is particularly striking in Long's (1980) study in which the NSs were exposed to NNSs, used FT with them in interactive tasks, and then, in the course of the same experiment, participated in tasks which did not necessarily involve verbal responses from the L2 learners. The NSs did not adjust their speech to a great/extent when they were not required to interact with their NNS partners. What has as yet to be established is the relative contributions of comprehension cues and comprehensibility. There is no reason to assume that NSs are not using both forms of feedback simultaneously, or that they may not be responding to different triggers at different times.

A major difficulty in trying to distinguish between NNS comprehensibility and level of understanding as triggers of FT is the variability of situations under which NS-NNS interactions take place. Under certain conditions, very little information is actually exchanged; rather, there is what Long (1980) has called phatic communication. In these conversations it is conceivable that the NNS may give misleading comprehension cues, since there is no urgency or real importance in understanding the message. It may be easier and less disruptive to pretend to understand than to get the NS to elaborate on an unclear point. No doubt features of the NNS (e.g., age, accent, comprehensibility) are not the only factors which have an effect on FT.

2.3.2 Setting, Topic, and Familiarity

Long (1981a) has made the observation that almost all recorded instances of ungrammatical FT have been in situations where it was important that the NNS understand the message. The Snow *et al.* (1981) study is a good example. The authors examined the speech of Dutch municipal employees in the Housing Bureau and the Population Register office in interaction with foreign workers. Although there was considerable individual variation among NSs, all of them exhibited ungrammatical FT; furthermore, the "NSs' tendency to use FT correlated significantly with the foreigners' tendency to make certain mistakes" (p. 90). Clyne (1977), HPD (1978) and others who have made naturalistic observations of NS-NNS interaction in the workplace have all found evidence of ungrammatical FT. These studies and that of Hatch *et al.* (1978), which recorded a NS's use of ungrammatical FT with a NNS

friend, are suggestive of a relationship between the importance of the message and the degree of simplification or modification in the NS's speech. It is certainly plausible that ungrammatical FT is not fundamentally different from grammatical FT, but merely that it is perceived by the NS as being easier for the NNS to understand. Some of the non-standard constructions that have been noted in FT correspond to L2 learner errors; thus the NS may be consciously or unconsciously incorporating aspects of the NNS's speech into his own. When the message itself is not particularly crucial, for example in virtually all the studies in laboratory settings and in ESL classrooms (where emphasis is generally placed on form rather than content), grammatical FT predominates. In addition, Long (1983b) has noted that almost all instances of ungrammatical FT have taken place during spontaneous conversations; perhaps the unnatural, contrived quality of the lab conversations and the special pedagogical requirements of the classroom also put constraints on the NS.

Not only may the relative importance of the message be a factor in determining the shape of FT, but, as Snow (1981) suggests, the complexity of the topic may also affect the NS's adjustments. She claims that topics of even moderate complexity cannot easily be discussed using a limited vocabulary and simple syntactic structures; consequently NSs resort to "distortions, incorrect deletions, and ungrammatical simplifications" (p. 208). When Snow contrasted adult NS-NNS exchanges with those between NS adults and L2 children, she found virtually no instances of ungrammatical input to the youngsters. There is a confounding of complexity with setting and age here, however, since the

ungrammatical input was directed at adults who were conducting business in government offices, whereas the grammatical FT to children was collected in a kindergarten. The possibility that topic complexity affects FT is not ruled out, but it simply cannot be demonstrated by Snow's comparison. A more reliable measure would be a comparison of the same adult NS-NNS dyads discussing two topics which differ in complexity.

It has been suggested that yet another factor has a significant influence on FT, namely, speaker familiarity. Gaies (1982) replicated Long's (1981b) investigation of NSs' use of questions in FT. Gaies, however, paired NS-NNS classmates who shared an academic interest. Many of Gaies' results are similar to Long's, but some interesting differences did arise. In Long's study, the NSs initiated all of the topics discussed, whereas Gaies' data show that the NNSs nominate topics 34% of the time. Long found that in NS-NNS intefactions there were substantially fewer topic-continuing moves than in NS-NS exchanges. Gaies' study indicates that NS-NNS interlocutors who are acquainted tend to use topic-continuing moves to a greater extent, moreover, NSs who know their conversational partners use fewer questions in topic initiation than those who are matched with strangers. Gaies attributes these unexpected findings in his replication of Long's work to the NS's familiarity with both the NNS and with the topics of discussion. Another factor that no doubt contributed to the difference in Gaies' and Long's results has to do with the higher language proficiency level of Gaies' subjects.

Gass & Varonis (1984) also examined the effects of familiarity on FT in a series of carefully controlled experiments. They assert that familiarity is one of several factors (such as the aforementioned pronunciation and

grammaticality) which contribute to the overall comprehensibility of the NNS's speech. The researchers were interested in all aspects of the phenomenon; i.e., familiarity with a topic, experience with NNSs in general, familiarity with a particular L2 accent and with a specific NNS. Their tasks involved the manipulation of each of the above variables, using tape-recorded sentences and longer passages. The NS subjects' task was to transcribe what they heard so that the researchers could obtain a comprehensibility rating for each of the test conditions. Their findings showed that familiarity definitely improved comprehensibility for each of the four variables. Gass & Varonis assume that the results of these experiments provide further evidence for their contention that NSs adjust their speech in response to NNSs comprehensibility. It is not surprising that familiarity should have a positive effect on comprehensibility; however, it should not necessarily be viewed as a principal contributing factor to NNS intelligibility. Familiarity with a specific NNS, or with NNSs in general, no doubt enhances recognition of subtle comprehension cues and heightens an awareness of topics that might cause problems for the learner. Obviously, familiarity plays a role in FT, at least where experience with a particular NNS or a given topic is concerned, as Gales' work indicates; the degree to which the other types of familiarity outlined by Gass & Varonis affect FT has not been determined.

Another element in the NS-NNS interaction that may have a significant effect on FT has to do with the NS's intrinsic language skills. There is considerable variability in performance from one NS to another, apart from differences attributable to factors already mentioned, although very little attention has been focused on this aspect to date. The next section

reviews the evidence in the literature for differences which are attributable to group membership (e.g., ESL teachers versus naive NSs) and linguistic differences (e.g., grammatical or ungrammatical FT).

2.4 INDIVIDUAL VARIATION

Although there has been a great deal of interest in FT in the last few years, the linguistic forms themselves and, more recently, the structure of the interaction have been the principal foci of research. Most of the FT information available is group data, a composite of several NSs' speech measured under comparable conditions. It is only from reports of case studies that we are able to identify noteworthy differences in individual language behaviour – and even here we are somewhat constrained by the consideration that other factors are very often uncontrolled. Nonetheless, differences from one NS to another can be readily discerned. Hatch *et al.* (1978) were the first to identify dissimilarities between NSs when they compared ungrammatical patterns (such as it-deletion) in the speech of a NS to her NNS friend, and that of an ESL instructor in conversation with members of his class. Although both subjects evidenced ungrammatical FT, simplified input, shorter MLU, etc., there were notable differences in the types of adjustments made. The teacher, for instance, practically never used the plural morpheme, while the friend never omitted it. Hatch *et al.* considered the possibility that the variation in the subjects' speech might be attributed to a 'matching' of NS discourse to NNS errors. They rejected a strong version of the matching hypothesis, though, because the errors and simplifications in the NSs' speech were not merely reflections of the NNS output. Data they collected from service

personnel over the telephone served to strengthen their conviction that NS's adjustments involve much more than a straightforward imitation of the NNS, as an even broader scope of individual variation in FT was indicated. None of the telephone subjects exhibited ungrammatical adjustments, but rather repeated themselves, spoke slowly, and kept their utterances short. The authors pondered the notion that perhaps NSs who make more adjustments (in their study, those who use ungrammatical FT) are better language learners themselves, leading to the more general suggestion that some individuals are predisposed to make more and perhaps better communicative adjustments than others.

Several studies (Long & Sato, 1983; Long, 1981b; Gaies, 1981) have been conducted which compare the language of ESL teachers in the classroom to that of NSs in casual conversations with NNSs, and these works have cited a number of differences in the interactions. For instance, Long & Sato (1983) found that ESL teachers use considerably more display questions (questions to which the teachers themselves already know the answers) than information questions. However, no claims can be made for individual or group variation on the basis of these studies because of the confounding of context and group membership. It is possible to get a sense of the differences from one teacher to another, though, upon examining the partial transcripts of two instructors in Hyltenstam's (1983) study of teacher talk in classrooms of Swedish as a second language. The teachers' whole approach to communicating is strikingly different, as in the following examples taken from pp. 175-176 of that study:

L1: In cabbage is por?

T1: Pork.

Do you mean stuffed cabbage rolls?

L1: Yes, stuffed cabbage rolls, more or less.

L2: We have spices. (pronunciation error at the word for spices, kryddor).

T2: Chalk? (holds up a piece of chalk, the learner's pronunciation of kryddor was more like the Swedish word or 'chalk' kritor)

L2: No, spices. (pronunciation error at the word for spices again)

T2: Chalk. (writes kritor on the blackboard, says the word with a very long /i/ — [Swedish has a length distinction in stressed vowels] — writes also the word kryddor, a number of learners are asked to repeat the two words)

Aside from such incidental evidence, however, there is very little information about other differences between individuals in their ability to communicate with NNSs. Gass & Varonis (1984) found that ESL teachers were better able to transcribe NNS speech from tapes, and concluded that their familiarity with L2 learners facilitated their comprehension, but they did not conduct any research to find out whether improved comprehension has an impact on the NSs' own FT adjustments.

The issue of individual variation will be discussed further in Chapter Three. In the following section the issue of the efficacy of FT is considered from the standpoint of communication enhancement and language acquisition.

2.5 EFFICACY OF FT

2.5.1 L2 Production Studies

Ever since the first studies of FT in the 1970's, there has been speculation and theorizing as to its relevance to L2 acquisition. Some individuals (e.g.: Ellis, 1981) readily accepted the position that the very existence of FT is *prima facie* evidence for its importance; they pointed to the now-familiar arguments made for the role CS plays in L1 acquisition and claimed that adjustments to input are even more relevant for L2 adults, whose LADs, so to speak, are not what they used to be.

When L1 acquisition researchers first entertained the notion that there might be a connection between input and language learning, they compared measures of simple frequency with the order of acquisition of grammatical morphemes (Brown, 1973). Although they failed to find a direct relationship at first, the early L1 morpheme studies prompted similar research in L2 acquisition, where it was argued that input would likely have greater impact (Dulay & Burt, 1978; Bailey *et al*, 1974; Larsen-Freeman, 1978). Long (1980) found that, indeed, the frequency of grammatical morphemes in the input addressed to L2 learners correlated positively with the "average order" of mastery of the same morphemes. However, he discovered that the frequency of the morphemes in FT was not significantly different from the frequency of the morphemes in NS-NS speech; therefore, no conclusions regarding the efficacy of FT could be drawn on this point. Evidently, in the case of nine grammatical morphemes, at least, the NS does not make adjustments that affect their acquisition by an L2 learner.

The fact that there is little or no difference in the frequency of grammatical morphemes, regardless of listener, suggests that obligatory morpheme categories are not the appropriate place to look for adjustment in naturalistic speech. Ungrammatical FT sometimes evidences morpheme adjustment (e.g., Wagner-Gough & Hatch, 1975); however, it would be virtually impossible to determine how much exposure to ungrammatical FT learners receive. The only other common situation where a distortion of natural frequency could take place is in the ESL classroom. There, where grammatical morphemes are overtly taught, frequencies may deviate from the order found in NS conversation (cf. Larsen-Freeman, 1975; Long & Sato, 1983; Lightbown, 1983).

Pica (1983, 1985) compared three groups of ESL students (with a shared L1 background) who were learning either through instruction only, through picking up the language in the course of their daily routine, or through a combination of the two. Pica found that the instruction-only group was more target-like in the production of the plural and third person singular than the other groups; she attributes this finding to the "straightforward form-function relationship" (p. 219, 1985) of these morphemes. On the other hand, the untutored group showed more native-like usage of the progressive marker and the progressive auxiliary than did the groups who had instruction. Pica argues that instruction of the progressive (linguistically complex in that it serves several functions) confused students, who tended to supply the -ing morpheme in inappropriate contexts. On the basis of these findings Pica suggests that altering input frequency in the ESL classroom has differential effects which are connected to the transparency of the form-function relationship.

A study that examines the immediate effects of modified input on NNSs' production is Brock's (1986) investigation of ESL teachers' use of display and referential questions. Long & Sato's (1983) finding that ESL instructors use far more display questions than referential questions prompted Brock to train two teachers to use more questions of the latter type. She then compared these two teachers' lessons with those of two other teachers who had not received the training. As expected, the trained teachers used significantly more referential questions, but more interesting was the effect that the increase in these questions had on L2 learners' output. The students in the experimental classes produced longer, more syntactically complex responses than did the NNS's in the control classes. Brock suggests that this finding may have far-reaching significance for the ESL classroom in light of Swain's (1985) argument that comprehensible input alone is not sufficient for mastery of a second language. An intensive study of immersion students who had had seven years of comprehensible input indicated that the students' deficiencies were in precisely those areas in which they had little opportunity to produce language. Swain argues that speaking a second language provides a NNS with a unique opportunity to test hypotheses in that it forces the learner to move from semantic to syntactic processing; she claims that immersion students "have just never gotten to a syntactic analysis of the language because there has been no demand on them to produce the language" (p. 249). The implication of this argument for Brock's findings is clear: if teachers can be trained to elicit syntactically complex utterances from learners, rather than simply ensuring that they are able to understand them, acquisition of the L2 will be enhanced.

Crookes & Rulon (1985) looked at the effect of communicative task on L2 output. They reasoned that tasks which encourage corrective feedback on the part of the NS would result in more incorporation of that repair in the NNS's speech than tasks which didn't encourage this. They examined Long's (1980) data from the free conversation task, the Spot the Difference task and the Odd Man Out task for instances of NS corrective feedback (this was limited to repairs which immediately followed a NNS error). The investigators also recorded whether the feedback was then incorporated into the NNSs' speech.

In a comparison of the three task types, Crookes & Rulon found that both the Odd Man Out and Spot the Difference elicited significantly more corrective feedback than did free conversation; however, only Odd Man Out evidenced significantly more incorporation of feedback on the part of the NNS. It is not clear whether the authors looked only at utterances in the next turn for incorporation or whether they scanned through the entire transcripts for evidence of incorporation. At any rate, as Brock, Crookes, Day & Long (1986) point out, lack of immediate incorporation does not mean that the L2 learner's linguistic system has not been affected by feedback. As Varonis & Gass (1985) have also argued that incorporation may emerge long after feedback has been provided.

Crookes & Rulon also measured the ratio of topic-continuing utterances to topic-initiating utterances on the assumption that the longer a dyad stayed on one topic, the more recycling of useful input there would be, and presumably the more likelihood of NNS incorporation. The results indicated that Spot the Difference, which did not result in significant incorporation of repair in NNSs' speech, had more topic-

continuing utterances than did either of the other tasks. As a consequence, Crookes & Rulon conclude that topic-continuation is not an adequate measure of the recycling of useful input. They suggest that structural differences in the tasks may partially account for the failure to find a relationship between incorporation of feedback and amount of topic-continuance. They also point out that Spot the Difference is not necessarily mutually negotiated, whereas Odd Man Out requires a "mutually acceptable solution" (p. 12). Rather than attempting to find a connection between a very broadly defined topic and a change in NNS output, it may be more profitable to investigate recycling by calculating the ratio of given to new information. Crookes & Rulon's study is important in that it identifies some differential effects of task on the L2 production of the NNS; there is clearly a need for an intensive programme following this line of research.

2.5.2 Input and Interaction

Krashen (1981, 1982, 1985) is perhaps the strongest proponent of the notion that modified input promotes not only communication, but language acquisition as well. His theory of language acquisition is based on five hypotheses: first, that language acquisition and language learning are two distinct processes; second, that there is a natural order of acquisition (this claim is based primarily on the morpheme studies); third, that each individual has a "Monitor" (learning that functions as an editor) and that Monitor use varies from person to person; fourth, that in order to progress in acquiring a language a learner must be able to understand what is said to him at a level which is just beyond his own current level of

competence; and fifth, that all learners have an "affective filter", that is, one's ability to make progress is L2 is determined in part by affective variables such as motivation, fear, etc. Krashen (1985) has added another component to the preceding, namely the output filter. This filter was proposed to account for individuals who have good comprehension skills yet are unable to use an L2 productively.

It is the fourth hypothesis, the input hypothesis, that is of concern here. Krashen maintains that in order for individuals to acquire a language, they must have access to comprehensible input, that is, language that they can understand but which is expressed in a form slightly beyond their own competence levels. FT is ideal, he claims, because it is not a finely tuned code, but one that is roughly tuned to the L2 learner's comprehension level. In this respect FT is an excellent representation of the L2 for the student, who is exposed to new structures one step beyond his/her current level (i + 1), as well as provided with built-in review of already mastered elements. In fact, the existence of CS for L1 acquirers and FT for their L2 counterparts is viewed by Krashen as evidence for the input hypothesis, as is the "silent period" often noted in children acquiring an L2. Krashen suggests that, given the luxury of the silent period, the L2 child can build up competence through listening and comprehending, with the result that when the child eventually does begin to talk (using more than mere memorized chunks), his/her errors are very like those of the L1 acquiring child. Very few interference errors occur, Krashen argues, because the child is not compelled to produce at a level beyond his/her own competence; L2 adults, on the other hand, who are often forced to speak

before they have received sufficient comprehensible input to have acquired the L2 forms, must rely on L1 rules that lead to interference errors. Finally, Krashen claims that when pedagogical methods are compared, those that focus on communication (e.g., Total Physical Response) rather than correctness of form (e.g., traditional methods) tend to produce better results.

Long (1983b), in a discussion which ultimately casts doubt on the strong form of the input hypothesis, observed that the success of immersion programs in comparison with second language programs in public schools is in accord with Krashen's contention. Long also points out that an argument very often made for the importance of CS to L1 acquisition holds equally for FT and L2: without exposure to comprehensible input, no acquisition can take place. While Long acknowledges the evidence supportive of the input hypothesis, he suggests that it is not so much modifications of the linguistic forms in the input that are crucial to language acquisition (e.g., shorter MLU, lower TTR, higher lexical frequency of nouns and verbs) as it is the structure of the interaction between NS and NNS. Confirmation checks, comprehension checks, clarification requests, self- and other-repetitions, etc., are all more prevalent in NS-NNS interactions than in NS-NS discourse. While there is variability in the use of input modifications themselves (not all studies find evidence of the same adjustments, and the modifications that are significant in one report may not be in another), all investigations which have recorded interactional adjustments have found at least some of them to be significant. The utility of the conversational adjustments lies in the fact that aspects of the L2 that are unfamiliar to

unfamiliar to the learner can be introduced in such a way as to make them comprehensible.

Long thus concludes that although modified input is of some benefit to the NNS, it is modifications to the interaction that make input comprehensible to the learner. Conversational adjustments, by their very nature, are tailored to the requirements of the individual; negotiation is therefore more likely to provide the student with precisely the information he needs in order to understand the message. If, as both Krashen and Long have argued, comprehensible input promotes acquisition (whether through modified input or through conversational adjustments), then the effect of interactional adjustments on second language acquisition can be tested indirectly (Long, 1985). Studies which show that adjustments promote comprehension in the NNS indicate that acquisition may have been facilitated as well. In the following section a number of studies which have measured comprehension in relation to modifications in the input or interaction are reviewed.

2.5.3 L2 Comprehension Studies

Chaudron (1983) took an interesting approach in studying the effect of input simplification on L2 learners. He designed recognition and recall experiments in which the subjects listened to short lectures on tape. Included in each lecture was one of the following conversational devices: repeated nouns versus simple nouns, rhetorical questions, if-clauses, and synonyms. One group of L2 subjects was asked to do a recognition task, while a second group was required to recall items as well as recognize them. Chaudron found that "the redundant repeated noun was

significantly better recognized than the simple noun, and was better recalled than the conditional or the synonym" (p. 437).

Cervantes (1983, cited in Kelch, 1985 & Chaudron, 1985) further investigated the effect of redundancy in a dictation task. One group of intermediate ESL students heard a passage divided into 26 parts. Students were asked to write what they had heard following each segment. A second group of students listened to the same passage, but in this instance each of the 26 segments was said twice. Students in both groups had 30 seconds to write. Results were calculated, both in terms of exact transcription of morphemes and equivalence of meaning. The subjects in the repetition group scored significantly better on both measures than did the subjects who heard the segments only once.

Wesche & Ready (1985) conducted a study in which they examined the speech of two instructors (one English and one French) teaching introductory psychology courses to NSs and NNSs. They concluded that the adjustments made by the instructors to NNSs resulted in comprehensible input, as evidenced by the fact that the students mastered the content material and were able to interact with the instructors. In addition, students reported that they found the lectures interesting and, finally, other NNSs who viewed videotapes of lectures given to NSs and NNSs found the latter easier to follow. The authors suggest that since the L2 language proficiency scores given to the students before and after the course indicated an overall improvement, there is indirect "support for the possibility of a causal relationship" (p. 109) between adjustments and acquisition. The adjustment measures were made on speech rate, type/token ratio (the number of tokens in

each word class), verb tense, T-units, number of words devoted to a given theme, and certain conversational adjustments, such as comprehension checks and self-repetitions. Wesche & Ready found that 'the French instructor made practically no significant adjustments for NNSs, other than using fewer words. The English instructor made some significant adjustments for NNSs, such as a considerably slower speech rate and the use of more tensed verbs; however, there were few significant adjustments in the categories studied. Wesche & Ready noted substantial differences in the instructors' speech patterns when addressing NSs. They consequently argue that it is how an individual addresses a NS which determines the type and extent of adjustment made when the interlocutor is a NNS, rather than "a given set of 'foreigner talk' characteristics" (p. 107).

It is not particularly surprising that Wesche & Ready found very few significant adjustments in the instructors' speech, however, as the traditional lecture format does not lend itself to extensive interaction — and for some of their measures they deliberately chose uninterrupted speech as their sample. There are several other difficulties with this study as well, one of which is the claim for indirect evidence that the adjustments aided overall language proficiency. First, there was no control over the amount of exposure students had to L2 outside of class (the authors note, in fact, that the readings in L2 may have contributed to the students' improvement), so it is quite possible that their language proficiency may have improved as a result of increased external L2 contact, including the supplementary language lessons that accompanied the psychology course.

A second major problem with the study is that the comprehension measure – a written final exam – was administered in both L1 and L2. Moreover, there was no attempt to judge comprehension in light of specific adjustments at any given time.

A third shortcoming of the experiment was the sample size. It is impossible to generalize on the basis of two subjects from different language backgrounds. Individual differences clearly exist, but these become interesting from a theoretical point of view only if groups of people can be shown to behave in similar ways.

Long (1985), in two much more tightly controlled experiments, also investigated the effect of input modifications on comprehension of a lecture. The first text, a lecturette on Mexico designed for NSs, was read onto audiotape. A second lecturette was then written, with the same propositional information but a larger number of words, less complex syntax, and many repetitions and paraphrases; the modified version was also recorded at a slower speech rate. Multiple-choice questions were devised based on the shared content in both lecturettes, as well as a question which asked the subjects to estimate what percentage of the lecture they had understood.

In the first version of the experiment, NNS subjects were placed in one of two groups: those who heard the NS lecturette and those who heard the modified lecturette. Each group was given an opportunity to read the questions beforehand and equal time to respond. Not only were the comprehension scores of the modified input group significantly higher than those of the other group, but their self-perception scores were higher. A replication of the experiment with a much larger sample

size indicated again that modified input was better understood than the original version, and that perceived comprehension of the modified tape was significantly higher than in the case of the NS tape.

In the second experiment, students from two proficiency levels were placed in each of the conditions in order to determine whether lower proficiency students would benefit more from the adjustments than higher level subjects. Long argues that the fact that a significant interaction was not found is most likely because the difference in proficiency levels was not great.

Pica, Doughty & Young (1986) compared the effects of modified input and modified interaction on NNSs' comprehension of instructions. NNSs were seated in front of a magnetic board that depicted an intersection of three roads, a vehicle, a little girl and a flagpole. An array of magnetic objects was laid out on a tray beside the subjects. Their task was to place the objects on the board according to the instructions given by a NS. Success was measured in terms of both correct selection of objects and accurate placement on the board. Subjects were assigned to one of two groups – those who received modified input and those who had modified interaction.

The investigators first obtained baseline NS-NS directions and then modified them by reducing linguistic complexity, doubling the number of words per direction and increasing redundancy 13 times by including repetitions of the directions. The modified input instructions were then read to NNS subjects; no interaction was allowed between NS-NNS partners in this case. In the modified interaction condition NSs read the baseline directions to their NNS partners, but subjects were encouraged

to seek assistance if they had comprehension problems. The interactionally modified input that resulted was very slightly more complex linguistically than the NS baseline data. NSs provided their partners with four times as many words per direction, but the redundancy measure showed the largest adjustment, as the input in the interaction condition was 65 times more redundant than the baseline data, i.e., there were 65 times as many repetitions per direction. Pica *et al.* predicted (a) that there would be more modification of input in the interaction condition but that the adjustments would be of the same types and (b) that NNSs would understand the interactionally modified input significantly better than preadjusted input. Both of their hypotheses were supported: there were quantitative but no qualitative differences in modification, and subjects selected the appropriate object significantly more often in the interaction condition. Although the mean placement score was higher in the interaction condition, it was not significantly different from the mean score obtained under the modified input condition. The investigators attribute the failure to find a difference to the responses of one subject, but unfortunately there were only five NNSs in the modified input condition and four in the interactionally modified condition; a replication with a larger subject sample would no doubt yield

Despite the finding that interactionally modified input appeared to be more beneficial overall, Pica *et al.* report a negative effect of interaction on four of the 15 directions.

Chaudron (1982), too, has noted that FT may sometimes have deleterious effects on the L2 learner. He reviewed the types of vocabulary elaboration used by teachers who taught subject matter to L2 learners and

found that in some instances the increased redundancy may actually confuse rather than assist the NNS. Although there is some evidence that NSs use simpler vocabulary and syntax when talking with NNSs, there is also a need, particularly in classroom situations, to define or elaborate upon certain vocabulary items. Chaudron classified several forms of elaboration that had been used in addressing L2 speakers and found that some were misleading in that they were structurally identical to forms that had different meanings. He cites lists versus appositives as an example, arguing that the latter generally involve the use of synonyms, whereas the former provide additional information. However, for the L2 learner, it is very difficult to distinguish one from the other if s/he is unfamiliar with any of the vocabulary involved, and the value of the two constructions is then lost.

Chaudron's perspective, that is, to address a very specific aspect of FT with reference to its effect on the language learner, is one that holds a great deal of promise.

The studies discussed here have shown that, for the most part, FT promotes communication with a NNS, and, indirectly, second language acquisition. Chaudron's work, and that of Pica (1983) and Pica *et al.* (1985), indicates, though, that not all adjustments are necessarily helpful to all NNSs. Pica suggested that the relative transparency of form-functional relationships interacts with the frequency of forms in the input; these factors together then play a role in the acquisition process. Chaudron's findings give additional support to Pica's contention, but, clearly, the complex nature of the relationship between FT and second language acquisition begs for further research.

2.6 SUMMARY

Just as in the expansion of the data base in theoretical linguistics and in L1 acquisition, there has been a trend in L2 acquisition research to go from describing linguistic form to examining function and, finally, to taking a more global approach by viewing communicative interactions as structural wholes. By the same token, FT is now seen as an integral part of a two-way interaction, whereas twenty years ago it was viewed as little more than a handful of autonomous simplification rules. We now know that NSs make phonological, lexical, syntactic and discourse adjustments at least some of the time, and that several factors are able to trigger these modifications. NSs also modify conversations with a NNS by taking control: they initiate most of the topics and, through their judicious use of questions, they even determine to a great extent what it is that the NNS will say. It is the responsibility of the NS to monitor the interaction and to use appropriate conversational devices in order to maintain the communication link with the NNS and to insure the comprehension of the L2 learner.

How effective is FT? There is a different answer for each NS-NNS interaction. In simplest terms, an interaction is effective if NNSs understand a message that they otherwise would not have understood. Does FT play a part in L2 acquisition? Insofar as FT promotes comprehension, the opportunity for acquisition is made available. However, up to this point there is very little direct evidence indicative of a link between FT and acquisition, although Sato (1986), in an investigation of the development of English past time reference in the

interlanguage of two Vietnamese children, has shown that some aspects of NS-NNS interaction may "facilitate the acquisition of some linguistic coding devices but not others" (p. 44). It seems obvious that NS speech made comprehensible through both negotiation with the learner and modification of form contributes to language acquisition. Nonetheless, current evidence suggests that FT adjustments may have negative as well as beneficial effects on comprehension (and, indirectly, on acquisition), depending on the circumstances. There is a definite need for experimentation which tests the FT/acquisition relationship directly, as well as for more long-term, controlled observational studies such as Sato's. Although research on the efficacy of FT has just begun, it already promises to be a highly fruitful area of investigation, leading eventually to a better understanding not only of the complex interrelationships of comprehension and language acquisition, but of language processing itself.

CHAPTER THREE

THEORETICAL BACKGROUND SKETCH

As noted in Chapter One, this study was originally conceived in response to some informal observations of NS-NNS interactions. It appeared that there was a considerable degree of variation from one NS to the next in terms of ability to communicate with a non-native individual. When the literature revealed parallel kinds of variation in the use of other simplified registers, this gave support to the idea that a common, underlying skill was being accessed in all of these observations.

Individual differences in maternal speech abound (Lieven, 1978; Corsaro, 1979; McDonald & Pein, 1982). Quite beyond the evidence provided by L1 researchers, there is another indication of a range of ability in using simplified registers: the speech pathologists' recognition of a need to intervene in parent-child interactions (Schacter, 1979). The fact that professionals must provide some mothers of normal children with training in communication skills suggests that the differences are relatively profound.

There is variability, too, among persons who regularly communicate with the language impaired (Swisher, 1984; Cramblit & Siegel, 1977). Moreover, even normal elderly people are addressed very differently, depending on who is speaking to them, and on how they are perceived (Ashburn & Gordon, 1981).

What is the theoretical import of these findings for variation in the use of simplified registers? It becomes increasingly evident that the convenient fiction of an ideal speaker is not a very useful one. In fact,

even in formal descriptive linguistics the advantages of distinguishing between competence and performance are less clear than was once widely believed. Moreover, one of the features that must now be included in a definition of a competent NS is the ability to shift from a standard register to a simplified form when confronted with a person of limited linguistic capabilities (Ferguson, 1981). It is probably true that all competent NSs do make adjustments in either form or interaction or both when communicating with a less proficient speaker (as the literature suggests), but these modifications should be viewed as tendencies rather than absolutes. If we are to have an accurate picture of real language use it is important to determine the full range of communicative behaviour rather than constructing an idealized amalgam. In order to determine what is common to all it is necessary to describe all; it has happened more than once before that linguistic behaviours dismissed as aberrant or non-systematic have later come to be recognized as valuable data that had gone unidentified because of data collection biases which precluded their discovery (witness, for example, the large body of research on speech errors (Fromkin, 1971) and on the matter of language learning strategies, (Peters, 1977)).

The central concern of this thesis, then, is to ascertain the nature and range of some specific differences in the use of FT, both among theoretically interesting groups of speakers (naive NSs, native ESL teachers, and NNSs) and among individual personality types within the NS groups. Ferguson (1981) has claimed that the

> use of registral variation must be acquired by children in the same sense that they must acquire the formal grammatical structure of the language(s) in use. (p. 11)

and Shatz and Gelman (1973) have found evidence of register adjustment in very young children. But what of the adult learner? Does skill at register adjustment transfer from one language to another? If one hasn't fully mastered a second language, can one accurately assess the comprehension level of another individual and modify one's speech accordingly? Do NNSs rely more heavily than NSs on interaction devices rather than simplified input? Do NNSs rely on accent (at least in part) to judge an interlocutor's proficiency, and if so, do they make more adjustments for someone of a different L1 background than they would for a NNS who shared the same language background?

Some of these questions have been addressed in a study conducted by Porter (1983) in which NSs, advanced NNSs and intermediate NNSs were paired in problem-solving tasks with partners from each of the three groups. Porter found that interaction devices, such as clarification requests, confirmation checks, comprehension checks and prompts (utterance completions) were used as frequently by NNSs as NSs, a finding which suggests that this aspect of communicative competence is not restricted to L1. Since the relative simplicity of input (e.g., MLU, TTR, T-units, verb tense, etc.) was not measured, there is no way of determining the extent to which NNSs are able to modify their own input as compared with NSs. Moreover, all of Porter's NNSs had the same L1, a factor that limits the generalizability of her findings. It is difficult to know

whether it is a modification of English that benefits the low proficiency NNS's comprehension, or a reliance on L1 cues (related lexical items, L1 syntax, literal translations of idioms, and the like). In the present work, NNSs will be paired with NSs and low proficiency NNSs of a different L1 in an attempt to eliminate the influence of a common language background on the interaction. Comparisons of the subjects' speech to NSs and NNSs will be made to find out whether NNSs do indeed alter their input for low level speakers, and whether their perceptions of what is 'simpler' are comparable to NS perceptions.

Two groups of NSs will also be examined here: naive NSs and native ESL teachers. Several researchers (e.g., Henzl, 1973; Gaies, 1977) have argued that FT and ESL teacher talk are separate registers, but the value of maintaining the distinction between the two on the basis of speaker identity is not clear. Granted, there are very few recorded instances of an ESL teacher using ungrammatical FT (e.g., Hatch *et al.*, 1978), whereas many researchers have found ungrammatical FT in NS-NNS conversations outside the classroom. It is more likely, though, as Long (1981a) has suggested, that the crucial elements in determining grammaticality are not so much related to the occupation of the speaker as to such factors as the setting, the importance of the message, and the degree of spontaneity in the conversation. Previous investigations have not used controlled comparisons of teachers and other NSs in which the setting and task are held constant. This study will attempt to fill that gap by contrasting ESL teachers and naive NSs under the same conditions. Earlier studies have also speculated on the efficacy of particular features of FT, but there are very few reports in which the degree of communicative success of the

interaction is recorded (Kelch, 1985; Chaudron, 1982; Long, 1985; Pica *et al.*, 1986; & Hawkins, 1985 are notable exceptions). Long (1981b) has stated that NSs readily accept an abrupt change in topic brought about by a misunderstanding on the part of the NNS; if this is indeed the case, NSs may willingly relinquish their messages. As a consequence, the interaction must be viewed as a failure from the perspective of message transmission. In order to ensure that our understanding of NS-NNS dialogue is based on successful rather than abortive cases, another key feature of this study will be to measure the outcome of the interaction along with the input and interaction adjustments actually made.

This thesis will also explore the notion that individual differences in FT are related in part to personality characteristics. If feedback is necessary to elicit FT, then the corollary must also hold that NSs are sensitive to the cues they receive from their NNS interlocutors. Presumably there is a fairly broad range of sensitivity to NNSs, just as there is for dialect and stylistic variation among NSs. In a preliminary investigation three people who have considerable experience teaching ESL were asked to rate six ESL teachers with whom they were acquainted according to the personality traits on the Jackson Personality Inventory (see Chapter 4 for details). Four of the teachers rated were known to be highly successful in beginner classes (they were better able to convey and elicit information from their students than other teachers on staff), while the other two admitted to having difficulty communicating with low level students and so preferred more advanced classes. The raters were asked to state which of the traits could be said to characterize the ESL teachers. Despite the fact that the ratings were carried out independently, that is,

each of the raters was unaware of the choices made by the others, the conclusions were unanimous that the successful low-level teachers scored high on all of the following traits: innovation, interpersonal affect, social participation, and tolerance. By the same token, the raters judged the advanced teachers to fit the descriptions accompanying the traits anxiety, organization and value orthodoxy. Only on the traits of breadth of interest and energy level was there any discrepancy among the three raters (one person gave high ratings to the low-level teachers on these scales). None of the other traits was seen as being unique to one of the two sets of instructors.

A problem inherent in this pilot study is the fact that the raters all shared a similar background and perspective; nevertheless, the ratings were so remarkably alike that further investigation seemed warranted. This is particularly true, given the fact that, while personality variables among language learners have received rather extensive study (e.g., Clement, Gardner & Smythe, 1977; Gardner, 1983), there is apparently not a single investigation of the role that such factors might play in the relative effectiveness of ESL teachers, though frequent allusions are made to their likely relevance (Hatch *et al.*, 1978; Long, 1980; Snow *et al.*, 1981).

Finally, we come to the question posed by Hatch *et al.* (1978): are good FT speakers better language learners? Is it reasonable to assume that the ability to acquire a second language and a facility with FT are both manifestations of an underlying communicative skill? It has been found that "certain personal characteristics are consistently related to successful language learning" (Strong, 1983, p. 241), at least in the case

of young children acquiring an L2. In this study, measures of FT, success of interaction, and personality traits will all be compared with measures of naive NSs' and ESL teachers' self-assessment of their second language learning ability (see Appendix C for questionnaire).

In summary, the main theoretical issues to be dealt with in this thesis are as follows: (1) Are there significant individual differences in FT and, if so, can they be attributed to personality traits and/or experience with NNSs? (2) Do NNSs differ from NSs in the way they communicate with less proficient NNSs? (3) What effect do FT adjustments have on communicative success? and, finally, (4) Are good FT speakers also good language learners?

Measurements of adjustments for NNSs will be made on the relative frequency of the conversational devices studied by Long (1980), on lexical frequency, on rate of speech, and on the relative proportion of three information types: task-related, major and minor information (defined in Chapter 4).

CHAPTER FOUR

THE EXPERIMENTS

4.1 SUBJECTS

A total of 72 individuals participated in these experiments. 40 of whom were native speakers of English and 32 nonnative speakers. Of the native speakers of English, 16 served as subjects, 24 as listener controls. Eight high intermediate nonnative speakers (NNSs) served as subjects, while 24 low proficiency ESL students served as the NNS listeners. All NNSs were students in the Continuing Education ESL Programme at the Alberta Vocational Centre, Edmonton. The NNS participants were chosen according to a number of criteria primarily intended to ensure a relatively high degree of homogeneity of linguistic skills within the groups: (1) they had to have been placed in their respective levels at least twice (class placement entails an internally-devised written examination and a personal interview); (2) their time of arrival in English-speaking Canada had to be within five years of the study; (3) subjects had to be between 25 and 45 years of age; (4) all subjects had to have had a minimum of nine years of formal education.

The NNSs came from a variety of language backgrounds. At the low proficiency level there were 16 Vietnamese, 3 Chinese, 2 Chilean, 2 Polish, and 1 Roumanian, (total=24). The high intermediate subjects were comprised of 4 Vietnamese, 3 Chileans and 1 Polish (total=8). Care was taken to ensure that in communication exchanges a high intermediate student was always paired with a low level student of a different language background.

The NS subjects fell into two categories: 8 ESL teachers and 8 naive NSs. The ESL teachers all had a minimum of three years teaching experience, and all had recently taught ESL at Alberta Vocational Centre, or were currently doing so. The naive NSs were individuals who had not had any extensive contact with NNSs; moreover, this group was restricted to people who had no teaching experience of any kind and whose occupations and interests had little to do with language or language arts. The persons in these categories were recruited through personal contacts. The 24 NS listener controls were all personal acquaintances of the author. Those who were paired with the NNSs had no ESL experience; however, some of the controls paired with other NSs had been ESL teachers or had a linguistics background. All NS subjects spoke standard Canadian English, and all were between 25 and 45 years of age.

The experiments involved three distinct subject group categories: the ESL teachers (Group 1), naive NSs (Group 2) and high intermediate NNSs (Group 3). Each group consisted of 4 males and 4 females. They were matched with same-sex NS controls and with low-level NNSs in counterbalanced order, that is, half of each subject group was paired with the NNS first while the other half was paired with the NS first. The subject pairings of the 48 dyads are summarized in Table 4.1.

Table 4.1

Summary of Subject Pairings

Subjects (Speakers)	NS Listeners	NNS Listeners
Group 1 ESL Teachers		
4 Males	4 Males	4 Males (4 Vietnamese)
4 Females	4 Females	4 Females (3 Vietnamese, 1 Chinese)
Group 2 Naive NSs		
4 Males	4 Males	4 Males (3 Vietnamese, 1 Roumanian)
4 Females	4 Females	4 Females (2 Vietnamese, 2 Chinese)
Group 3 Intermediate NNSs		
4 Males (2 Chilean, 2 Vietnamese)	4 Males	4 Males (2 Vietnamese, 1 Chilean, 1 Pole)
4 Females (1 Chilean, 1 Pole, 2 Vietnamese)	4 Females	4 Females (2 Vietnamese, 1 Chilean, 1 Pole)

4.2 TASKS AND MATERIALS

There were two tasks involved, a 'Film Description' task and a 'Find the Difference' task. In the first, a six-minute animated film, *The Spring and Fall of Nina Polanski*[1] was used. This film was chosen because, in a federally-commissioned study of films suitable for ESL students (Smith, 1982), it had been well received by several beginner ESL classes, as well as by intermediate and advanced students, and almost all students understood the main thrust of the story. A second reason for choosing this film is its unexpected, somewhat startling sequences, such as the sudden appearance of children (one pops out of the dishwater) and the change in Nina's physical appearance (her body turns into a number of household appliances). All of these scenes can be described with vocabulary and structures that are within the low level students' comprehension abilities, but the odd quality of the scenes places demands on the person telling the story, simply because s/he cannot rely upon the student's life knowledge or upon context to ensure comprehension.

There is no speaking in the film, and written language is limited to the English title, credits in English and French, and the words 'icebox' and 'schoolbus' appear on the objects they represent. This film consists of 35 episodes, as determined by changes in the scene or action. The subjects' task was to describe the main content of the film. A post-experimental interview was also conducted with the listeners to assess the communication success achieved by the subjects (see Procedure for

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[1]The film was written by Joan Hutton and Louise Roy and produced for the Challenge for Change by the National Film Board and agencies of the Government of Canada.

details).

The second task involved a pair of pictures which, although similar to one another, differed in ten details. One set depicted a house, garden and tree; the varying elements included whether the door was open or shut, the number of people in the window, the absence or presence of flowers along the path, curtains versus blinds, etc. The second set showed a woman talking on the telephone in a living room. Differences included the number of people in the room, different paintings on the wall, a pencil versus a book on the table, very different lamps, and so on. The participants' task was to identify these differences without looking at each other's picture. Two sets of pictures were used, one with NSs and one with NNSs; these were randomly assigned (if the same set of pictures had been used twice, the subject would be aware of most of the differences the second time around).

Other materials used in the study were (1) a written questionnaire designed to obtain background information on the NSs (see Appendix C) and (2) the Jackson Personality Inventory (JPI) (Jackson, 1976).[2] The JPI was administered to all of the NS subjects, i.e., to both the ESL teachers and the naive NSs. The inventory, which consists of 320 true/false questions, provides for each subject a standardized personality profile encompassing the following traits: anxiety, breadth of interest, complexity, conformity, energy level, innovation, interpersonal affect, organization, responsibility, risk-taking, self esteem, social adroitness, social participation, tolerance, and value orthodoxy. This personality

[2]Dr. Cynthia Fekken of Queen's University first brought this measure to my attention as one particularly well suited to this study.

measure was selected because it is standardized for use "on populations of average or above average ability" (Jackson, 1976, p.9) and because of its emphasis on interpersonal and social factors. Regarding the reliability of the test Jackson states:

> Internal consistency reliability estimates were obtained for two samples of college students for the Jackson Personality Inventory using Bentler's coefficient theta. In the California sample (n = 82), values ranged from .84 to .95, with a median of .93. The Pennsylvania sample (n = 307) yielded a range of .75 to .93 with a median of .90. (Jackson, 1977, p.613)

The NNS subjects were not administered the JPI because their diverse cultural backgrounds may have made their responses uninterpretable.

4.3 PROCEDURE

Each subject (either an ESL teacher, naive NS or a high intermediate NNS) was first brought to a viewing room and given a card with the instructions (Appendix A). The experimenter read the instructions aloud and answered any procedural questions the subject had. The subject was also shown the comprehension questions (Appendix B) and told that it was his or her responsibility to ensure that the listeners would be able to answer the questions. The film was then shown on a 16 millimeter projector. At the end of the viewing, the subject was shown the questions again; then he or she was taken to another room where his or her first partner (either a NNS or a NS control) was waiting. The experimenter

introduced the participants, and asked them to converse with each other for a few minutes in order to get to know one another. The participants were aware that their conversation was being recorded, but they were asked to make themselves comfortable and to ignore the machine. The experimenter then left the room for at least five minutes. The participants were given this time together so that the subjects would have an opportunity to assess the linguistic capabilities of the listeners in order to be able to make necessary adjustments.

When the experimenter returned, she explained the Find the Difference (FTD) task. The participants were each given a picture, and were then told that there were more than six differences between their respective pictures. They were instructed to identify as many differences as they could verbally, that is, without looking at one another's pictures. It was explained that the pictures could differ in two ways, there could be an item in one picture with no corresponding object in the other, or two somewhat different objects in the same location. The experimenter again left the room, and returned approximately five minutes later. All verbal exchanges were recorded. Some pairs required additional time to complete the task while others were able to proceed immediately to the film task. In general, the FTD task took no more than ten minutes to complete.

In the film task the listeners (i.e., the low level NNSs or the NS controls) were told that their partners had just seen a short film, and would be describing the story to them. The listeners were also advised that they would be questioned about the film later, and were encouraged to promote or facilitate their comprehension by any means available to

them. Both participants were asked to notify the experimenter when they had finished the task. Upon completion, the listeners were interviewed in order to determine how much of the film explanation they had understood. They were asked the comprehension questions, the appropriate answers to which would provide a summary of the film. Students were given ample opportunity to answer, and were encouraged to expand where necessary. The questions and acceptable answers appear in Appendix B. The score on the comprehension questions is referred to as the film success score. In the meantime, the subjects were taken to another room where they met their second listening partners, and the whole procedure was then repeated (the only difference being the use of the other set of FTD pictures). Finally, once the subjects had met with both a NNS and a NS listener control, they were asked to fill out the background information questionnaire. They were then given the option of completing the JPI at that time, or on their own time within the next few days.

The last step in the data collection procedure was the transcription. Each tape was transcribed in standard orthography, supplemented by broad phonetic transcription in the case of non-standard utterances. The transcripts were later typed into the Oxford Concordance Program (Hockey & Marriot, 1984).

4.4 DATA ANALYSES

4.4.1 Personality

4.4.1.1 Poll

Three linguists with ESL teaching experience were asked to identify features from the JPI that they thought were typical of specific ESL teachers with whom they were acquainted. The evaluators had access to the trait definitions and descriptions of high and low scores (see Appendix D) and they were told that only traits which truly characterized the individuals under discussion were of interest. The subjects of the evaluations were four teachers known to be very successful with low level classes and two, who, although considered to be excellent teachers by their employers, were uncomfortable teaching low proficiency students. The latter instructors admitted freely that they doubted their efficacy in beginner or near-beginner classrooms, whereas the former instructors much preferred low level to advanced because they felt more effective with beginners. These teachers liked to see improvement in a relatively short period of time, and reported that they had a sense of futility with more advanced students whose progress was not always readily perceptible.

As noted earlier, the evaluators were interviewed individually, and were unaware of the purpose of the task. Each identified the same four factors – Innovation (INN), Interpersonal Affect (IAF), Social Participation (SPT), and Tolerance (TOL) – for all of the successful low level teachers. Furthermore, they all claimed that Anxiety, Organization and Value Orthodoxy characterized the two high level instructors. The evaluators

specified one or two other traits for each individual, none of which was common to all.

4.4.1.2 Jackson Personality Inventory

The responses to the 320 true/false questions of the JPI were scored for Groups 1 & 2, and the results were transferred to a profile which automatically standardized the scores (profiles differed for males and females). There was considerable range on each of the traits; however, the means all hovered around the fiftieth percentile, a fact which suggests that the subpopulation under consideration here is relatively normal. Group 3 subjects were not administered the JPI because their different cultural backgrounds might have affected the profiles.

4.4.1.3 Analyses

Each subject's standardized scores on the seven personality factors identified in the poll were entered into a cluster analysis program called Clustan. Clustan separates cases "into groups such that the degree of association is high between members of the same group, and low between members of different groups" (Wishart, 1978, p.1). The analysis divided the subjects into three groups. When the mean film success score for each group was compared against the mean score on each personality scale, it was found that IAF, SPT, and ORG varied in the same direction as success. Additional Clustan analyses were done on all the possible combinations of these three variables. There were two considerations in the final choice for personality grouping: 1) the strongest differentiation possible in terms of success and 2) relatively equal groups. The IAF/SPT

ratings satisfied both criteria in that the groups were almost equal (n=9 & n=7) and the difference between mean success scores was substantial (24.9%). These were the groupings used as the basis for personality comparisons for the FTD and film tasks (see Figure 4.1).

It was conceivable that a personality trait other than the ones identified in the poll might be related to successful communication; for this reason, Pearson correlations were calculated for all of the traits and film success. Of the positive features identified in the poll, only SPT was significantly correlated with success (r(14)=.5707, p=.02, two-tailed); INN (r(14)=.4872, p=.056), IAF (r(14)=.4704, p=.066) and ORG (r(14)=.4635, p=.07) did not reach significance. None of the remaining variables correlated significantly with success.

When Pearson correlations between all the individual traits were calculated for the subjects it was found that SPT, IAF and ORG are highly correlated: SPT and ORG (r(14)=.6841, p=.004); IAF and ORG (r(14)=.5789, p=.018); SPT and IAF (r(14)=.5554, p=.026).

Pearson correlation coefficients were calculated for the personality factors and success on the FTD task when the subjects' partners were NNSs. None of the personality traits correlated significantly with success scores.

T-tests for independent means were calculated to determine whether or not teachers and naive NSs differed significantly on any of the personality variables. There were no significant differences between the two groups.

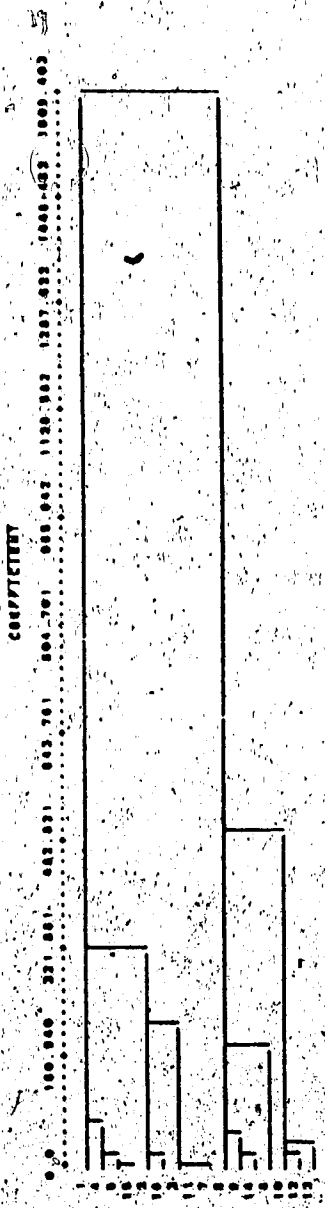

Figure 4.1: Clustan Grouping of Subjects by Personality Traits

4.4.2 Dependent Variables

In the following sections the measures for conversational adjustments, lexical frequency, rate, and proposition information type will be defined and the results reported. The basic experimental design for each task is a repeated measures ANOVA with subject group (teacher, naive NS, NNS) as the between factor, listener (NS, NNS) as the within factor, and a variety of dependent measures. The design used when measurements on both tasks are examined together is a repeated measures ANOVA with listener and task as the within factors and subject group as the between factor. Unless otherwise specified, all *t*'s and *r*'s are two-tailed. Subjects will sometimes be referred to as 'speakers', and (although this is somewhat of a misnomer) their partners will be referred to as 'listeners'.

The general pattern followed in the reporting of the results is 1) a description of the measures 2) a description of the analyses with regard to i) listener and group differences ii) the relation of the measures to communicative success and iii) personality grouping differences. A summary of the major findings appears at the end of the chapter.

4.4.2.1 Conversational adjustments

4.4.2.1.1 Measures

The subjects' speech on the FTD and film transcripts was coded according to Long's (1980) criteria for the following adjustments:

1. <u>confirmation checks</u>: confirmation checks allow an individual to check his own comprehension, by repeating all or a portion of what the interlocutor has just said, with rising intonation.

E.g. S1. No flower.

S2. No flower?

2. comprehension checks: comprehension checks are used to check the comprehension of the listener. These are expressed either as a direct question or through the use of rising intonation towards the end of the speaker's utterance.

E.g., S1. I think this is in the spring.

Do you know when the spring is?

3. other-repetition: full or partial repetition of the interlocutor's utterance (up to three turn-taking sequences back[3]).

E.g., S1. I have a bird.

S2. A bird; okay.

4. self-repetition: full or partial repetition of the subject's own utterance (up to three turn-taking sequences back).

E.g., S1. This way.

S2. This way?

S1. Yeah, this way.

5. clarification requests : clarification requests indicate a non-understanding on the part of the listener.

E.g., S1. And one /plawr/ on the table?

S2. One what on the table?

The following information-seeking question types were also coded:

6. yes-no questions.

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[3]Long and others included repetitions of up to five turn-taking sequences back, but this was deemed unnecessary here, as there were practically no instances of repetitions more than three sequences away.

7. WH questions and

8. or-choice questions.

In addition, the transcripts were coded for instances of

9. paraphrase: this category includes physical and/or functional descriptions, and synonyms.

E.g.,

S1. And then there's a chimney S1. And a chimney S1. It's fall, or autumn,

S2. Chimney S2. Chimney

S1. Made of brick S1. For the fireplace

10. utterance completions: subjects "fill in the blank" when the interlocutor is struggling to finish an utterance.

E.g., S1. How many people do you get in your house?

S2. Uh, one, uh ...

S1. One people, one people

11. imperatives

12. topic-dislocation: utterances in which new information appears at the beginning of a sentence.

E.g., S1. A refrigerator she would look like

13. restructuring: utterances were coded as restructured when there was evidence of self- correction to a simpler form.

E.g., S1. And I think what it symb..., what it shows

14. nonverbal: subjects made either physical reference to an object in the room or drew a picture for their partners.

E.g., A pen, that you write with (pause) like this. (subject picks up a pen)

In addition to the conversational adjustment measures noted above, the total number of words and the type/token ratio (TTR) for each subject were recorded. TTR is simply the number of unique lexical items divided by the total number of words. Finally, the transcripts were given a success score. On the FTD task this score was based on the number of differences actually identified by each dyad. One full point was given when the participants recognized that an item in one picture had no counterpart in the other. When slightly different items appeared in the same location (e.g., curtains versus blinds), one half point was given for the identification of each, that is, both items had to be noted in order to obtain a full point for the difference. The highest score achieved by a dyad, 8.5, was taken as the ceiling, and a percentage score was then calculated for each pair on this basis. The score for the film was based on the appropriateness of the listeners' responses to the comprehension questions. The success scores on both tasks were determined by two raters, with 100% interrater reliability in each instance.

4.4.2.1.2 Analyses

4.4.2.1.2.1 FTD TASK

Summary statistics for the FTD task appear in Table 4.2. Each measure will be discussed in the sections that follow.

Table 4.2

Summary of Statistics for FTD Task

	NS Listeners	NNS Listeners
Group 1 (*n*=8) ESL teachers		
Mean success	6.7	5.9
Mean TTR	.479	.345
Mean number of words	167.6	290.4
Mean number of adjustments	9.125	35.25
Mean number of adjustments per 100 words	5.87	12.4
Group 2 (*n*=8) Naive NSs		
Mean success	7.1	4.9
Mean TTR	.515	.384
Mean number of words	200.0	293.4
Mean number of adjustments	7.125	34.125
Mean number of adjustments per 100 words	3.59	12.45
Group 3 (*n*=8) Intermediate NNSs		
Mean success	6.4	5.2
Mean TTR	.418	.295
Mean number of words	205.0	318.0
Mean number of adjustments	18.75	49.0
Mean number of adjustments per 100 words	10.19	16.81

4.4.2.1.2.1.1 Listener and Group Differences

In a partial replication of Long (1980), the Wilcoxon matched-pairs signed-ranks test for related samples (Winer, 1971) was applied to the raw count data for conversational adjustments. That is, the conversational adjustments for the three subject groups were combined, then a comparison was made of the adjustments made for NS partners vs. NNS partners. As determined by the Wilcoxon test there were significantly more of the following adjustments in language addressed to the NNS listeners (following Long a significance level of $p<.005$ was used) : yes/no

questions, confirmation checks, other-repetition, WH questions, paraphrase, self-repetition and clarification requests (see Table 4.3).

The Wilcoxon test was then applied separately to each of the subject groups (Table 4.3). Because of the smaller number of subjects tested in these Wilcoxons (n=8), the significance level was set at .05. Group 1 (teachers) used significantly more confirmation checks, comprehension checks, other-repetition, WH questions, paraphrase and clarification requests when addressing NNSs. Group 2 (naive NSs) used significantly more yes/no questions, confirmation checks, self-repetition, nonverbal cues and restructuring, while Group 3 (NNSs) had more yes/no questions, confirmation checks, other-repetition, WH questions, paraphrase and clarification requests in their speech to NNSs.

Increases in these conversational adjustments could reflect the overall increase in the number of words used when subjects addressed low level NNSs. For this reason, a relative measure of adjustments was calculated: the number of adjustments in each case was expressed as a percentage of the total number of words used by the subject. Wilcoxon tests based on the relative scores for each subject group and for the three groups combined were then calculated; the results appear in Table 4.4. When overall scores are compared for the raw and relative adjustments, self-repetition is the only measure whose significance is changed. Group 1 scores are not radically affected – the same adjustments are significant with the exception of other-repetition. All significant raw adjustments made by Group 2 are also significant using the relative measure; however, a considerably different pattern emerges for Group 3. Only clarification requests and utterance completions are significantly more prevalent in

speech to NNS partners when total number of words is taken into account.

Table 4.3

Wilcoxon Scores on Conversation Adjustments: Raw Counts

Adjustment	Overall (*N*=24)	Group 1 ESL teachers	Group 2 Naive NSs	Group 3 Int. NNSs
	z	z	z	z
yes/no	3.5225***	1.5724	2.2014*	2.3105*
confirmation check	4.1973***	2.5205*	2.5205*	2.3664*
comprehension check	1.5513	2.0226*	1.7821	.7338
other-repetition	3.3927***	1.9604*	1.7821	2.1704*
or-choice	2.5992**	1.3416	1.4832	1.3416
WH	3.4005***	2.2014*	1.7821	2.0284*
utterance completion	2.6508*	1.8257	.0000	1.3628
paraphrase	3.4320***	2.3664*	1.6036	2.1974*
self-repetition	3.1006***	1.2780	2.2014*	1.9439
imperative	1.9548	.0000	1.3416	1.6036
nonverbal	2.2509*	1.3416	2.0226*	.0000
topic-dislocation	1.0954	1.3416	1.0000	1.0000
clarification	3.7893***	2.3664*	1.7821	2.5205*
restructuring	2.4483*	.8018	2.0226*	1.0483

*** $p \leq .005$, ** $p \leq .01$, * $p \leq .05$

Table 4.4

Wilcoxon Scores on FTD Conversation Adjustments: Relative Frequency

Adjustment	Overall	Group 1 ESL teachers	Group 2 Naive NSs	Group 3 Int. NNSs
	Z	Z	Z	Z
yes/no	2.9714***	.8402	2.1004*	.7001
confirmation check	4.1060***	2.5205*	2.5205*	1.8593
comprehension check	1.4438	2.0226*	1.7821	.8452
other-repetition	3.0719***	1.5403	1.8593	1.8204
or-choice	2.2934*	1.3416	.9439	1.6036
WH	3.1329***	2.1974*	1.6903	1.8204
utterance completion	1.9775*	1.8257	.5394	2.0226*
paraphrase	3.3752***	2.3664*	1.6036	1.8204
self-repetition	2.2536*	1.2136	2.2014*	.9802
imperative	1.2448	1.6742	1.3416	1.4606
nonverbal	1.8671	1.3416	2.0226*	.7303
topic-dislocation	1.0954	1.3416	1.0000	1.0000
clarification	3.7712***	2.3664*	1.5213	2.3664*
restructuring	1.7891	.5345	2.0226*	.7338

*** $p \leq .005$, ** $p \leq .01$, * $p \leq .05$

The total number of words and type/token ratio (TTR) (see Table 4.2) were the dependent measures in two separate repeated measures ANOVAs with group as the between factor and listener as the within factor. All three subject groups used significantly more words with NNS partners ($F(1,21)=7.85$; $p=.011$). There was no group effect, and no group by listener interaction. Significantly lower TTRs were directed to the NNS listeners ($F(1,21)=44.45$; $p<.001$). There was a significant group effect ($F(2,21)=4.04$; $p=.033$). A one way ANOVA (with TTR collapsed across listeners) followed by a Newman-Keuls test indicated that Group 3 had a significantly lower TTR than either Group 1 or Group 2 ($F(2,21)=5.0619$, $p=.016$).

4.4.2.1.2.1.2 Total Adjustments

A repeated measures ANOVA with listeners as the within factor was performed on the total number of relative adjustments (collapsed across adjustment type). There was a significant listener difference ($F(1,21)=37.35$; $p<.000$). Overall, subjects made more adjustments for NNSs ($\bar{X}=13.9$) than for NSs ($\bar{X}=6.55$). There was, however, a significant difference among subject groups in terms of the extent of adjustments made ($F(2,21) = 7.4$; $p=.004$). When relative adjustments were collapsed across listeners, a Newman-Keuls range test indicated that Group 3 (NNSs) used significantly more adjustments ($\bar{X}=13.5$) than either Group 1 or Group 2 ($\bar{X}=9.14$, $\bar{X}=8.04$).

4.4.2.1.2.1.3 Success

A repeated measures ANOVA with FTD score as the dependent measure indicated that the only statistically significant difference in success depended on the listener: all three subject groups were more successful when paired with a NS ($F(1,21)=11.764$; $p=.003$); means appear in Table 4.2. Each of the relative adjustments was correlated (Pearson) with the success measure for all subject-NNS dyads. None of the 14 conversational adjustments correlated at greater than $r=.55$, and none were significant for Groups 1 and 2. Moreover, neither the total number of words nor the TTR addressed to NNSs were significantly correlated with success. There were, however, three adjustments that correlated significantly with success in the Group 3 data: clarification requests ($r=.867$; $p=.006$), other-repetition ($r=.867$; $p=.006$) and utterance completion ($r=.762$; $p=.028$). Although there were no significant correlations of the conversational adjustments with success on the FTD task overall, it was thought that a comparison of each relative adjustment made to NNSs by the most successful (top 4) and the least successful (bottom 4) subjects might indicate significant contrasts. However, Mann-Whitney U tests for independent samples revealed that there were no differences in the use of any of the adjustments by the two groups.

4.4.2.1.2.1.4 Personality Differences

In order to assess whether there were any differences in performance when NS subjects were grouped according to personality characteristics (see section 4.4.1 for a discussion of the personality groupings), a repeated measures ANOVA with total relative adjustments as the

dependent variable was carried out. The two groups compared were comprised of individuals who rated high on both the Interpersonal Affect and Social Participation scales (high IAF/SPT) and those whose ratings were relatively lower on the two scales (low IAF/SPT). There were no group differences and no interactions; there was, however, a significant listener effect ($F(1,14)=35.74$, $p<.000$), i.e., NNSs elicited more conversational adjustments than did their NS counterparts.

Another repeated measures ANOVA compared high and low IAF/SPT groups on FTD success. There was a significant listener effect ($F(1,14)=16.58$, $p=.001$) and a significant group by listener interaction ($F(1,14)=6.437$, $p=.024$). Because of unequal n's (high IAF/SPT $n=9$, low IAF/SPT $n=7$) a Scheffé test was applied to the success means. The significance level was set at .10 as suggested by Scheffé (1959) to offset the conservatism of the test. The low IAF/SPT group had significantly less success with the NNS listeners than with NS listeners; no other differences were found (see Table 4.5).

4.4.2.1.2.2 FILM TASK

The summary statistics for the film task appear in Table 4.6.

4.4.2.1.2.2.1 Listener and Group Differences

A Wilcoxon test was used to compare the adjustment measures made for NNS and NS listeners (see Table 4.7). As in the FTD task, these adjustments were relative; that is, the number of adjustments per 100 words. Overall there were significantly more comprehension checks ($z=3.706$; $p<.005$), self-repetition ($z=2.8083$; $p<.005$) and paraphrase ($z=$

3.8857; $p<.005$) addressed to NNS partners. Group 1 (teachers) had significantly more of the three measures just cited in their speech to NNSs; they also had significantly more instances of topic-dislocation when talking to NNSs. Group 2 used comprehension checks and paraphrase significantly more frequently with NNSs and Group 3's use of paraphrase with NNSs was significant.

A repeated measures ANOVA indicated that NNS listeners elicited significantly lower TTRs ($F(1,21)=59.296$; $p<.001$); there were no group differences or group by listener interactions. Another repeated measures ANOVA showed that a significantly greater number of words was directed to NNSs ($F(1,21)=12.222$; $p=.002$), and again, there were no significant group or group by listener differences.

Table 4.5

Scheffé Comparison of Means on FTD Success for High and Low IAF/SPT

Low IAF/SPT to NS	High IAF/SPT to NS	High IAF/SPT to NNS	Low IAF/SPT to NNS
$\bar{X}$ 87.29	76.44	69.44	57.14

Low IAF/SPT to NS	vs.	High IAF/SPT to NS	F=2.829
Low IAF/SPT to NS	vs.	High IAF/SPT to NNS	F=7.856
Low IAF/SPT to NS	vs.	Low IAF/SPT to NNS	F=21.846*
High IAF/SPT to NS	vs.	High IAF/SPT to NNS	F=1.177
High IAF/SPT to NS	vs.	Low IAF/SPT to NNS	F=8.952
High IAF/SPT to NNS	vs.	Low IAF/SPT to NNS	F=3.637

F'=15.66, α=.10

Table 4.6

Summary of Statistics for Film Task

Group 1 (*n*=8) ESL teachers	**NS Listeners**	**NNS Listeners**
Mean success	89.25	64.375
Mean TTR	.401	.286
Mean number of words	476.25	746.125
Mean number of adjustments	6.875	49.25
Mean number of adjustments per 100 words	1.55	5.97
Group 2 (*n*=8) Naive NSs		
Mean success	83.125	53.375
Mean TTR	.379	.305
Mean number of words	592.75	700.5
Mean number of adjustments	9.125	24.75
Mean number of adjustments per 100 words	1.57	3.71
Group 3 (*n*=8) Intermediate NNSs		
Mean success	67.375	43.875
Mean TTR	.367	.278
Mean number of words	415.875	610.375
Mean number of adjustments	10.25	26.0
Mean number of adjustments per 100 words	2.24	3.85

Table 4.7

Wilcoxon Scores on Film Conversation Adjustments: Relative Frequency Measure

Adjustment	Overall (N=24)	Group 1 ESL teachers	Group 2 Naive NSs	Group 3 Int. NNSs
	z	z	z	z
yes/no	1.9612*	1.5213	.7303	1.0000
confirmation check	.4707	1.4832	1.0000	.7338
comprehension check	3.7106***	2.5205*	2.5205*	1.3522
other-repetition	1.2241	1.6903	.4472	.6742
WH	.9802	1.8257	1.3416	1.3416
utterance completion	1.5403	1.6036	.4472	1.6036
paraphrase	3.8857***	2.3805*	2.1004*	2.3805*
self-repetition	2.8083***	2.5205*	.8452	1.1832
imperative	2.0226*	1.3416	1.0000	1.3416
nonverbal	1.0954	.4472	1.3416	.0000
topic-dislocation	2.2014*	2.2014*	.0000	.0000
clarification	.2801	1.3416	1.0000	.6742
restructuring	.4573	1.5213	.2801	1.6036

*** $p \leq .005$, ** $p \leq .01$, * $p \leq .05$

4.4.2.1.2.2.2 Correlations with Success

None of the relative adjustments to NNSs made by the three groups overall correlated at higher than r=.396 (Pearson) and none correlated significantly with comprehension scores; neither did number of words or TTR.

4.4.2.1.2.2.3 Total Adjustments

A repeated measures ANOVA on the total relative adjustment scores revealed no group effect, a significant listener effect ($F(1,21)=48.93$, p=.000) and a significant group by listener interaction ($F(2,21)=5.15$, p=.015). A Newman-Keuls test indicated (see Table 4.8) that although there was no overall group effect, Group 1 (teachers) used significantly more relative adjustments with NNSs than Groups 2 and 3. Groups 2 and 3 to NNSs had significantly higher relative adjustment scores when compared with Groups 1 and 2 to NSs. There was no significant listener difference in relative adjustments for Group 3.

4.4.2.1.2.2.4 Success

A repeated measures ANOVA with listeners as the within factor, subject group as the between factor and success as the dependent variable showed a significant difference in success depending on subject group ($F(2,21)=6.904$, p=.005), and listener ($F(1,21)=29.202$, p<.001). There was no group by listener interaction. When the success scores were collapsed across listeners, a Newman-Keuls test indicated that Group 3 (NNSs) success was significantly lower than that of Groups 1 & 2. There was no significant difference in success between teachers and naive NSs.

Table 4.8

Newman-Keuls Comparison of Mean Relative Adjustments
Film Task

	Group 1 ESL teachers to NS	Group 3 Int. NNSs to NS	Group 2 Naive NSs to NS	Group 3 Int. NNSs to NNS	Group 2 Naive NSs to NNS	Group 1 ESL teachers to NNS
$\bar{X}$	2.529	2.84	3.537	3.615	3.691	6.039

	Group 3 Int. NNSs to NS	Group 2 Naive NSs to NS	Group 3 Int. NNSs to NNS	Group 2 Naive NSs to NNS	Group 1 ESL teachers to NNS
Group 1 to NS	.587	1.787	1.926	2.06	6.223**
Group 3 to NS		1.236	1.374	1.509	5.672**
Group 2 to NS			.138	.208	4.436*
Group 3 to NNS				.135	4.298*
Group 2 to NNS					4.163*

**p≤.01, *p≤.05

4.4.2.1.2.2.5 Personality Differences

A repeated measures ANOVA with interpersonal affect/social participation (IAF/SPT) groups as the between factor, listeners as the within factor and total relative adjustments as the dependent variable showed only a significant listener effect ($F(1,14)=30.66$, $p=.0001$).

To determine whether there were differences in listener success when NS subjects were grouped according to personality characteristics,

a repeated measures ANOVA was carried out. There was a significant listener effect ($F(1,14)=29.757$, $p<.001$), a significant group difference ($F(1,14)=6.321$, $p=.025$) and a significant group by listener interaction ($F(1,14)5.404$, $p=.036$). A Scheffé test on the IAF/SPT means for film success revealed that although both high and low groups were significantly more successful talking to NSs than the low IAF/SPT group talking to NNSs, there was no difference between the high IAF/SPT group talking to NNSs and both groups paired with NSs (see Table 4.9).

4.4.2.1.2.3 COMPARISON OF FTD AND FILM TASKS

4.4.2.1.2.3.1 Relative Adjustments

The individual relative adjustments to NNSs were compared across the FTD and film tasks, using a Wilcoxon test. The FTD task elicited more conversational adjustments overall, with the number of confirmation checks ($z= 4.2$), restructurings ($z= 3.92$), clarification requests ($z= 3.98$), yes/no questions ($z= 4.29$) and WH questions ($z= 4.01$) occurring significantly more often ($p=.005$) than in the film task. Comprehension checks were the only adjustment that appeared significantly more frequently in the film task ($z= 3.54$, $p< .005$).

The TTRs for NNSs for the two tasks were compared using a *t*-test for related samples; the TTRs in the film were significantly lower than in the FTD task ($t=2.77$; $p=.011$).

Table 4.9

Scheffé Comparison of Means on Film Success for High and Low IAF/SPT

High IAF/SPT to NS	Low IAF/SPT to NS	High IAF/SPT to NNS	Low IAF/SPT to NNS
$\bar{X}$ 86.33	86.0	69.78	44.86

High IAF/SPT to NS	vs.	Low IAF/SPT to NS	F=.0019
High IAF/SPT to NS	vs.	High IAF/SPT to NNS	F=4.897
High IAF/SPT to NS	vs.	Low IAF/SPT to NNS	F=30.375**
Low IAF/SPT to NS	vs.	High IAF/SPT to NNS	F=4.705
Low IAF/SPT to NS	vs.	Low IAF/SPT to NNS	F=30.25**
High IAF/SPT to NNS	vs.	Low IAF/SPT to NNS	F=11.102

F'=26.22, α=.05, F'=15.66, α=.10

4.4.2.1.2.3.2 Total Adjustment Scores

The total relative adjustment scores were calculated for each subject for each task (by summing across adjustments). These total relative adjustment scores were the dependent measure in a 3-way repeated measures ANOVA (Group x Task x Listener). There were significantly more adjustments on the FTD task than the film task ($F(1,21)=177.4$, $p<.000$) and significantly more adjustments made to NNSs than NSs ($F(1,21)=63.25$, $p<.000$). There was no significant group effect. The task

by listener interaction was significant ($F(1,21)=13.3$, $p<.002$). The Newman-Keuls test for the interaction (collapsed across groups) indicated that more relative adjustments were made for NNSs on the FTD task than on the film task and more were made for NNSs than NSs on both tasks (see Table 4.10). The group by task interaction was also significant ($F(2,21)=10.1$, $p<.001$). There were higher relative adjustment scores for Group 3 for the FTD task than any other case. All groups used more adjustments in the FTD task than any of the three groups on the film task (see Table 4.11). The other interactions were not significant.

Table 4.10

Newman-Keuls Comparison of Proportional Adjustment Means for the FTD and Film Tasks, Collapsed Across Groups

NS Film	NNS Film	NS FTD	NNS FTD
$\bar{X}$ 2.97	4.45	6.55	13.9

	NNS Film	NS FTD	NNS FTD
NS Film	1.37	3.316	10.125**
NNS Film		1.946	8.76**
NS FTD			5.97**

**$p \leq .01$

Table 4.11

Newman-Keuls Comparison of Means on Proportional Adjustments Both Tasks, Collapsed Across Listeners

	Group 3 Int. NNSs Film	Group 2 Naive NSs Film	Group 1 ESL teachers Film	Group 2 Naive NSs FTD	Group 1 ESL teachers FTD	Group 3 Int. NNSs FTD
$\bar{X}$	3.227	3.614	4.284	8.044	9.137	13.5

	Group 2 Film	Group 1 Film	Group 2 FTD	Group 1 FTD	Group 3 FTD
Groups 3 Film	.423	1.155	5.264*	6.459**	11.227**
Group 2 Film		.732	4.842*	6.036**	10.804**
Group 1 Film			4.109*	5.304**	10.072**
Group 2 FTD				1.195	5.963**
Group 1 FTD					4.768**

**p≤.01, *p≤.05

Table 4.12

Newman-Keuls Comparison of Success Means, Both Tasks, Collapsed Over Task

	Group 3 Int. NNSs to NNS	Group 2 Naive NSs to NNS	Group 1 ESL teachers to NNS	Group 3 Int. NNSs to NS	Group 2 Naive NSs to NS	Group 1 ESL teachers to NS
$\bar{X}$	52.5	55.75	67.118	71.5	83.375	84.0

	Group 2 to NNS	Group 1 to NNS	Group 3 to NS	Group 2 to NS	Group 1 to NS
Groups 3 to NNS	.615	2.781	3.597	5.845**	5.964**
Group 2 to NNS		2.165	2.982	5.23*	5.348**
Group 1 to NNS			.816	3.065	3.183
Group 3 to NS				2.248	2.367
Group 2 to NS					.118

**$p \leq .01$, *$p \leq .05$

4.4.2.1.2.3.3 Success

A 3-way repeated measures ANOVA on success scores for the two tasks indicated that there was a significant listener effect ($F(1,21)=25.659$, $p<.001$) and a significant group effect ($F(2,21)=6.650$, $p=.006$). There were no other significant effects. A Newman-Keuls test (collapsed across task) showed that the groups' success did not differ significantly when addressing a NS. There was no significant difference in success for Group 1 whether they addressed a NS or a NNS; neither was there a difference for Group 3 whether they addressed a NS or a NNS, but both Groups 1 and 2 were significantly more successful when addressing a NS than Groups 2 and 3 when addressing a NNS. There were no significant pairwise comparisons among groups when addressing NNSs (see Table 4.12).

4.4.2.1.2.3.4 Personality Differences

A 3-way repeated measures ANOVA (Group x Task x Listener) on the total relative adjustments used in the two tasks by high and low IAF/SPT groups showed a significant listener effect ($F(1,14)=65.04$, $p<.000$) and a significant task effect ($F(1,14)=54.69$, $p<.000$); there was no group effect and no significant interactions. A 3-way repeated measures ANOVA (Group x Task x Listener) on success for both tasks, comparing high and low IAF/SPT groups showed a listener difference ($F(1,14)=41.91$, $p<.001$), a significant group difference ($F(1,14)=5.036$, $p=.042$) and a significant group by listener interaction ($F(1,14)=10.433$, $p=.006$). Because the personality groups have unequal n's a Scheffé test was used to compare means (collapsed across task); significance level was set at .10. The

Scheffé test indicated that both groups had significantly more success when paired with a NS than did the low IAF/SPT group when paired with a NNS. There was no difference in performance success between the means for NS listeners and the high IAF/SPT group talking to NNSs (see Table 4.13).

Table 4.13

Scheffé Comparison of Success Means, Both Tasks for IAF/SPT

Low IAF/SPT to NS		High IAF/SPT to NS	High IAF/SPT to NNS	Low IAF/SPT to NNS
$\bar{X}$ 86.645		81.385	69.6	51.0
Low IAF/SPT to NS	vs.	High IAF/SPT to NS	F=.507	
Low IAF/SPT to NS	vs.	High IAF/SPT to NNS	F=5.318	
Low IAF/SPT to NS	vs.	Low IAF/SPT to NNS	F=23.261*	
High IAF/SPT to NS	vs.	High IAF/SPT to NNS	F=2.544	
High IAF/SPT to NS	vs.	Low IAF/SPT to NNS	F=16.909*	
High IAF/SPT to NNS	vs.	Low IAF/SPT to NNS	F=6.335	

F'=15.66, α=.10

4.4.2.2 LEXICAL FREQUENCY

4.4.2.2.1 Measures

The subjects' utterances in the film task were coded in their entirety for an analysis of lexical frequency based on the Thorndike Lorge (1944) word count. Words were then classified as belonging to one of the following categories:

1. the 500 most frequent words
2. the top 1,000 most frequent words
3. words occurring 100 or more times per million (this figure includes the top 1,000 words and corresponds to Thorndike-Lorge's category AA)
4. words occurring between 50 - 99 times per million (Thorndike Lorge's category A)
5. words occurring between 26 - 49 times per million and
6. words occurring 0 - 25 times per million. (See Table 4.14)

The Oxford Concordance Program provided a record of the total number of words.

Table 4.14

Mean Lexical Frequency for Subject Groups to NS and NNS Listeners — Film Task

	Group 1 ESL teachers	Group 2 Naive NSs	Group 3 Int. NNSs
Top 500			
NS	64.0	62.0	72.3
NNS	69.0	65.0	73.4
Top 1,000			
NS	74.3	72.1	81.6
NNS	80.1	76.9	83.4
100+/million			
NS	79.3	77.9	87.0
NNS	85.0	82.8	87.3
50-99/million			
NS	6.0	7.0	3.5
NNS	5.0	4.5	3.5
26-49/million			
NS	5.0	5.0	3.2
NNS	4.0	5.0	3.1
0-25/million			
NS	10.0	10.0	6.3
NNS	6.0	8.0	6.0

4.4.2.2.2 Analyses

4.4.2.2.2.1 Listener and Group Differences

Separate repeated measures ANOVAs were done with subject group as the between factor, listener as the within factor and each of the lexical frequency categories above as the dependent variables. Overall, the type of listener had a significant effect. The 500 most frequent words ($F(1,21)=14.733$, $p=.001$), the top 1,000 most frequent words ($F(1,21)=18.648$, $p<.001$), words in the 100+/million range ($F(1,21)=26.935$, $p<.001$), words in the 50-99/million range

($F(1,21)=7.053$, $p=.015$) and least frequent words in the 0-25/million range ($F(1,21)=24.95$, $p<.001$) all differed significantly for NS versus NNS listeners. As might be expected, subjects used more words in the first three categories and fewer words in the latter categories when speaking to NNSs (see Figures 4.2 & 4.3).

Several group differences and two group by listener interactions emerged from the analyses. There was a significant group difference for the top 500 words ($F(2,21)=14.545$, $p< .001$). A one-way ANOVA of the percentage of words in this category (collapsed for listener) was followed by a Newman-Keuls test which showed that Group 3 used significantly more of the 500 most frequent words ($\bar{X}=72.75$) than did either Group 1 ($\bar{X}=66.187$) or Group 2 ($\bar{X}=63.56$). The latter groups did not differ significantly from each other.

The repeated measures ANOVA for the 1,000 most frequent words also indicated a group difference ($F(2,21)=17.627$, $p< .001$) (this is not surprising since the top 500 are included in this category). Again, scores were collapsed for listeners and a Newman-Keuls test was done. It indicated that Group 3 used significantly more words in this category ($\bar{X}=82.25$) than either of the other groups ($\bar{X}=77.19$; $\bar{X}=74.5$). Both a significant group difference ($F(2,21)=18.976$, $p< .001$) and a significant group by listener interaction ($F(2,21)=5.968$, $p=.009$) appeared in the ANOVA for words that occur 100+/million. A Newman-Keuls test showed that Group 3 made no adjustment for NNSs; in fact, they used significantly more frequent vocabulary with NSs than Group 2 did with NNSs. Groups 1 & 2 did not differ from each other when talking to a NS or a NNS; both

groups used significantly more words in the 100+/million category with NNSs (see Table 4.15 and Figure 4.2).

Table 4.15

Newman-Keuls Comparison of Means for Words in the 100+/Million Category

	Group 2 Naive NSs to NS	Group 1 ESL teachers to NS	Group 2 Naive NSs to NNS	Group 1 ESL teachers to NNS	Group 3 Int. NNSs to NS	Group 3 Int. NNSs to NNS
$\bar{X}$	77.88	79.25	82.75	85.0	87.0	87.25

	Group 1 to NS	Group 2 to NNS	Group 1 to NNS	Group 3 to NS	Group 3 to NNS
Group 2 to NS	1.608	5.702**	8.333**	10.673**	10.965**
Group 1 to NS		4.094	6.725**	9.06**	9.357**
Group 2 to NNS			2.632	4.97*	5.263**
Group 1 to NNS				2.339	2.632
Group 3 to NS					.292

**p≤.01, *p≤.05

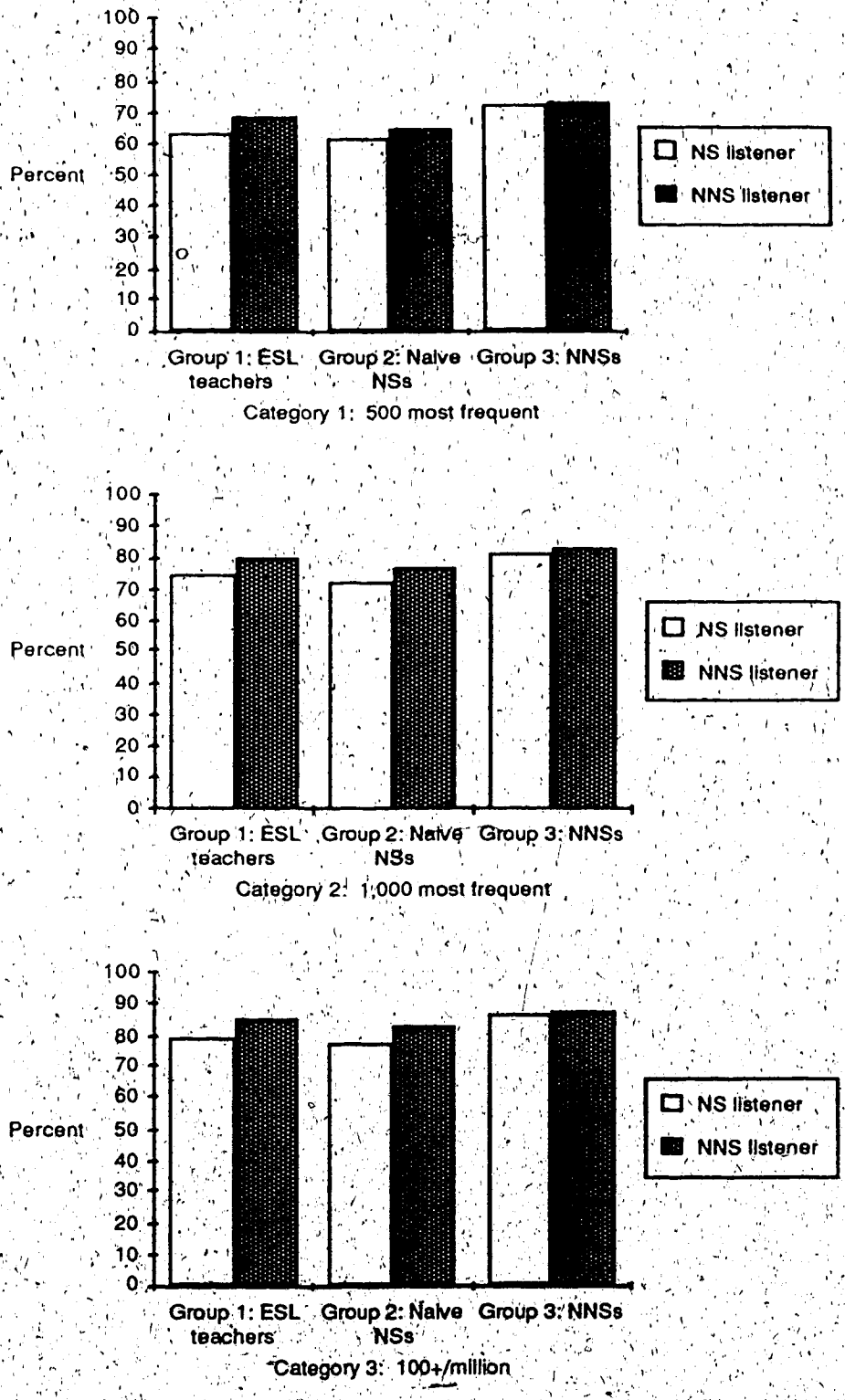
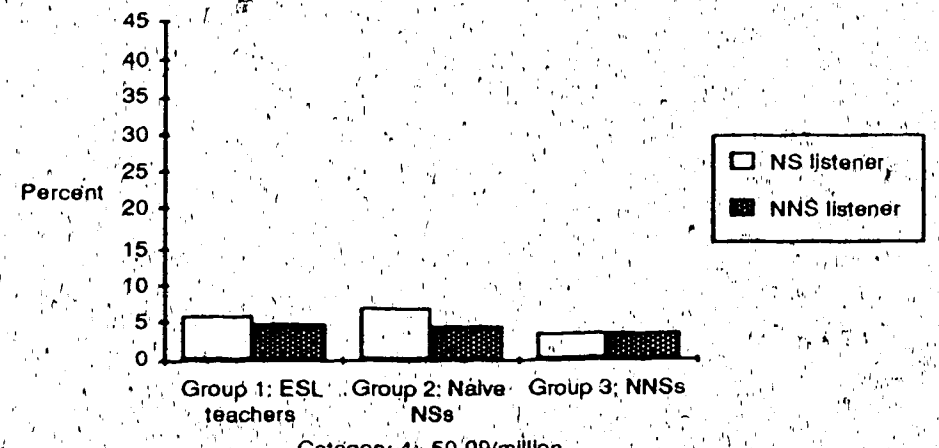
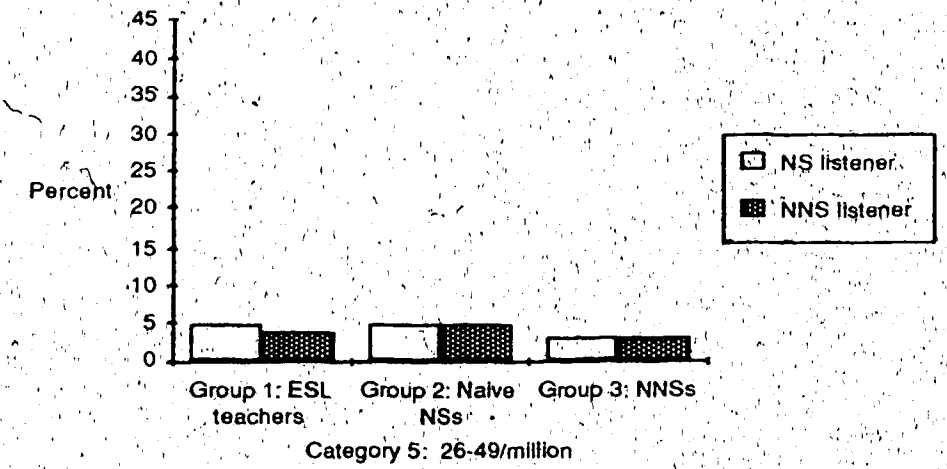


Figure 4.2: Percentage of Words in Lexical Frequency Categories 1, 2, 3.





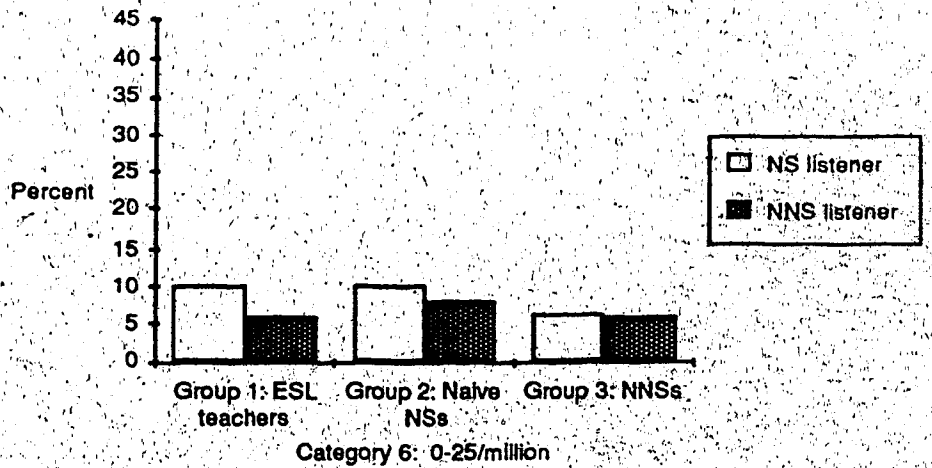


Figure 4.3: Percentage of Words in Lexical Frequency Categories 4, 5, 6.

There was a significant group difference in the 50-99/million category ($F(2,21)=8.467$, $p=.002$). A Newman-Keuls (collapsed across listeners) indicated that Group 3 used significantly fewer words in this range than did the other groups. Similarly, a group difference emerged in the 26-49/million category ($F(2,21)=4.04$, $p=.025$). Again, a Newman-Keuls test was performed; in this instance Group 2 and Group 3 were significantly different, Group 2 having more words in this category. Group 1 and Group 3 were not significantly different, neither were Group 1 and Group 2. A group difference ($F(2,21)=6.559$, $p=.006$) and a group by listener interaction ($F(2,21)=5.135$, $p=.015$) were found when the least frequent words category was examined. A Newman-Keuls test (Table 4.16) indicated that Group 3 did not adjust the relative frequency of words in this range for NNSs; moreover, there was no significant difference between Group 3 to NSs and Groups 1 and 2 to NNSs. Both Group 1 and Group 2 used significantly fewer low frequency words when addressing NNSs.

4.4.2.2.2.2 Success

Pearson correlation coefficients were calculated to examine the relationship between measures of lexical frequency for all subject groups and the comprehension success scores of the NNS listeners. None of the overall lexical frequency measures was significantly correlated with success. Because Group 3 had demonstrated different behaviour from Groups 1 and 2 in terms of lexical adjustments, separate correlations were run on the frequency counts and success scores for NS subjects (Groups 1 and 2) and NNS subjects (Group 3). Most of the measures did

not correlate significantly with success, the only exception being the number of words in the 100+/million category for Groups 1 and 2 combined ($r(14)=.5523$, $p=.026$).

Table 4.16

Newman-Keuls Comparison of Means for Least Frequent Words

Groups 1 and 3 ESL teachers & Int. NNSs to NNSs	Group 3 Int. NNSs to NSs	Group 2 Naive NSs to NNSs	Group 1 ESL teachers to NSs	Group 2 Naive NSs to NSs
$\bar{X}$ 6.0	6.375	7.625	10.25	10.5

	Group 3 to NS	Group 2 to NNS	Group 1 to NS	Group 2 to NS
Groups 1 and 3 to NNS	.612	2.651	6.933**	7.341**
Group 3 to NS		2.039	6.321**	6.729**
Group 2 to NNS			4.282*	4.69**
Group 1 to NS				.408

**$p \leq .01$, *$p \leq .05$

It was thought that perhaps the extent of lexical adjustment might play a greater role in successful communication than actual lexical frequency levels. For this reason, the difference between lexical frequency to NSs and NNSs was correlated with success scores for those frequency categories that had been shown to be significantly different for NNS listeners. There were no significant correlations for all groups combined, nor for Group 3 alone or Groups 1 and 2 combined.

4.4.2.2.2.3 Personality Differences

To see if lexical frequency is related to personality, the proportions of words in the 1,000 most frequent class, the 100+/million category and in the least frequent (0-25/million) category were compared for individuals who rated high on the IAF/SPT scale and those with low IAF/SPT ratings. One-way ANOVAs with personality group as the main factor and lexical frequency percentages as the dependent measures indicated no differences between the two groups. *T*-tests of the adjustments in frequency for NNSs versus NSs were also calculated on each of the measures for both personality groups. The high IAF/SPT group used significantly more of the top 500 words with NNSs ($t(8)=2.34$, $p=.047$) and significantly fewer of the least frequent words ($t(8)=2.71$, $p=.027$). There were no significant adjustments in the low IAF/SPT group.

4.4.2.3 RATE

4.4.2.3.1 Measures

Speaking rate for the film task was calculated for NS subjects (Groups 1 and 2) only, as the rates of NNSs (Group 3) could have been affected by several uncontrolled factors that have little or nothing to do with the adjustments made for the benefit of NNSs (for example, Group 3 members may have had lexical access difficulties that would have altered rate). Overall rate was determined by timing the audiotapes with a stopwatch. Because there was considerable variation in the amount of feedback provided by the listeners on the film task, all listener utterances were deleted from the recorded times, except in the few instances when participants spoke simultaneously. The times were then divided by the

number of words uttered by each subject to obtain a words per second measure (see Table 4.17).

Three 50-syllable samples of speech were also chosen from the beginning, middle and end of each narrative. These were measured twice, once with pauses (although listener feedback was removed) and a second time with all pauses removed. These measurements made it possible to determine whether slower rates were associated with a change in speaking rate, or with a change in the amount of pause time.

Table 4.17

Rate of Speech to NSs and NNSs in Words/Second — Film Task (Higher Rates are Underlined)

Subjects	Listeners	
	NS	NNS
Group 1 ESL Teachers		
1	2.72	2.31
2	2.60	2.37
3	2.25	2.46
4	2.43	2.64
5	2.40	2.21
6	2.57	2.06
7	3.17	2.89
8	3.06	2.07
Group 2 Naive NSs		
9	1.82	1.34
10	2.72	1.53
11	2.11	2.14
12	2.64	2.74
13	2.38	1.52
14	2.36	2.45
15	3.12	2.67
16	2.70	2.82

4.4.2.3.2 Analyses

4.4.2.3.2.1 Listener and Group Differences

A repeated measures ANOVA with group (teachers and naive NSs) as the between factor and listeners as the within term showed no group differences in overall rate and no group by listener interaction, although there was a significant listener effect ($F(1,14)=7.305$, $p=.017$). Across subjects there was a decrease in rate to NNSs, despite the fact that six of the sixteen subjects did not slow down at all. Subjects were then divided into a successful group (more than 50% on the listeners' comprehension scores) and an unsuccessful group (50% or less on the listeners' comprehension scores). A repeated measures ANOVA comparing successful and unsuccessful groups indicated that there was a significant listener difference ($F(1,14)=12.74$, $p=.003$) and a significant group by listener interaction ($F(1,14)=10.536$, $p=.006$). A Newman-Keuls test showed that the unsuccessful group used a significantly slower rate with NNSs. There was no rate change in the successful group, as their rates to NSs and NNSs were both significantly faster than the unsuccessful group's rate to NNSs (see Table 4.18).

Table 4.18

Newman-Keuls Comparison of Means for Rate in Words/Second: Successful & Unsuccessful

	Unsuccessful to NNS	Successful to NNS	Successful to NS	Unsuccessful to NS
$\bar{X}$	2.001	2.525	2.553	2.579

	Successful to NNS	Successful to NS	Unsuccessful to NNS
Unsuccessful to NNS	6.162**	6.485**	6.794**
Successful to NNS		.324	.635
Successful to NS			.318

**p≤.01

4.4.2.3.2.2 Success

NNS listeners' success scores and the subjects' rate of speech were correlated at $r(14)=.37$, $p=.158$. A correlation of success with the extent of rate adjustment, that is, the degree of change for each subject, was correlated at $r(14)=-.48$, $p=.062$.

4.4.2.3.2.3 Personality

A repeated measures ANOVA for rate with high and low rated IAF/SPT individuals as the between subjects factor and listener as the within subjects factor indicated that there was a significant listener difference ($F(1,14)=11.62$, $p=.004$) and a significant group by listener interaction ($F(1,14)=5.11$, $p=.04$). Because the n's for the personality groups are

uneven, the Scheffé test was used to compare mean rates. Both high and low IAF/SPT groups had significantly faster rates when talking to NSs ($\bar{X}$=2.611 and 2.507, respectively) than the low IAF/SPT group's rate when addressing NNSs ($\bar{X}$=1.959). The rate used by the high IAF/SPT group to the NNSs ($\bar{X}$=2.5) did not differ significantly from the other rates (see Table 4.19).

Table 4.19

Scheffé Test on Rates of Personality Groups to NS and NNS

High IAF/SPT to NS		Low IAF/SPT to NS		High IAF/SPT to NNS	Low IAF/SPT to NNS
$\bar{X}$ 2.611		2.507		2.5	1.959
High IAF/SPT to NS	vs.	Low IAF/SPT to NS		F=.5679	
High IAF/SPT to NS	vs.	High IAF/SPT to NNS		F=.6469	
High IAF/SPT to NS	vs.	Low IAF/SPT to NNS		F=22.322*	
Low IAF/SPT to NS	vs.	High IAF/SPT to NNS		F=.0026	
Low IAF/SPT to NS	vs.	Low IAF/SPT to NNS		F=15.76*	
High IAF/SPT to NNS	vs.	Low IAF/SPT to NNS		F=15.369	

F'=15.66, α=.10

4.4.2.3.2.4 Characteristics of Rate Change

In order to determine whether it was speed of talking that is affected by having a NNS listener or the amount of pause time, a comparison was made of the three sample rates addressed to both sets of listeners with pauses removed. There was no significant difference based on paired *t*-tests comparisons between the rates to NSs and NNSs by this measure: sample 1, $t(15)=1.5$; sample 2, $t(15)=1.99$; sample 3, $t(15)= 1.64$. In other words, subjects did not articulate significantly more slowly, but rather made greater use of pause time when talking to NNSs.

The relative consistency of rate was tested by comparing the measures taken at the beginning, middle and end of each narrative. Two repeated measures ANOVAs on rate addressed to NNSs, both with and without pauses, indicated that subjects were consistent over time: there were no significant differences found.

4.4.2.4 Information Type

4.4.2.4.1 Measures

Two individuals coded each film transcript for the NS subjects (Group 1 and 2) for proposition type. The definition of proposition was adopted from Tomlin: "a semantic unit consisting of a predicate plus its arguments about which a truth value can be obtained . . .[A]n utterance in the text was counted as realizing a proposition if and only if it is realized by a full clause or by a partial clause for which missing arguments are readily recoverable" (1984, p. 122). Each proposition was subsequently coded for one of three information types: a) task-related; that is, an utterance that contained information that was crucial for answering the comprehension questions,

and any repetitions or directly supporting propositions; b) major events; that is, information that is not directly questioned in the comprehension test, but which outlines an event in the film and which serves to carry the story along; and c) minor information; this category included background detail not directly related to a specific event in the film and also irrelevant propositions related either to performance of the task, e.g., "I'm going to tell you about a movie I saw." or to some other topic, e.g., "Do you like washing dishes?". Interrater agreement on the assignment of propositions to all of the appropriate categories was 96%.

4.4.2.4.2 Analyses

4.4.2.4.2.1 Group and Listener Differences

The percentage of propositions in each of the three categories — task-related, major and minor — was calculated for each of the NS subjects talking to both NS and NNS listeners (see Table 4.20). Separate repeated measures ANOVAs with each of the three information types as dependent variables revealed that Group 1 (teachers) used significantly more task-related information than Group 2, regardless of listener ($F(1,14)= 5.074$, $p=.041$). Both major and minor information types were significantly different depending on listener ($F(1,14)= 5.63$, $p=.032$ and ($F(1,14)=4.75$, $p=.047$ respectively); however, there were no group differences. NNSs elicited less major information and more minor information than did NS listeners. (It should be pointed out that there is a trade-off effect — since there are only three information types, a percentage change in one necessarily affects one or both of the others).

Table 4.20

Means for Task-Related, Major and Minor Information

	Task-Related		Major		Minor	
	NS	NNS	NS	NNS	NS	NNS
ESL teachers	28.37	26.57	35.45	29.64	36.14	43.76
Naive NSs	21.7	23.19	34.67	25.75	43.41	51.09
Successful	25.86	26.19	31.76	31.55	42.35	42.25
Unsuccessful	24.21	23.57	38.36	23.84	37.2	52.6
High IAF/SPT	25.98	26.54	32.9	28.26	40.9	45.17
Low IAF/SPT	23.83	22.74	37.8	26.96	38.32	50.3

4.4.2.4.2.2 Success

When the comprehension scores were correlated (Pearson) with the proportions of information type, only task-related information was significant ($r(14)= .4971$, $p=.05$), though minor information just missed reaching significance ($r(14)= -.4871$, $p=.056$). When minor information was subdivided into background detail and irrelevant information (see section 4.4.2.4.1), it was found that background detail correlated negatively with success ($r(14)=-.5315$, $p=.034$). There were no significant correlations of NS comprehension scores with information types.

The subjects were again regrouped into successful and unsuccessful categories. Repeated measures ANOVAs with successful and unsuccessful groups as the between factor, listener as the within factor and information type as the dependent variables were then carried out. There were no significant effects connected to task-related information; however, both major and minor information showed listener effects ($F(1,14)=8.821$,

p=.01 and (F(1,14)=7.297, p=.017 respectively) and group by listener interactions (F(1,14)=8.319, p=.012 and (F(1,14)=7.489, p=.016 respectively). A Newman-Keuls test on the major information means showed that successful subjects did not differ in the amount of major information they used when talking to either a NS or an NNS ($\bar{X}$=31.76 versus $\bar{X}$=31.55); however, unsuccessful subjects used significantly less major information with NNSs ($\bar{X}$=38.36 versus $\bar{X}$=23.84). (see Table 4.21).

Table 4.21

Newman-Keuls Comparison of Major Information Means for High and Low Success Groups

Low Success to NNS	High Success to NNS	High Success to NS	Low Success to NS
$\bar{X}$ 23.837	31.55	31.762	38.362

	High Success to NNS	High Success to NS	Low Success to NS
Low Success to NNS	3.11	3.194	5.85**
High Success to NNS		.085	2.75
High Success to NS			2.66

**p≤.01

A Newman-Keuls test on the amount of minor information revealed that the unsuccessful group used significantly more with NNSs (52.6%) than with NSs (37.2%) (see Table 4.22). In other words, the low success

group makes an adjustment that has a negative effect on the comprehension of the NNS.

Table 4.22

Newman-Keuls Comparison of Minor Information Means for Successful and Unsuccessful Groups

Low Success to NS	High Success to NNS	High Success to NS	Low Success to NNS
$\bar{X}$ 37.2	42.25	42.35	52.6

	High Success to NNS	High Success to NS	Low Success to NNS
Low Success to NS	1.78	1.82	5.442**
High Success to NNS		.035	3.657
High Success to NS			3.622

**$p \leq .01$

To investigate whether the two types of minor information were used differently by successful and unsuccessful subjects, separate repeated measures ANOVAs were done on background detail and irrelevant information. There were no differences between successful and unsuccessful groups in the amount of irrelevant information addressed to listeners. When background detail was examined for the two success groups, a group by listener interaction was found ($F(1,14)= 5.518$, $p=.034$). When all four means were compared in a Newman-Keuls test, no significant differences emerged; however, when only the means for the

low and high success groups talking to NNSs were compared in an independent *t*-test, there was a significant difference ($t(14)=2.94$, $p=.011$); successful subjects used significantly less background detail when addressing NNSs than did unsuccessful subjects.

4.4.3.4 Personality Differences

When subjects were divided into high and low IAF/SPT groups, repeated measures ANOVAs on the three information types indicated significant listener differences for both major and minor information, that is, NNSs elicited less major information ($F(1,14)=6.47$, $p=.023$) and elicited more minor detail ($F(1,14)=5.78$, $p=.031$).

4.4.2.5 Self Perception and Previous Language Learning Experience

4.4.2.5.1 Measures

A questionnaire (Appendix C) completed by all teachers and naive NSs provided information on the subjects' own experiences with second language acquisition, as well as their perceptions of their language learning skill. The subjects were asked to recall the adjustments they had made (or thought they had made) when talking with their NNS partners, specific problems they had encountered while doing the tasks, and what they perceived to be most difficult when speaking to low proficiency NNSs.

The subjects rated themselves as poor, fair, average, good or very good in terms of their own L2 fluency, comprehension, grammar and vocabulary. They used the same rating scale to denote their overall language learning skill.

4.4.2.5.2 Results

The sixteen subjects, who ranged in age from 26 to 45 ($\bar{X}$=33) had all learned a second language; for twelve people the language was French, two others had learned Spanish, one person German and one person Portuguese. Eight individuals reported that they had learned their second language through instruction only, two said that they had 'picked up' their second language without benefit of instruction, and six people learned through both means. Five subjects claimed to have actively sought activities in their L2 (movies, plays, etc.), eight reported that they pursued additional exposure to L2 only once in a while, and three said they never searched out L2 activities. Eight subjects indicated that they began acquiring their second language between the ages of 12 and 18; six started between 7 and 11 years of age; one began as an adult and one began between 1 and 6 years of age. The mean age at which the subjects reported having reached their current proficiency levels was 20.7 years (range = 14 to 33 years). When subjects were grouped into categories based on a) how they learned their L2, b) whether they pursued L2 activities, and c) age of acquisition, no discernible patterns for teachers, nonteachers, IAF/SPT groups or success groups emerged.

All subjects reported that they had made adjustments in their speech for their NNS partners. Everyone claimed to have spoken more slowly, and 12 individuals specifically mentioned that they had used simpler vocabulary with the NNSs. Eight people reported that they had enunciated more clearly with NNSs, and two said that they had increased volume. Although three subjects said that their speech was more repetitive and another three claimed to make extensive use of paraphrase,

one person reported that she was less redundant with the NNS than with the NS. Two persons recalled using gestures with the NNSs, and one person said that his language to the NNS was "more factual, less conceptual".

Generally speaking the subjects had an accurate perception of the degree of difficulty they encountered when talking with their NNS partners. None of the six persons who said that communicating with a NNS was difficult achieved higher than 50% success on the film task. Of the ten people who reported no difficulty on the film task, only two had scores of 50% or less.

Nine subjects were unable to identify any specific problems they had in communicating with NNSs; however, those who responded said that conveying symbolic, abstract information was extremely difficult.

4.4.2.5.3 Self-Ratings

Subjects' ratings of their proficiency in L2 were converted to a five-point scale in which 1=poor and 5=very good. Self-ratings on each of the four skills, i.e., grammar, vocabulary, comprehension and fluency were highly intercorrelated (see Table 4.23). The subjects' ratings of their overall language learning ability did not correlate as strongly; in fact only grammar correlated significantly with general ability (see Table 4.23).

A comparison of film task success and the subjects' self-ratings was made on the assumption that good communication skills might underlie both measures. None of the correlations was significant.

Table 4.23

Correlations of Second Language Skills for NS Subjects

	Fluency	Vocabulary	Comprehension	Overall Ability
Grammar	r=.7534 p<.001	r=.7299 p=.002	r=.7308 p=.002	r=.5067 p=.046
Fluency		r=.7126 p=.002	r=.7698 p<.001	r=.4804 p=.06
Vocabulary			r=.8422 p<.001	r=.3504 p=.184
Comprehension				r=.4160 p=.108

Teacher and naive NS self ratings of fluency, comprehension, grammar, vocabulary and overall language learning ability were compared with *t*-tests for independent means. There were no significant differences between the two groups. *T*-test comparisons were also made of the high and low IAF/SPT groups' self-ratings. Here again, there were no significant differences between groups.

To determine whether there was a relationship between overall language ability ratings and the JPI personality traits, Pearson correlations were calculated, none of which were significant; no *r* exceeded .42. Interestingly enough, an aggregate score determined for each subject (i.e., the mean for each of the individual skill ratings) did not correlate highly with the subjects' self-ratings of their overall skill ($r(14)=.4936$, $p=.052$). Nor did the aggregate score correlate with the JPI personality factors or success on the film task.

4.5 SUMMARY

In summary, the principal questions which this work sought to address were a) are there significant individual differences in FT adjustments, and if so, can they be attributed to personality traits and/or experience with NNSs; b) do NNSs differ from NSs in communicating with less proficient persons; c) what effect do various FT adjustments have on success in communication and d) are successful FT speakers also good language learners.

In answer to the first question, it appears that in terms of communicative success, ESL teachers were not significantly better than naive NSs. There were, however, differences between the two groups in the type of conversational adjustments they favoured (on both tasks), the number of conversational adjustments made on the film task, and in the percentage of propositions that were task-related in the film narrative. When subjects were grouped according to personality type, rather than experience with NNSs, there were significant differences in communicative success on both tasks. Furthermore, there were differences in lexical frequency and rate between the two personality types.

In answer to the second question, NNSs (at least at the high intermediate level) did not follow the FT pattern for NSs. Although they used significantly more conversational adjustments on the FTD task with the NNSs (as did the other groups), they made extensive use of conversational adjustments with their NS partners as well. NNS subjects did not differ from naive NSs in the number of conversational adjustments used in the film task; however, they had more difficulty communicating

their message than did either NS group. It appears that NNSs made no adjustments in lexical frequency, unlike NS subjects.

The third question, concerning the effect of FT adjustments on success, has only partially been answered. Counted globally, conversational adjustments did not correlate with success on either task; nonetheless, these adjustments may have a critical impact on communicative success in specific exchanges. A finer-grained analysis may thus provide more insight into their communicative value. Only one measure of lexical frequency correlated with success (the percentage of words in the 100+/million category, NS-NNS dyads). Again, further analyses may shed light on the contribution of lexical frequency to comprehensibility. It was shown that slowed speech rate did not benefit communicative success in this study; however, further research on slowed articulation, pause length, and an upper boundary for speech rate is called for. When the relation of information type to communicative success was explored, it was found that an increase in background detail and a concomitant decrease in major information to NNSs had negative consequences.

Finally, no relationship was found between successful FT speakers and good language learners.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

5.1 INTRODUCTION

The two issues that are the primary focus of this thesis are (a) the effect of a subset of FT adjustments on the comprehension of low-level NNSs and (b) the relative importance of individual differences among NSs to successful communication with L2 learners. Until very recently, most of the research on FT has been of a purely descriptive nature; that is, there has been a concentration on the delineation of FT characteristics without regard to their relative effect on the NNS. It has generally been assumed that speech adjustments are beneficial in the promotion of the NS's comprehensibility (see Hatch, 1983a for an extensive list of adjustments and their presumed benefits). No matter how intuitively plausible the claims for the efficacy of FT may seem, it is necessary to explore the potential benefits through experimentation because, as Chaudron (1982) has shown, some adjustments may have adverse effects. It is also important to determine how FT varies from one speaker to another and whether systematically different FT profiles for groups of individuals can be identified. As with every form of communication, some individuals exhibit a facility in getting the point across to a NNS, while others struggle and often even give up when they do not meet with immediate success. Are there definable speech traits which coincide with successful NS-NNS communication, and, if so, are they connected in some way to other underlying characteristics or similarities?

In the following sections these issues will be addressed in relation to the findings presented in Chapter 4.

5.2 CONVERSATIONAL ADJUSTMENTS

5.2.1 Comparisons with Long (1980)

Direct comparisons of some of the conversational adjustments examined here can be made between Long's (1980) findings and those for the FTD task in this study. Long's data revealed that NSs made significantly more use of confirmation checks, self-repetition and clarification requests when addressing NNSs than when addressing other NSs. The raw count data from the present study confirmed that, for all subjects, all three of the adjustment types noted were more prevalent in NS-NNS than in NS-NS conversations. However, when relative score data are considered, self-repetition is no longer significant at the .005 level. Furthermore, other-repetition is significantly more frequent in the NS-NNS interaction under study here, whereas Long found no statistically significant evidence of this adjustment. Paraphrase, a measure not examined by Long, was also found significantly more often in NS-NNS conversations in this study.

Long's proportional measures of questions differed from the relative score measures made here in that he examined questions (yes/no, intonation, tag and WH) in relation to statements and imperatives and found significantly more questions overall on the FTD task for NS-NNS than for NS-NS dyads, but when the individual question types were analyzed there were no significant differences in terms of relative distribution on the task. (When Long combined the results for all of his

six tasks, he found that WH questions were relatively more frequent in NS-NNS dyads than in NS-NS pairs, but that the distribution of the other question types was more or less constant, regardless of listener.) In the present study, both relative score measures of yes/no questions (auxiliary-inverted and intonation combined) and WH questions were significantly more frequent in NS-NNS exchanges.

The differences between Long's data and the present findings may be partially accounted for by the difference in subject selection. First, in Long's experiment, the individuals who addressed the NNSs were not the same people who met with the NS controls, whereas random individual variation was eliminated to an extent in the present study by using each subject as his/her own control.

A second possible explanation for the disparities in the two studies has to do with the subjects' past experience in talking with NNSs. Long notes that his NS subjects were matched according to "the number of years of prior FT experience" (p. 69), though we are not told what proportions of the NS sample had extensive, limited or almost no previous experience in dealing with NNSs. A comparison of the ESL teachers and naive NSs in this experiment reveals several differences in their choice of conversational adjustments (although there was no difference between groups in the total number of adjustments made). If Long's subjects did not fall into comparable categories, the distribution of adjustments would be expected to differ as well.

Finally, it might be assumed that the inclusion of the NNS subject group in this task had an effect on the overall results. When the raw counts are examined, Group 3 appears to contribute to three categories

(yes/no, other-repetition and WH) that are significant in this study but not in Long's. The influence of this NNS group diminishes, however, when relative measures are made, yet those same categories are still significant at the .005 level. This fact, and the extensive use of conversational adjustments made by Group 3 to NSs, leads to the conclusion that the incorporation of the NNS data into the overall analysis could not have resulted in a spurious increase in overall adjustments.

What is clear from both studies, despite the differences discussed above, is the appreciable increase in negotiation when a NNS is the addressee.

5.2.2 Task Differences

Long (1980) has argued that interactive tasks encourage the negotiation of the comprehensible input essential to second language acquisition and that so-called one-way tasks, in which information is not exchanged but rather delivered, are not characterized by negotiation. In his vicarious narrative task (in which each member of the dyad was to tell the other about his/her favourite movie), Long found no statistically significant evidence of FT. The film task in this study was somewhat different in that, although only the speakers had control of the information, it was incumbent upon the listeners to understand the story in order to answer the comprehension questions. Presumably this added component of the essentially one-way task accounts for the significant increase in comprehension checks, self-repetitions and paraphrase when the listener was a NNS. In some respects this task is similar to many real NS-NNS encounters, particularly in the workplace. Although information

flows in one direction in job-related instructions, for example, both participants recognize the importance of comprehension on the NNS's part. It seems to be the case, then, as Gass & Varonis (1985b) have observed, that some one-way tasks are less one-way than others; that is, "the amount of information exchange required by a given task is a continuous rather than a dichotomous variable" (p. 159). The degree to which a task is interactive is not necessarily reflected accurately by an examination of the conversational adjustments made by the NS. In a pilot version of the film task, for example, it was noted that one teacher did not use a single comprehension check. But there was no need, as the NNS responded to everything that the teacher said with confirmation checks. When the number of listener feedback turns on the film task was examined (comparing NNS listeners to NS controls), it was found that the average increase was over 980% (with a range from -93% to 3259%!). Clearly the NSs were in part responsible for this increase, but the task's comprehension question component obviously prompted many of the NNSs to initiate the negotiation of comprehensible input on their own. It should be noted, however, that the foregoing is not intended as a claim that the film task is interactive, as it serves to limit interaction by its very nature; on the other hand, it has been suggested that intrinsically non-interactive tasks can be manipulated to encourage communicative exchange.

The finding that, for all three subject groups combined, there were no significant correlations of success on either task with the total global amount of conversational adjustment is not altogether surprising, given Long's suggestion (1983c) that conversational adjustments serve multiple

functions. He points out that they are sometimes used to avoid communication problems (strategies), to make repairs when there has been a communication failure (tactics), or some combination of the two. Simply determining the relative frequency of adjustments does not reveal whether a given adjustment is appropriate or that it has actually served its intended purpose. Hawkins (1985) has illustrated how the NS's perception of the NNS's comprehension is often inaccurate. To assess the relative value of individual conversational adjustments, a fine-grained evaluative analysis is required, perhaps using Hawkins' post-interview technique in which both participants listen to a tape recording (or alternatively,view a videotape) of their exchange and comment on what they understood or perceived at each stage of the interaction.

Conversational adjustments may well be a necessary but not sufficient aspect of NS-NNS speech: the adjustments improve communication if and only if the speaker can 1) identify at which points they are needed, 2) make the appropriate adjustment called for and 3) ensure that the NNS has understood. To illustrate, one subject made several comprehension checks in the film task, but didn't wait for the NNS's response to any of them – and three other subjects never checked comprehension at all on the conceptually most difficult parts of the film. It appears that in some instances, at least, conversational adjustments are a hit and miss matter, depending on the accuracy of the speaker's perceptions of the NNS's needs.

5.2.3 Group Differences

The most striking difference between the subject groups in this study was the large number of adjustments made by NNSs to NSs in the FTD task. This finding suggests that, at least in a two-way task, NNSs are influenced not only by the relative linguistic sophistication of the listener, but by their perception of their own language proficiency. In contrast, Porter (1983) collapsed three adjustments (confirmation checks, clarification requests and comprehension checks) with three "appeal to authority" (Tarone, 1980) communication strategies to obtain a measure of repair. She compared the interactions of NSs, advanced NNSs and intermediate NNSs in problem-solving tasks (by pairing each subject with a person from each proficiency level) and found no differences among speakers in their use of repair, although native speakers were observed to make about one-third more repairs than learners in discussion with learners. (All but approximately 15% of the repairs were in the conversational adjustment categories.) In the film task here, although Group 3 appeared to use more paraphrase with NNSs, there was no significant difference in the total adjustments made for NS and NNS listeners; in fact, Group 3 did not differ in this respect from naive NSs.

These seemingly conflicting findings for NNS adjustment are most likely a reflection of task differences. Of the three task types (problem-solving, FTD, film), FTD requires the most precision in self-expression; it is also the most restricted in terms of lexical choice. Furthermore, as a true two-way task, it is the most interactive of the three. Problem-solving, which requires two people to arrive at a consensus, entails some negotiation (although it is possible for one person to dominate), but there

is no "right answer" and therefore troublesome language areas can be avoided. The film task also offers relative freedom linguistically and is the least interactive of the tasks. These two factors, then – degree of linguistic constraint and degree of interaction – may account for the variable behavior in NNSs' use of conversational adjustments.

In all three groups there was an increase in total adjustments made for NNS listeners on the FTD task; however, on the film task, the teachers made significantly more adjustments for NNSs than did the other groups. When the conversational adjustments of ESL teachers, naive NSs and NNSs were examined separately for the FTD task, it became apparent that the groups were not relying on the same adjustments. Although both Groups 1 and 2 made relatively heavier use of 5 of the 14 measures, only one of these, confirmation checks, was common to both groups. The teachers favoured comprehension checks, WH questions, clarification requests and paraphrase, while naive NSs showed a preference for yes/no questions, self-repetition, non-verbal cues and restructuring. Group 3 made more use of clarification requests and utterance completions with NNSs.

Although none of the adjustments made by Groups 1 and 2 was directly correlated with success, it is conceivable that the differential use of these features has an impact on second language acquisition. It may be as important to produce L2 in a comprehensible manner as it is to understand it if a learner is to achieve relatively high proficiency (Swain, 1985). Notice that four of the five adjustments used extensively by the ESL teachers, namely, confirmation checks, comprehension checks, WH questions and clarification requests, require feedback from the NNS,

while only two, confirmation checks and yes/no questions, encourage responses in the Group 2 dyads. Moreover, WH questions tend to elicit longer, more complicated answers than do yes/no questions. Although the teacher-NNS pairs did not perform significantly better overall on the FTD task, it does seem to be the case that Group 1 was attempting to draw the NNSs into the interaction to a greater degree than Group 2 was. This was definitely the case on the film task, where the teachers elicited more than 2 1/2 times the amount of NNS feedback that Group 2 did. The role of comprehensible input as a principal factor in L2 acquisition is clear, but evidence of comprehension success need not be the only indicator of useful communicative experiences. Here again, what is called for is a detailed analysis of conversational adjustments with reference to the amount and form of resultant NNS output.

5.3 LEXICAL FREQUENCY

It has long been taken for granted that a basic characteristic of FT is the increased use of high-frequency vocabulary items, but it was not until Long's study (1980) that this notion was tested in a systematic way. Long compared the mean lexical frequency of nouns and verbs sampled from the spontaneous conversation, vicarious narrative and final discussion tasks with the Dahl (1979) corpus of spoken English, which is based on 15 sessions between 15 patients and 14 psychoanalysts. Long found no significant adjustments in the frequency of nouns and verbs used in NS-NNS interactions. He also examined type/token ratios (TTR) for the spontaneous conversations and vicarious narrative tasks and, although TTRs to NNSs were lower, the differences were not significant. He

attributes the failure to find adjustments in both TTR and lexical frequency in part to the limited sampling of the transcripts. In the present study, every lexical item in the film transcripts was coded according to the Thorndike & Lorge (1944) word count. Although the count is old and is based on a variety of written texts rather than on spoken language, it was chosen because of its sheer size and its categorization of words into several frequency classes. In a comparison of another count of the most frequently occurring words in adult spoken English (Wepman & Lozar, 1973) and the Thorndike & Lorge count, it was found that over 89% of the spoken English corpus was classified by Thorndike & Lorge as occurring at least 100 or more times per million words of text (their category AA).[1] This finding suggests that despite certain, obvious flaws (e.g., lack of morphological information), the Thorndike & Lorge count adequately represents word frequency, and, in any case, any miscategorizations are held constant for all subjects.

The principal finding overall is that NNSs elicit significantly more frequent lexical items than do NSs. It appears that the NS subjects had a high degree of conscious control over this aspect of FT, as fully 75% of them (spontaneously) reported that they were aware of using "simpler" words with their NNS partners.

Interestingly, Groups 1 and 2 behaved very similarly in this respect, in contrast to Group 3. The NNS subjects used more high frequency vocabulary when speaking to NNSs than did the other groups and significantly fewer words in the 26-49/million category than Group 2,

[1]The Wepman & Lozar corpus was not used in this study because it is limited to fewer than 400 words.

Even more worthy of note, though, is the lack of adjustment on the part of the Group 3 subjects. The use of high frequency vocabulary by Groups 1 and 2 to NSs is also notable, as is the fact that the adjustments made for NNSs are relatively small, albeit extremely consistent. Group 3, on the other hand, made no adjustment, but employed high frequency lexical items with all listeners, regardless of language status. This suggests that either their own linguistic resources were limited and/or that they simply preferred to rely on the more common words in tasks such as these, perhaps as an overt communication strategy.

Notwithstanding the intuitive benefit of reliance on the most common words as a means of enhancing NS-NNS communication, the use of only one of the lexical frequency categories examined (100+/million) was correlated with comprehension success. One explanation for the lack of strong relationships between lexical frequency and success is the remarkable uniformity of the NSs' performance, leaving little room for effective variation. The effect of relative lexical frequency on learner comprehension would doubtless be better determined through experimental manipulation of frequency, controlling for factors such as redundancy, which has been shown to influence NNS comprehension (Cervantes, 1983; Chaudron, 1983).

Two other measures related to the subjects' lexical choices, namely, TTR and number of words, were made on the complete data set. Significantly lower TTRs were directed to NNSs on both tasks, a finding which suggests considerable redundancy at the lexical level. Group 3 had significantly lower TTRs than the NS groups on the FTD task; this can be

interpreted as additional evidence of their reliance on a limited vocabulary.

A task difference emerged, wherein the TTRs for the film transcripts were lower than those for the FTD. This result may be accounted for by the distinctive demands of the tasks. The very nature of FTD dictates the use of a variety of specific lexical items, and once a particular difference between the pictures has been identified, there is no need to return to it again. Furthermore, in several instances subjects did not use full sentences in response to a NNS utterance, e.g., No mouse in my picture, although there were fewer cases of elliptical utterances addressed to NNSs than NSs. The film task, on the other hand, not only places fewer restrictions on lexical choice, but is necessarily longer and requires more complete information in the absence of visual support. Several subjects essentially repeated the entire story two or three times to the NNSs, and this further reduced the TTR.

Nearly all subjects used more words on both tasks when talking with NNSs. There were no group differences on this measure, a finding which differs from Porter (1983), who found that NNSs elicited more input from NSs than from other NNSs. It is possible that task differences are the cause of this disparity. Porter's problem-solving tasks required the subjects to arrive at solutions by depending largely on their own resources, whereas the FTD and film tasks provided the "content" of the resultant output, thus partially controlling for topic avoidance.

5.4 RATE

A common perception of FT is that it is characterized by a slow rate of speech. In fact, all of the NS subjects in this study reported that they spoke more slowly when talking to NNSs, and six mentioned "careful pronunciation" as a concomitant aspect of FT. One person stated that she employed longer pauses, while another recalled using fewer contractions with the NNS partner.

Many benefits have been attributed to a slower rate, including increased processing time, clearer boundary markers, clearer pronunciation (sometimes to the point of using citation forms for normally reduced articles and other functors) and so on. Anyone who has been cast into a foreign language environment after a short period in the classroom is likely to complain that NSs "talk too fast"; in fact, one of the first survival English phrases often taught to L2 learners is the request, "Please speak more slowly."

Given this widely-held perception that slow rate enhances NNS comprehension, it is not surprising that several studies (Henzl, 1975; Steyaert, 1978; and Dahl, 1981) found evidence that both language teachers and naive NSs speak more slowly to NNSs than to NSs. Henzl examined the speech rate (words/minute) of teachers of Czech, English and German, each of whom told two stories to NSs, advanced learners and beginning learners. The general trend was to slow down for all NNSs, but the speech addressed to beginners was even slower than that to advanced students.

Steyaert's study was similar in that she had six ESL teachers relate two stories to NNSs (intermediate level) and to NSs. She found a significantly

slower rate to NNSs in one of the stories, but the differences were not as pronounced in the other (in fact, two of the subjects actually spoke faster to the NNSs).

Dahl's study compared ESL teachers and naive NSs giving instructions to NNSs and NSs. Subjects heard their intended addressees reading a passage on tape, but had no actual contact with them. Despite the lack of interaction, all of her subjects spoke more slowly when their instructions were directed to beginner NNSs. When Dahl played the tapes to NNSs and asked them to assess the instructions for comprehensibility, she found no correlation of speech rate and ease of understanding. Nonetheless, when the NNS listeners reported that a given message was difficult to understand, they usually complained that it was delivered at too fast a rate. Actually, those messages were no faster than the ones that were judged as being easy to understand.

Interestingly enough, Arthur *et al.* (1980) found no significant adjustment in rate (words/minute) when they contrasted the speech of 120 airline ticket agents to NSs and NNSs. We are not told the proficiency level of the NNSs (who used a script identical to that of the NSs), but their speech was independently rated as being more accented, less grammatically correct and less fluent than that of the NSs. Arthur *et al.* offer no explanation for their finding, but merely report that their result "is surprising, since it runs counter to the common wisdom: virtually all the native speakers we questioned thought that they spoke more slowly when addressing nonnative speakers" (p. 119).

When Wesche & Ready (1985) compared the lectures of two psychology professors (one a native English speaker, the other a native

French speaker) to NSs and L2 learners, they found that the English-speaking lecturer used a significantly slower rate (words/minute) with NNSs, although it was not constant over time. The authors also note that the lecturer tended to introduce topics at a reduced rate but that his rate increased as he went along. The French speaker did not use a significantly slower rate with NNSs.

The first study designed to assess the specific effect of rate on NNS comprehension through experimental manipulation is that of Kelch (1985). In a follow-up of Long's (1985) investigation of the combined effects of slow rate, simplified syntax, and rephrasing and repetitions, Kelch isolated rate, and typical FT manipulations such as "synonymy, hyperonomy, paraphrase, and parallel syntactic structures." (p. 83). Four versions of a passage on volcanic eruptions were recorded on tape, the first of which was not modified in any way. In the second condition, the same passage was read at a rate one third slower than the NS version. The third passage was not altered for rate, but it was modified in terms of the FT characteristics cited above. The last passage was similar to the third in every respect except rate: it was read at a rate one third slower than the third passage. Each of the four passages was then used in a dictation task to which ESL students were assigned. Pause points in the passages (to allow students to write what they had heard) occurred at propositional boundaries (propositions were between 7 and 13 words in length). Students heard the passages once. Their responses were scored twice, once for exact accuracy, and a second time on a 4-point scale of propositional equivalence. An ANOVA of the exact word scores indicated that only slow rate significantly improved comprehension; however, an

ANOVA of the equivalent meaning scores showed not only a significant effect for rate, but also an interaction of modified input and rate. Kelch argues that the positive effects of rate provided empirical support for the commonly held belief that "slower is better" when it comes to talking with NNSs. He interprets the significant interaction of modifications and rate as an indication that the modifications make input "cognitively rather than linguistically simpler" (p. 88) and suggests that, in light of the failure to find a significant main effect for modifications, the benefits of this cognitive simplification are "dependent upon the positive contributions of a reduced rate of delivery" (p. 88).

In the present study there was a significant overall decrease in rate (words/second) to NNSs; however, not all subjects slowed their speech for their L2 partners. Furthermore, when successful versus unsuccessful subjects were compared, it was only the latter who slowed their rates significantly for NNSs. It should be pointed out that there was not a significant correlation of rate with success, nor was there a significant correlation between the degree of rate adjustment and success; however, it is interesting to note that the direction of the former correlation was positive (r=.37, p=.158), while the direction of the latter was negative (r=.48, p=.062), just the opposite of what one would expect according to conventional wisdom. The analysis of the 50-syllable samples (both with and without pauses) from the beginning, middle and end of the transcripts indicated that rate was consistent over time and, moreover, that the slowing that did occur did not involve a significant change in the rate of articulation, but was rather due to a significant increase in pause time. An attempt to reconcile these findings with those of the studies

cited previously raises a number of questions that ultimately provoke the examination of rate in the light of several intervening variables.

The first and foremost of these questions is the following: how do the demands of the task affect the speaker's behaviour, especially rate? Direct comparisons of Kelch's results and those of this study at first appear to be in conflict, but if the nature of the dictation task and the film task are looked at more closely, a number of factors emerge which may account for the disparate findings. Dictation requires the immediate recall of individual propositions and, in order to achieve a high degree of success, a fairly exact reproduction of these propositions is necessary. Kelch's data indicate that NNSs perform better when a dictation is given slowly.

The demands of the film task are very different and, in fact, much more akin to those involved in ordinary language comprehension, in that the student must assimilate what s/he has heard under conversational conditions and the elements of the text must be understood as they relate to each other. Although Kelch attempted to control for short-term memory effects by ensuring that all propositions were at least seven words long, it is a plausible assumption that short-term memory played a much larger role in the dictation task than in the film task. Moreover, Kelch's argument that his meaning equivalence scores measure comprehension is limited to the individual propositions he employed, and the conditions which contribute to better comprehension of short, isolated statements may not be the same as those which are necessary for the development of a schema for a larger, integrated passage.

The second question is this: what is actually changing when speech rate is being slowed down? More specifically, in a controlled study such as Kelch's, is it the articulation rate or length of pause time that is being altered? Kelch reports merely that the passage was "slowed by one third," but given that it was read onto tape, and given his conclusion that the improved comprehension resulted from "clearer articulation, fewer vowel reductions, and more easily identifiable word boundaries" (p. 88), we can reasonably infer that actual speaking rate was at least one of the factors that was manipulated. In the film task, on the other hand, articulation rate remained constant, regardless of listener, and only the time devoted to pauses was significantly affected. Pauses may indeed help to delineate word boundaries, but if they exceed an unidentified critical length or frequency, they may be disruptive to the coherence of the story and hence to comprehension. This point is purely speculative, but is based on suspicions that were raised during the transcription of the tapes for the film task. Even as a native speaker I found that I had difficulty following the thread of the narration in some instances, despite the fact that I was also very familiar with the details of the film, and it was my impression that these difficulties stemmed from the inordinately long pauses used by some of the (unsuccessful) subjects.

A third question that arises from the results of the rate studies is whether or not the benefits of slower speech are tempered by other variables. For example, does rate interact with a factor such as lexical frequency? That is, does the use of high frequency vocabulary (and its concomitant reduction in processing time requirements for comprehension) obviate the need for a slower rate? The input

modifications in Kelch's dictation task appeared to facilitate comprehension but only in the presence of a reduced rate. Presumably the relative frequency of the vocabulary used in the modified version of the passage was higher than that in the original, but only a detailed examination of the lexical items would indicate 1) whether there was a significant adjustment of this variable and 2) whether the overall lexical frequency of the modified passage was comparable to the very high frequencies found in the film task.

It should be recalled at this point that Arthur *et al.* (1980) found no word/minute rate adjustment in the speech of airline ticket agents to NNSs. However, although they did not look at lexical frequency *per se*, the investigators did report that the speakers made use of "more limited word choices for conveying identical information" (p. 119) when addressing NNSs.

They cite as an example the almost exclusive use of the word *plane* with NNSs, whereas *aircraft* was often used with NSs. Furthermore, Arthur *et al.* found little evidence of complex information in the agents' responses to NNS questions, as compared to those given to NSs. This avoidance strategy, in combination with the anecdotal evidence cited above, suggests that the lexical frequency of the agents' speech to NNSs was very high. The results of Arthur *et al.*'s study and those of the successful NSs in the film task, where lexical frequency was consistently high, may thus be indicative of a trade-off phenomenon between rate and lexical frequency that warrants further investigation.

Another variable which affects rate must be the NS's perception of the NNS's proficiency level. Henzl's (1975) study suggests that NSs slow

their speech rate to a greater degree when addressing beginners than when talking to advanced L2 learners. Although all the L2 learners in the present study were low-level, six of the sixteen subjects did not alter their rates when addressing them. Perhaps this was because the combination of all the other adjustments made precluded the need for a slower rate. The combined effect of the adjustments may also be the reason for these NSs' perception that they had spoken more slowly to the NNSs, even when they hadn't.

It is clear that rate adjustment is far more complicated than it appears to be at first blush. Many factors may contribute both to the degree of rate alteration and to the benefits suggested for it. There is a need for substantially more research in this area, involving a variety of tasks and the experimental manipulation of interacting variables. It will be possible to fully explicate the role of rate adjustment in FT only if converging evidence from a number of sources is taken into consideration.

5.5 INFORMATION TYPE

To describe information types in the film, a short account of the story is in order. The film is the story of Nina, who is first seen as a young, attractive woman in a spring garden. After her marriage, Nina becomes a housewife; she is seen doing various chores and then, while she is washing the dishes, a baby pops into her arms. As Nina continues to do housework, two more children appear. Eventually she finds the routine of housework so burdensome that her torso takes on the appearance of household appliances, notably a fridge and a stove. When Nina's children

go to school, her body resumes its normal shape, and she returns to the garden; however, it is now fall and Nina has aged perceptibly.

The NS subjects in this experiment can be likened to the Americans who viewed The Pear Stories, a film devised as part of a large crosslinguistic, crosscultural study (see Chafe, 1980). Tannen (1982) reports that the Americans used cinematic terminology, maintained temporal order, and concentrated on a straightforward, detailed account of the events. There was little interpretation or embellishment of the film's content. This description is applicable to the NSs' productions in the present study, as well.

Tomlin (1984, 1985) analyzes a film in terms of events, defined as "the total action occurring between ... loci of abrupt visual change, with the goal of distinguishing crucial from non-crucial events on internal grounds" (p. 120, 1984). In the present study, however, we have an external criterion that seems more suitable for purposes of analysis, as all subjects knew in advance what questions the listeners were going to have to answer. Each transcript of the events of the film was therefore broken down into a sequence of propositions (see Chapter Four for details), which were in turn coded as task-related, major information, or minor information, depending on its relationship to the content of the comprehension questions.

Task-related propositions outlined events or aspects of the film which were considered crucial to the answering of the comprehension questions, and since the answers to these questions provided a summary of the film, task-related utterances (including repetitions) provided the backbone of the story. E.g., "There's a woman in the film." " Nina is in the

garden," "And then more babies came," etc. Major information consisted of propositions that pertained to non-crucial events in the film, that is, propositions (including repetitions) based on events which were not directly questioned in the comprehension task, but which served to carry the story along. E.g., "Then the young girl gets married" "She makes their lunches," "They [the children] go away from home," etc.

The category of minor information was comprised of two types: background detail and irrelevant information. The former class included propositions which were related to the film but which were not connected to any specific event (e.g., "So she was in love", "And she didn't sing," "She's got a housedress on, and an apron," "And the trees were nice"). Irrelevant information was either focussed on cinematic aspects of the movie (e.g., "The film had pictures," "It was like a child would draw, all bright colours") or on task performance (e.g., ""Okay, I saw a movie," "Okay, we're finished") or comprised information which had no direct relation to the task at all (e.g., "In Canada the winter is too long," "What kind of housework do you do?").

The question of interest here was whether subjects would change the proportions of information types when addressing NNSs. It might be hypothesized, for instance, that subjects would increase the relative amount of task-related information, at the expense of background detail, in order to help the NNS along. The actual results, however, were quite different and unexpected: subjects did not alter the relative amounts of task-related information for NNSs (although there was a group difference in that teachers used more task-related information than non-teachers with both NSs and NNSs); instead, overall, subjects decreased the amount

of major information and increased minor information when telling the story to L2 learners.

When the subjects were grouped according to success, it was found that the less successful people produced significantly less major information and significantly more minor information to NNSs than to NSs, while the successful subjects made no significant adjustment in the proportions of any of the information types. When minor information was subdivided into background detail and irrelevant information, it was found that the former category was the main contributing factor to the overall increase in minor information.

The obvious question that arises from these findings is whether this change in the ratio of major to minor information has an impact on the comprehension success of the NNSs. When Pearson correlations for information types and success were calculated, only task-related information and background detail were significant. These findings suggest that unsuccessful subjects, in a misguided attempt to provide as much information as possible to the NNSs, severely taxed the L2 learners' ability to follow the thread of the story.

This interpretation of the results is supported by my own initial impressions in making the transcripts, as I was struck by the fact that several of the unsuccessful film narratives seem cluttered with unnecessary detail. Moreover, in a study of the recall of written narratives, Omanson (1982) found that content not central to the story or supportive of the central characters or events (that is, neither task-related nor major information, in the terminology used here) disrupted the flow of the story sufficiently to impair its accurate recall. It seems

likely that N8s would have similar difficulties with a lengthy, over-detailed oral narrative, as well. If this is indeed the case (as Ochs (1979) has suggested in her discussion of the principle of nextness, that is, coherence by proximity of mention in unplanned discourse; cf. Lesgold, Roth & Curtis, 1979), then some FT speakers are making adjustments for L2 learners that would have negative effects, regardless of language proficiency.

Dahl (1981) hypothesized that information organization may affect comprehensibility of FT. She asked NNSs to judge taped messages for relative degree of difficulty. She also asked them to comment as to whether there was too much or too little information given. Although a correlation of perceived difficulty with the responses that there was too much information did not quite reach significance, Dahl suggests that "too much information is more confusing than too little, or at least it gives people a stronger feeling of being confused" (p. 87).

At first glance it might appear that Dahl's results and those of the present study are contrary to the findings of other investigators who have argued that redundancy is beneficial to the comprehension of L2 for the NNS. In fact, however, these findings supplement previous work, for they suggest that the nature of the redundancy is crucial in determining whether it will be beneficial to comprehension or detrimental to it. Simple redundancy (repetition) of the kind found to be beneficial in Cervantes (1983) and Chaudron (1983) appears to facilitate understanding, while redundancy of another type, such as increased use of background detail, detracts from the central message.

An issue which is deserving of further investigation, therefore, is the effects of extensive background detail on language acquisition. Interestingly, most of the background information included in the film transcripts occurs in the absence of negotiation with the NNS. There are very few instances in which background detail was solicited by the learner, and even when a degree of negotiation did occur, the question involved often followed from an earlier specification of superfluous details, as in the following example.

The subject involved told the NNS that Nina's first baby was a cute little girl. As she continued with the story, she told the learner that Nina had another baby. The following exchange then occurred:

S: OK? So this time she has a boy and a girl.

L2: The fir... the first time is a girl?

S: Actually, I'm wrong. The first time is a boy. Sorry. And the second baby is a girl. Then she works some more. Okay? And she works and works and works. And then (snaps fingers) she has a third baby. Okay? Another little boy, or a little girl, I don't know. Okay, and then... the children...

L2: Mmhm.

S: ...get bigger and bigger...

Not only was the gender of the children completely irrelevant to the story, but the subject's own confusion regarding the birth order of the children evidently resulted in confusion on the part of the learner, who subsequently failed to report the fact that Nina had any children at all! This example illustrates the 'worst case' outcome of over-specification of detail, where the subject's attempt at clarification succeeded only in

muddling the NNS further – and all this on a topic that needn't have come up at all, had the NS not mentioned that the first baby was "a cute little girl."

As mentioned before, much of the background detail was not the result of an overt expression of lack of understanding on the part of the listener, but rather appeared to function much like a screen that prevented the NNS from participating in the task. Impressionistically, it sometimes seemed as though Ss were providing as much detail as possible in order not to be interrupted, as if in fear of having to engage in a dialogue with the NNS. Consider the following three examples from this point of view:

Example #1:

S: Everything was very colourful. And, she had a, a daisy. Um, do you know what a daisy is? It's a type of flower.

L2: Daisy?

S: Yeah, lots of different petals on it. You know, the, the little parts of the top of the flower, you know, the part that blooms. And she was pulling each of those little petals off. And throwing them away. And, uh, she was walking through the garden and she was doing this and eventually they were all gone and the flower was, ... there was nothing left of it. The next picture....

Example #2:

S: And then there were three children, and all of a sudden there was one and another and then a third. One was very small and the other two were older. There was a boy and a girl and then a younger child and I couldn't tell if it was a boy or a girl....

Example #3:

S: She had blond hair and a nice dress and she was walking through the forest, through the woods. There were lots of trees and, and flowers and it was really pretty. All kinds of nice colours. So she was walking through the woods. And she had a flower. And she was picking the petals off the flower. And she was really just walking through and it was really pretty and the trees were nice. Everything was nice.

This is not to say, however, that recounting unnecessary details has only negative value. Recall that, on average, 42% of the retellings of the successful subjects consisted of minor information. In instances where negotiation of background detail does take place, the opportunity for language acquisition is open; however, negotiation is far more likely to occur at crucial (task-related) points in the discourse.

Varonis & Gass (1985), in fact, define negotiation between NNSs as conversational side sequences involving information "crucial to the success of the discourse" (p. 73). They call the 4-stage sequences in their model "push-downs" because the linear progression of the conversation is interrupted until the communication breakdown is successfully negotiated, at which point there is a "pop-up" and the conversation continues.

Varonis & Gass note that there can be multiple push-downs in conversation and cite an example which involved several levels of negotiation before the original topic could be resumed. Although the 4-stage model they devised to describe conversational push-downs is perhaps not entirely suitable for a narrative, there is evidence of multiple

levels of negotiation at crucial points in the film task, as well, as can be seen from the following example:

A subject explained that Nina's body took on the shape of various household appliances, and then asked the NNS if she had understood:

S: Do you understand?

L2: A little bit. (laugh)

S: A little bit?

L2: Not a lot. (laugh)

S: A little bit, okay. You know, for example, when you're driving a car.

L2: Yeah.

S: You're not part of the car, are you?

L2: Yeah.

S: You're, are you part of the car? No. You're separate. You get in the car, you get out of the car. It's two, here's you, here's the car. But when she, she worked so hard in the house that she became part of the house.

L2: Yeah.

S: So that she turned into a refrigerator. She was, she was, uh, how can I explain it to you? So that you can understand.... We're looking at her, in the film....

L2: Yeah.

S: You're looking at her. You see a lady, and all of a sudden when you're looking at her, you see a lady and, on top of her body, instead of, instead of her body being a lady, it's, it's a fridge.

And the little boy comes and he opens up... the fridge and he reaches in and takes out an apple and closes, closes the door.

L2: Mmhm.

S: Do you understand a little bit better?

L2: Yeah, I think so.

S: Do you think so? (both laugh) Okay. Well, tell me what I've just said...

The NNS responded in a round-about way but she satisfied the subject that she understood. When she was questioned directly in the post-test interview, the NNS indicated correctly that Nina's body had changed, that it had taken on the form of a fridge and a stove. She also understood what this extraordinary part of the film symbolized. In this instance the NNS was provided with comprehensible input, as a result of the form of negotiation in which the L2 learner played a somewhat passive role (most likely because of the nature of the task and because the interlocutor was an unfamiliar NS).

Although finer-grained analyses of the transcripts are needed in order to specify the relationship of crucial information and negotiation, I suspect that the positive correlation of comprehension success with the proportion of task-related information is not a result of increased quantity *per se* so much as an increase in negotiation, which, as noted earlier, occurs most often at crucial points in the narrative.

5.6 PERSONALITY AND EXPERIENCE

5.6.1 Personality and ESL Learners

As noted in Chapter 1, my desire to explore the relationship between personality traits and successful communication with a NNS grew out of personal experience. It was clear to me that there were dramatic individual differences among my acquaintances in their ability to talk with low proficiency ESL learners, but there was no way to tell from such informal observation whether these differences correlated with discernible linguistic patterns or whether there was a connection between these patterns and any specific personality traits.

It has been assumed for a long time that the teacher's personality and pedagogical behaviours influence students' progress in any discipline, second language learning included, and several approaches have been taken in an attempt to specify the relationship. In the 1960's a number of education studies endeavored to find a link between teachers' characteristics and their teaching behaviours (e.g., Ryans, 1960; Wilk & Edson, 1963; Campbell, 1971), yet, as Jansen, Jensen & Mylor point out, "these studies have not produced uniform results, but on the whole they show little or no relationship" (1972, p. 537).

Numerous coding systems for documenting classroom interaction were developed, but they proved to be inadequate in that they described teachers' behaviours in terms of pedagogical function alone, with little or no regard to other, often more important functions, or to students' roles (see Long, 1980b, for a comprehensive critique of interaction analysis). One of the few studies that specifically addressed the connection between language teacher characteristics (albeit a very limited set) and student

achievement was that of Politzer & Weiss (1969). They found very few direct relationships and deduced that flexibility was the key to successful teaching. On the basis of that study, Politzer (1970) concluded that the efficacy of teacher behaviours is dependent upon the teachers' ability to accurately judge the appropriateness of their actions or reactions, and that this ability is not quantifiable; but is rather likened to an art.

In one of the few L2 studies that addresses the issue of teacher personality, Stevick (1974a, 1974b) discussed the relevance of teacher and student personality characteristics to L2 learning in terms of transactional analysis, a theory that reduces human behaviour to three ego-states: the Parent, the Adult, and the Child. Although Stevick's points are couched in the terminology of the 'pop' psychology of the early 1970's, his basic argument is that the interaction of the teacher and student is of paramount importance to the development of a successful language learning programme. Stevick's claim is that the teacher must be sensitive to the learners' internal states and, moreover, must be able to use that awareness in order to bring about an ideal learning situation.

In the last decade, studies linking affective variables and L2 acquisition have been restricted, for the most part, to the L2 learner. An extensive and controversial literature has developed in which it has been argued that there is a relationship between L2 proficiency and learner attitudes and motivation (e.g., Clement *et al.*, 1977; Gardner, 1977 & 1979).

Oller & Perkins (1978) have challenged this claim, both by citing evidence that does not support the hypothesis and by suggesting explanations for what they argue are spurious relationships (e.g., Oller, 1977; Oller, Hudson & Liu, 1977; Oller, Baca & Vigil, 1977) (see also

Strong, 1984). The few studies which directly address the personality characteristics of L2 learners (e.g., Taylor *et al.*, 1971; Guiora *et al.*, 1972) concentrate primarily on one or two traits, such as empathy. These investigations are subject to the same criticisms that Oller & Perkins levelled at the attitude and motivation studies, namely, that the students' ability to accurately complete questionnaires is in part determined by their L2 proficiency, and that responses can be strongly influenced by such extraneous factors as self-flattery, an approval motive and response set.

5.6.2 Personality and ESL Teachers

There have apparently been no large-scale investigations which attempt to relate ESL teachers' personality traits to successful NS-NNS communication. In the present study, all NSs were asked to complete the 320-item Jackson Personality Inventory. Obviously the problems inherent in administering an English language test to L2 speakers did not apply in this case, but it might be argued that the subjects' responses could have been affected by the approval motive, self-flattery and the like. These problems were anticipated in the construction of the test items, with the result that general "desirability responding" is suppressed (Jackson, 1976). For the subjects who participated in the present study there was also little if any motivation to answer in a misleading fashion: they were assured of complete confidentiality, there were no evaluative decisions hinging on the test scores and, finally, the personality characteristics themselves "are not nearly so evaluative as are the scales found in many personality questionnaires" (Jackson, 1976, p. 17).

Just as a matter of interest, subjects were also given the opportunity to see the results of their own tests. Approximately 3/4 of the individuals chose to look at their profiles, and in every instance they commented on the high degree of accuracy that they felt had been achieved. This was not unexpected, since both sets of judgements involve self-perception; however, the individual test items are not obviously related to the derived personality factors that emerge from the results, so that it is difficult for a subject to guess the traits to which a given question may be related.

The finding related to personality of most interest here is the fact that the linguistic behaviour of the two personality groups identified in Chapter 4 differs in a number of respects, whereas teachers and naive NSs differed only in terms of conversational adjustments. On both tasks, the analysis of the success scores indicates that low interpersonal affect/social participation (IAF/SPT) individuals had significantly more trouble communicating with a NNS than either group did in talking to a NS, while high IAF/SPT subjects did not. The results are not entirely conclusive statistically, as the conservative Scheffé test did not show the high IAF/SPT-NNS pairings to differ significantly from low IAF/SPT-NNS dyads, but the data showed a strong trend in that direction. There was, of course, a similar, though weaker, trend for the teacher vs. naive NS grouping, as well, but six of the eight teachers were included in the high IAF/SPT personality group. The two factors of experience and desirable personality type were thus to some extent confounded in this study and further research is required in order to confirm the finding only tentatively established here that personality variables may be more important than experience in interacting and communicating with NNSs.

There is also evidence that high IAF/SPT subjects made significantly more adjustments in two categories of lexical frequency (more words in the top 500 class, fewer words in the least frequent class) than did their low IAF/SPT counterparts, whereas there were no such differences between teachers and naive NSs. That the adjustments in the two categories were not correlated with success on the film task was presumably because the relative frequency of the lexical items addressed to NSs was also extremely high on this task. In any event, to determine whether the high IAF/SPT subjects' tendency to adjust more for NNSs is really beneficial, a controlled experiment along the lines of that of Pica, Doughty & Young (1985) is also called for. Specifically, members of each personality group would be given a script containing fairly complicated low frequency vocabulary and would then be required to use the script with NNSs, making adjustments as they saw fit. Under such controlled conditions, the overall lexical frequency and communicative success could then be compared for the two communication groups.

Another distinction between high and low IAF/SPT groups is the rate of delivery in the film task. High IAF/SPT subjects did not generally slow down for their NNS partners, while low IAF/SPT subjects did. As noted above, when the successful and unsuccessful subjects were compared, it was the unsuccessful group that used a slower rate, while the successful subjects made no significant adjustment on this variable. This is by no means, of course, a suggestion that high IAF/SPT speakers never alter their rate when talking to NNSs. Such speakers may simply be more sensitive to the linguistic needs of their interlocutors and so tend to slow down only when they have to. Much more controlled research needs to

be carried out in order to discover what aspects of an interaction might cause high IAF/SPT speakers to alter their speech rate.

Finally, the common perception among both educators (e.g., Moskowitz, 1978) and ESL students that the "best" ESL teachers are the friendly, sympathetic and good-natured ones may have some basis in fact. The reasons for this may not be related to the pervasive "touchy-feely" (i.e., ill-defined and untested) view that it is the knowledge that these people "care" that promotes learning in an L2 student. It is also unlikely that teachers react according to their determination of the "internal states" of their students, as Stevick claims (1974a). Perhaps high IAF/SPT speakers simply pay more attention to what their interlocutors do and do not say and that this leads them to engage in true interactions, negotiating where necessary, rather than engaging in thinly disguised monologues. An awareness of the NNSs' linguistic capabilities, for instance, the recognition of a lack of understanding, will result in adjustments that are appropriate to the situation at hand, as well as lead to the rejection of adjustments that are not actually required. This may explain in part why conversational adjustments are not generally correlated with success.

5.6.3 Experience and ESL Teachers

It is often assumed that experience in teaching ESL serves to develop and enhance the communicative skills required to accurately judge the NNSs' linguistic deficiencies. Dahl (1981) and Pica & Long (1986) compared experienced ESL teachers with naive NSs and inexperienced ESL teachers, respectively. Dahl examined seven variables in the

transcripts of her two subject groups' addressing NNSs and found only one significant difference: the explicitness of requests was greater in naive NS speech. Dahl postulated that the inexperienced group was relying on Caregiver Speech strategies. Unfortunately, Dahl did not look at her NS-NS dyads on this measure, which would have provided a baseline against which it could be determined whether the difference in explicitness was a result of an adjustment for NNSs or merely an idiosyncratic feature of the speech of some of the subjects.

In a follow-up experiment, Dahl found that NNSs rated the teachers' instructions as easier to understand than those of the naive NSs; however, quantifying the crucial differences in experienced and inexperienced subjects' speech was not a straightforward task. Dahl hypothesized that an exaggerated intonation contour and organization of information may have contributed to the teachers' higher ratings, but she made no measurements in either area. In sum, though teachers were rated as more comprehensible than non-teachers, none of Dahl's measures provided unequivocal evidence of differences in FT that were attributable to experience.

In a comparison of experienced and inexperienced teachers, Pica & Long (1986) also found very few quantifiable differences. Experienced teachers used relatively more WH questions than did inexperienced ones (a similar finding emerged in the current study, which contrasted experienced teachers and naive NSs) and the experienced teachers were more fluent. There were also more other-repetitions in the experienced teachers' speech. With the exception of these few differences, however, Pica & Long concluded that, as far as linguistic behaviour in the classroom

was concerned, "the influence of classroom context is strong enough to outweigh the effects of teaching experience" (p. 96).

The results in the present study, which was conducted outside the classroom environment, suggest that the role experience plays in the shaping of FT is not particularly strong in terms of immediate communicative success, regardless of context. As previously mentioned, however, the teachers in this study did elicit more feedback from their NNS partners, partly through the use of conversational adjustments (comprehension checks, WH questions, clarification requests and paraphrase) which were not employed to the same extent by naive NSs. This suggests that, taken out of the formal restrictions of the classroom, experienced teachers provide NNSs with more opportunity to negotiate input, but the catch lies in the appropriateness of the adjustments used. Those subjects who fit the high IAF/SPT profiles — i.e., speakers who identify closely with and are concerned about others, who value positive interpersonal relationships and are actively social — appear to be better able to gauge the linguistic requirements of NNSs and to select the particular adjustments they employ accordingly. In short, while experience tends to foster more feedback-eliciting conversational adjustments, it is the two critical personality factors noted that tend to produce the behaviours that work best, and the behaviours will often vary depending on the circumstances.

5.6.4 L2 Experience and FT

The questionnaire regarding subjects' own L2 learning experiences and proficiency was administered to test the hypothesis that persons who

were relatively successful as L2 learners would also be the most likely to succeed in NS-NNS communication. A positive finding would have led to the suggestion of an underlying communicative skill that is not specific to a given set of circumstances (such as the nature of the interlocutor or the degree of familiarity with a set of interlocutors). No significant relationships were found in this study between L2 self-ratings and NS-NNS communicative success; however, the questionnaire was inappropriately designed for an accurate appraisal of the subjects' L2 abilities. Self-reporting without specific anchor points can lead to tremendous disparities among subjects, and the reliability of this questionnaire is all the more suspect since there was only a very weak correlation between the two components of the aggregate skill scores and the language learning ratings.

Both seem to be at fault: the ratings of L2 proficiency needed to be more descriptive and detailed, and the good vs. poor L2 language learners should have been identified independently. Subjects for such a study should also be obtained from an unbiased pool in which both enthusiastic and resigned learners can be found, and where both previous L2 experience and contact with NNSs can be held relatively constant. This is a tall order, to be sure, but civil service language training centres come to mind as optimal locations for research of this kind.

5.7 CONCLUSIONS

This study has identified some systematic individual differences in FT that have observable consequences for NNSs' comprehension (and indirectly for language acquisition). In addressing individual differences I

have deliberately tried to isolate separate group patterns while ignoring idiosyncratic behaviours.

5.7.1 Nonnative Speakers

Long & Porter (1985), in a review of the literature on NNS-NNS interaction, have reported claims that there is more negotiation (and resultant language acquisition) in NNS-NNS dyads than in corresponding NS-NNS pairings, particularly when two-way tasks are used. The findings of the current study provide additional support in this regard. High intermediate NNSs made many of the conversational adjustments for low proficiency learners that NSs did; however, the adjustments were in response not only to the language level of the interlocutors, but to the linguistic proficiency of the speakers as well. The importance of two-way tasks in classroom group work is particularly evident when the performance of the NNS subjects on the FTD and film tasks is compared, both in terms of adjustments made and communicative success.

5.7.2 Experience

Experience talking to NNSs appears to result in a predilection for conversational adjustments that elicit feedback from students. Unfortunately, it seems that this behaviour is context-bound: other researchers have found the classroom to be lacking in opportunities for negotiation. As Brock (1986) has shown, it is possible to train teachers in the use of classroom materials that encourage complex responses from students, and clearly materials development of this type is called for. If negotiation is as crucial to L2 acquisition as it appears to be, then it is

incumbent upon ESL programmes to make dramatic changes in the structure of the classroom. Many programmes which now purport to follow a communicative approach to language teaching actually adhere to traditional, teacher-fronted, teacher-dominant forms of instruction in which very little true communication takes place (Spada, 1986, Iglesias, 1985). Administrators and instructors would do well to attend to Van Lier's (1984) admonition that teachers take a long hard look at what is going on in their own classes – not by using a coding system that misses more than it records – but by videoing lessons and then watching them as objectively as possible to see how much real interaction occurs. Self-examination and subsequent recognition of problem areas are the first steps toward an improvement in the learning environment of the L2 student.

5.7.3 Personality

The preliminary investigation of the relationship that holds between personality and communicative success suggests that the former does indeed have an effect on the latter. As indicated in Section 5.6 more research is necessary to determine to what extent personality factors affect communicative skills. This study identified a combination of two traits which appear to contribute to successful interaction with a NNS; the next step will be to conduct experimentation with subjects (either all ESL teachers or all naive NSs) who have been preselected on the basis of their personality ratings. A finding that consistent behaviours beneficial to L2 acquisition are associated with a given personality profile would not by any stretch of the imagination imply the need for a screening of prospective

ESL instructors; rather, it would suggest the need for a change in teacher training procedures. Current TESL education programmes concentrate heavily on a comparison of competing methodologies with a smattering of watered-down L2 acquisition theory thrown in for good measure; they do not address the issue of how to talk to a low proficiency NNS — that problem is left up to the novice's intuitions on the first day of class. Those individuals who are naturally sensitive to the communicative needs of their interlocutors will cope, while those who aren't could benefit from some guidance.

5.7.4 Success Groups

When individuals were grouped according to success on the film task, some systematic differences emerged in the performance of the two groups. The most surprising of these had to do with rate. The fact that the successful group did not significantly slow speaking rate or pause rate when talking to NNSs gives the lie to the general assumption that it is always necessary to slow down for low level L2 interlocutors.

It becomes increasingly clear that once an FT factor has been identified it must be studied under a variety of conditions from several different approaches. Furthermore, as Sharwood-Smith (1985) suggests, we cannot continue to consider each FT adjustment in isolation — a concerted effort must be made to discover how each part fits into the integrated whole, or, in terms of Sharwood-Smith's analogy, we must identify the co-conspirators and their relation to one another. Rate and lexical frequency are ideal candidates for initial research of this sort, since both are easily manipulated, both play a role in FT, and both are

thought to affect the comprehension of a NNS (although a direct relationship is not always evident). Controlled comprehension studies along the lines of Kelch (1985), involving several conditions of rate and vocabulary frequency levels in which everything else is held constant, could reveal the extent to which rate and lexical frequency interact. These studies should encompass a variety of tasks and comprehension measures, since the relative effects of the two variables may differ depending on situation and processing demands made on the subjects.

One completely new finding that emerged from this study was that an adjustment in the proportions of information type was shown to have a significant negative impact on NNSs' comprehension. While successful communicators did increase their total output to NNSs as compared to NS interlocutors, they did not alter the relative proportions of the three main information categories. Less successful subjects, on the other hand, tended to drown their partners in a sea of inconsequential detail. It might be argued that the success measure, based as it was on the crux of the story, biased the results; perhaps the NNSs were exposed to some useful linguistic input when they were given background detail, and that, although the students may not have understood the general outline of the story, they may have benefited from micro-level 'nuggets' of language. This is, in some ways, an intuitively pleasing view: many people are familiar with the experience of participating in a conversation with a NS of an L2, which they believe they are following, until the NS asks a direct question. The common complaint of L2 learners is that they understand bits and pieces, but simply cannot assimilate them. Does the fact that they are unable to synthesize the whole negate the value of the parts?

This is a question that deserves some attention, but my inclination is to discount the unseen benefits of increased background information. The success measure in the current study defined what was or was not task-related information — and there was no difference in the proportions of task-related information directed to NNSs by successful and unsuccessful subjects. A second problem with the view that background detail provides the L2 student with comprehensible input is the lack of NNS feedback in response to such information. As Long has demonstrated, input is made comprehensible principally through negotiation. It only stands to reason that negotiation will occur when the message matters.

It is evident that there is a need for judicious selectivity on the part of the NS in deciding what proportion of talk should be devoted to background detail. It is important to realize that too much tangential information (i.e., proportionally more than would be addressed to a NS) will overburden the low proficiency learner who is already faced with the difficult task of understanding the gist of the narrative or conversation.

The preliminary findings regarding information types point to the need for further research in this area. Follow-up experiments are indicated in which the proportions of information types are predetermined; in addition, subjects should be selected from several proficiency levels.

There are several shortcomings to this study, the most obvious of which is the reliance on L2 learner comprehension scores as a success measure. Although subject and task selection were controlled, there were bound to be differences among learners which affected their respective performances. Furthermore, the number of comprehension questions was

small and, although there was a normal distribution of success scores for NNSs, the findings would no doubt have been clearer with a larger set of questions. Finally, as in most studies of this type, the sample size was rather small, and therefore the results reported here must be interpreted with caution. Nonetheless, this study has demonstrated that there are important individual differences in FT that are worthy of continued attention. Perhaps even more important is the finding that some adjustments made for NNSs have a negative effect. It is one thing to define the features of a register such as FT, but it is quite another matter entirely to assess their efficacy. The time has come to go beyond mere description of FT characteristics;[2] it is essential that we now also take into consideration the effects, both positive and negative, of each feature and that we identify how the various characteristics interact.

[2]Though this is not to say that there is not more work to be done in this area as well; on the contrary, we have only scratched the surface as far as information content is concerned.

REFERENCES

Abunahleh, L., S Allen, B. Arthur, S. Beals, M. Butler, B. Drezner, G. Frydenberb, M. Galal, S. Gass, K. Hildebrandt, L. Marlos & T. Ostrander (1981-82). The scope and function of language repair in foreigner discourse. Interlanguage Studies Bulletin, 6, 112-119.

Albrechtson, D., B Hendriksen & C. Faerch (1980). Native speaker reactions to learners' spoken interlanguage. Language Learning, 30, 365-396.

Andersen, R. (1983). (Ed.). Pidginization and creolization as language acquistion. Rowley, MA: Newbury House.

Arthur, B., R. Weiner, M. Culver, Y.J. Lee & D. Thomas (1980). The register of impersonal discourse to foreigners: Verbal adjustments to foreign accent. In Larsen-Freeman, 111-124.

Ashburn, G. & A. Gordon (1981). Features of a simplified register in speech to elderly conversationalists. International Journal of Psycholinguistics, 8, 7-31.

Bailey, N., C. Madden & S.D. Krashen (1974). Is there a 'natural-sequence' in adult second language learning? Language Learning, 21.

Beebe, L.M. & H. Giles (1984). Speech-accommodation [illegible]: A discussion in terms of second-language acquistion. International Journal of the Sociology of Language, 46, 5-32.

Bodemann, Y.M. & R. Ostow (1975). Lingua franca und pseudo-pidgin in der Bundesrepublik. Zeitschrift für Literaturwissenschaft und Linguistik, 5, 122-146.

Brock, C.A. (1986). The effects of referential questions on ESL classroom discourse. TESOL Quarterly, 20, 47-59.

Brock, C.A., G. Crookes, R. Day & M. Long (1986). Differential effects of corrective feedback in native speaker-nonnative speaker conversation. In Day, 229-236.

Brown, H.D., C.A. Yorio & R.H. Crymes (Eds.) (1977). On TESOL '77 Teaching and learning English as a second language: Trends in research and practice. Washington, D.C.: TESOL.

Brown, R. (1977). Introduction. In Snow & Ferguson, 1-27.

Campbell, E.M. (1971). The evaluation of learning principles by some superior classroom teachers. Journal of Education, 15, 58-72.

Cervantes, R. (1983). "Say it again Sam": The effect of repetition on dictation scores. Term paper, ESL 670. Honolulu: University of Hawaii at Manoa. Cited in Chaudron (1985).

Chafe, W. (Ed.) (1980). The pear stories: Cognitive, cultural and linguistic aspects of narrative production. Norwood, N.J.: Ablex.

Chaudron, C. (1982). Vocabulary elaboration in teachers' speech to L2 learners. Studies in Second Language Acquisition, 4, 170-180.

Chaudron, C. (1983). Simplification of input: topic reinstatements and their effects on L2 learners' recognition and recall. TESOL Quarterly, 17, 437-458.

Chaudron, C. (1985). Comprehension, comprehensibility, and learning in the second language classroom. Studies in Second Language Acquisition, 7, 216-232.

Clarke, M.A. & J. Handscombe (Eds.) (1983). On TESOL '82: Pacific perspectives on language learning and teaching. Washington, DC: TESOL.

Clement, R., R.C. Gardner & P.C. Smythe (1977). Motivational variables in second language acquisition: A study of francophones learning English. Canadian Journal of Behavioral Science, 3, 123-133.

Clyne, M..G. (1977). Multilingualism and pidginisation in Australian industry. Ethnic Studies, 1, 40-55.

Clyne, M.G. (1981). 'Second generation' foreigner talk in Australia. International Journal of the Sociology of Language, 28, 69-80.

Coons, W., D.M. Taylor & M.A. Tremblay (Eds.) (1977). Individual language and society. Ottawa: The Canada Council.

Corder, S.P. (1978)). Language learner language. In Richards, 71-93.

Corder, S.P. & E.P. Roulet (Eds.) (1977). Actes du 5ème colloque de linguistique appliquée de Neuchatel. Geneva: Droz.

Corsaro, W.A. (1979). Sociolinguistic patterns in adult-child interaction. In Ochs & Schiefflin, 373-389.

Cramblit, N.S. & G.M. Siegel (1977). The verbal environment of a language-impaired child. Journal of Speech and Hearing Disorders, 42, 474-484.

Crookes, G. & A. Rulon (1985). Incorporation of corrective feedback in native speaker/non-native speaker conversation. Technical Report. Center for Second Language Classroom Research, Social Science Research Institute; University of Hawaii at Manoa.

Cross, T.G. (1977). Mothers' speech adjustments: The contribution of selected child listener variables. In Snow & Ferguson, 151-188.

Dahl, D.A. (1981). The role of experience for speech modifications for second language learners. Minnesota Papers in Linguistics and Philosophy of Language, 7, 78-93.

Dahl, H. (1979). Word frequencies of spoken American English. Essex, CN: Verbatim.

Dale, P.S. & D.Ingram (Eds.) (1981). Child language: An international perspective. Baltimore: University Park Press.

Day, R. (Ed.) (1986). Talking to learn: Conversation in second language acquisition. Rowley, MA: Newbury House.

Dulay, H.C. & M.K. Burt (1978). Natural sequences in child language acquisition. In Hatch, 347-361.

Eisenstein, M. (1983). Native reactions to non-native speaker speech: a review of empirical research. Studies in Second Language Acquisition, 5, 160-176.

Ellis, R. (1981). The role of input in language acquisition: Some implications for second language teaching. Applied Linguistics, 2, 70-82.

Ellis, R. (1985). Teacher-pupil interaction in second language development. In Gass & Madden (1983), 69-85.

Felix, S.W. & H. Wode (Eds.) (1983). Language development at the crossroads. Tübingen: Günter Narr Verlag.

Ferguson, C.A. (1971). Absence of copula and the notion of simplicity. In D. Hymes (Ed.), Pidginization and creolization of language. London: Cambridge University Press, 141-150.

Ferguson, C.A. (1975). Towards a characterization of English foreigner talk. Anthropological Linguistics, 17, 1-14.

Ferguson, C.A. (1977). Baby talk as a simplified register. In Snow & Ferguson, 209-235.

Ferguson, C.A. (1981). 'Foreigner Talk' as the name of a simplified register. International Journal of the Sociology of Language, 28, 9-18.

Ferguson, G.A. (1971). Statistical analysis in psychology and education (3rd ed.). New York: McGraw Hill.

Flanders, N. & G. Nuthall (Eds.) (1972). Classroom behaviour of teachers. Hamburg: UNESCO Institute for Education.

Freed, B. (1980). Talking to foreigners versus talking to children: Similarities and differences. In Scarcella & Krashen, 19-27.

Freed, B. (1981). Foreigner talk, baby talk, native talk. International Journal of the Sociology of Language, 28, 19-89.

Fromkin, V.A. (1971). The non-anomalous nature of anomalous utterances. Language, 47, 27-52.

Furrow, D., K. Nelson & H. Benedict (1979). Mothers' speech to children and syntactic development: Some simple relationships. JCL, , 423-442.

Gaies, S.J. (1977). The nature of linguistic input in formal second language learning: Linguistic and communicative strategies in ESL teachers' classroom language. In Brown et al., 204-212.

Gaies, S.J. (1981). Learner feedback and its effect on communication tasks. Studies in Second Language Acquisition, 4, 46-59.

Gaies, S.J. (1982). Native speaker-nonnative speaker interaction among academic peers. Studies in Second Language Acquisition, 5, 74-81.

Gardner, R.C. (1977). Social factors in second language acquisition and bilinguality. In Coons et al., 105-148.

Gardner, R.C. (1979). Social psychological aspects of second language acquisition. In Giles & St. Clair, 193-227.

Gardner, R.C. (1983). Learning another language: A true social psychological experiment. Journal of Language and Social Psychology, 2, 219-239.

Gardner, R.C., R.N. Lalonde, & R. Moorcroft (1985). The role of attitudes and motivation in second language learning: Correlational and experimental considerations. Language Learning, 35, 207-227.

Garnica, O. (1977). Some prosodic and paralinguistic features of speech to young children. In Snow & Ferguson, 63-88.

Gaskill, W.H. (1980). Correction in NS-NNS conversation. In Larsen-Freeman (1980), 125-137.

Gass, S.M. & C.G. Madden (Eds.) (1985). Issues in second language acquisition. Rowley, MA: Newbury House.

Gass, S.M. & E.M. Varonis (1984). The effect of familiarity on the comprehensibility of nonnative speech. Language Learning, 34, 65-89.

Gass, S.M. & E.M. Varonis (1985a). Variation in native speaker speech modification to non-native speakers. Studies in Second Language Acquisition, 7, 37-57.

Gass, S.M. & E.M. Varonis (1985b). Task variation and nonnative/nonnative negotiation of meaning. In Gass & Madden, 149-161.

Giles, H. & R. St. Clair (Eds.) (1979). Language and social psychology. Oxford: Basil Blackwell.

Givón, T. (1979). Syntax and semantics-discourse and syntax. New York: Academic Press.

Guiora, A.Z., R.C. Brannon & C.Y. Dull (1972). Empathy in second language learning. Language Learning, 22, 111-130.

Gumpert, G. & R. Cathcart (1983). Media stereotyping: Images of the foreigner. Communications, 9, 103-111.

Halliday, M.A.K., A. McIntosh & P. Strevens (1964). The linguistic sciences and language teaching. London: Longmans.

Hasan, R. (1973). Code, register and social dialect. In B. Bernstein (Ed.). Class, codes and control, Vol. 2, 253-292.

Hatch, E.M. (Ed.) (1978). Second language acquisition. Rowley, MA: Newbury House.

Hatch, E.M. (1983a). Psycholinguistics: A second language perspective. Rowley, MA: Newbury House.

Hatch, E.M. (1983b). Simplified input and second language acquisition. In R. Anderson, 64-86.

Hatch, E.M., R. Shapira & J. Gough (1978). Foreigner talk discourse. ITL: Review of applied linguistics, 39-60.

Hawkins, B. (1985). Is an 'appropriate response' always so appropriate? In Gass & Madden, 162-178.

Heidelberger Forschungsprojekt 'Pidgin Deutsch' (1976). The unguided learning of German by Spanish and Italian workers: A sociolinguistic study. Paris: UNESCO.

Henzl, V.M. (1973). Linguistic register of foreign language instruction. Language Learning, 23, 207-222.

Henzl, V.M. (1975). Speech of foreign language teachers: A sociolinguistic register analysis. Paper read at AILA, Stuttgart, Germany (cited in Hatch, 1983a).

Henzl, V.M. (1979). Foreign talk in the classroom. IRAL, 17, 159-167.

Hockey, S. & I. Marriot (1984). Oxford concordance program: Users' manual. Oxford: Oxford University Computing Service.

Hyltenstam, K. (1983). Teacher talk in Swedish as a second language classrooms. In Felix & Wode, 173-188.

Iglesias, A. (1985). Cultural conflict in the classroom: The communicatively different child. In Ripich & Spinelli, 75-96.

Jackson, D.N. (1976). Jackson Personality Inventory (Manual). Goshen, NY: Research Psychologists Press.

Jackson, D.N. (1977). Reliability of the Jackson Personality Inventory. Psychological Reports, 40, 613-614.

Jansen, M., P.E. Jensen & P. Mylor (1972). Teacher characteristics and other factors affecting classroom interaction and teaching behaviour. In Flanders & Nuthall, 529-540.

Johansson, S. (1978). Studies of error gravity: Native reactions to errors produced by Swedish learners of English. Goteborg: Acta Universitatis Gothoburgensis.

Kalin, R. & D.S. Rayko (1978). Discrimination in evaluative judgements against foreign-accented job candidates. Psychological Reports, 43, 1203-1209.

Kalin, R., D.S. Rayko & N. Love (1979). The perception and evaluation of job candidates with four different ethnic accents. In H. Giles, W.P. Robinson & P. Smith, Social psychology and language. London: Pergamon Press, 197-202.

Kelch, K. (1985). Modified input as an aid to comprehension. Studies in Second Language Acquisition, 7, 81-89.

Kleifgen, J.A. (1985). Skilled variation in a kindergarten teacher's use of foreigner talk. In Gass & Madden, 59-68.

Krashen, S.D. (1980). The input hypothesis. In J.E. Alatis (Ed.), Current issues in bilingual education. Washington, DC: Georgetown University Press, 168-180.

Krashen, S.D. (1981). Second language acquisition and second language learning. Oxford: Pergamon Press.

Krashen, S.D. (1982). Principles and practice in second language acquisition. Oxford: Pergamon Press.

Krashen, S.D. (1985). The input hypothesis: Issues and implications. London Longman.

Labov, W. (1966). The social stratification of English in New York City. Washington, DC: Center for Applied Linguistics.

Labov, W. (1970). The study of non-standard English. Champaign, IL: National Council of Teachers by special arrangement with the Center for Applied Linguistics.

Larsen-Freeman, D.E. (1975). The acquisition of grammatical morphemes by adult learners of English as a second language. Ph.D. dissertation. University of Michigan.

Larsen-Freeman, D.E. (1978). An explanation for the morpheme accuracy order of learners of English as a second language. In Hatch, 371-379.

Larsen-Freeman, D.E. (1980). Discourse analysis in second language research. Rowley, MA: Newbury House.

Lesgold, A.M., Roth, S.F., & Curtis, M.E. (1979). Foregrounding effects in discourse comprehension. Journal of Verbal Learning and Verbal Behavior, 18, 291-308.

Lightbown, P.M. (1983). Exploring relationships between developmental and instructional sequences in L2 acquisition. In Seliger & Long, 217-245.

van Lier, L. (1984a). Analysing interaction in second language classrooms. ELT Journal, 38, 160-169.

van Lier, L. (1984b). Discourse analysis and classroom research: A methodological perspective. International Journal of the Sociology of Language, 49, 111-133.

Lieven, E.V.M. (1978). Conversations between mothers and young children: individual differences and their possible impolicastion for the study of language learning. In N. Waterson & C Snow, The development of communication. Chichester: John Wiley & Sons, 173-187.

Long, M.H. (1980). Input, interaction and second language acquisition. Ph.D. dissertation, UCLA.

Long, M.H. (1981a). Input, interaction and second language acquisition. In Winitz, 259-276.

Long, M.H. (1981b). Questions in F.T. discourse. Language Learning, 31, 135-157.

Long, M.H. (1983a). Linguistic and conversational adjustments to non-native speakers. Studies in Second Language Acquisition, 5, 177-193.

Long, M.H. (1983b). Native speaker/non-native speaker conversation in the second language classroom. In Clarke & Handscombe, 207-225.

Long, M.H. (1983c). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. Applied Linguistics, 4, 126-141.

Long, M.H. (1983d). Does second language instruction make a difference? TESOL Quarterly, 17, 359-382.

Long, M.H. (1985). Input and second language acquisition theory. In Gass & Madden (1985), 377-393.

Long, M.H. & C. Sato (1983). Classroom FT discourse: Forms and functions of teachers' questions. In H.W. Seliger & M.H. Long, Classroom oriented research in second language acquisition. Rowley, MA: Newbury House, 268-285.

McDonald, L.& D. Pien (1982). Mother conversational behaviour as a function of interactional intent. JCL, 9, 337-358.

Meisel, J.M. (1977). Linguistic simplification: A study of immigrant workers' speech and foreigner talk. In Corder & Roulet (1977), 88-113.

Moskowitz, G. (1978). Caring and sharing in the foreign language class. Rowley, MA: Newbury House.

Newport, E. L. (1976). Motherese:The speech of mothers to young children. Ph.D. dissertation, University of Pennsylvania.

Newport, E.L., H. Gleitman & L.R. Gleitman (1977). Mother, I'd rather do it myself: Some effects and non-effects of maternal speech style. In Snow & Ferguson (1977), 109-149.

Ochs, E. (1979). Planned and unplanned discourse. In T. Givón, 51-80.

Ochs, E. & B. Schiefflin (1979). (Eds.). Developmental pragmatics. New York: Academic Press.

Oller, J.W. (1977). Affective variables in second language acquisition: How important are they? 1976-77 Papers in ESL. Washington, D.C.: NAFSA, 7-12.

Oller, J.W., L. Baca & F. Vigil (1977). Attitudes and attained proficiency in ESL: A sociolinguistic study of Mexican-Americans in the Southwest. TESOL Quarterly, 11, 173-182.

Oller, J.W., A.J. Hudson & P.F. Liu (1977). Attitudes and attained proficiency in ESL: A sociolinguistic study of native speakers of Chinese in the United States. Language Learning, 27, 1-27.

Oller, J.W. & K. Perkins (1978). Intelligence and language proficiency as sources of variance in self-reported affective variables. Language Learning, 28, 85-97.

Omanson, R.C. (1982). An analysis of narratives: Identifying central, supportive and distracting content. Discourse Processes, 5, 195-224.

Peters, A.M. (1977). Language learning strategies: Does the whole equal the sum of the parts? Language, 53, 560-573.

Pfaff, C.W. (1981). Sociolinguistic problems of immigrants: Foreign workers and their children in Germany. Language in Society, 10, 155-188.

Pica, T. (1983). Adult acquisition of English as a second language under different conditions of exposure. Language Learning, 33, 465-497.

Pica, T. (1985). The selective impact of classroom instruction on second language acquisition. Applied Linguistics, 6, 214-222.

Pica, T., C. Doughty & R. Young (1985). Making input comprehensible: Do interactional modifications help? Paper presented at the 1985 TESOL Summer Meeting, Georgetown University, Washington, D.C.

Pica, T. & M.H. Long (1986). The classroom and linguistic performance of experienced vs. inexperienced ESL teachers. In Day, 85-98.

Politzer, R.L. (1970). Some reflections on 'good' and 'bad' language teaching behaviours. Language Learning 20, 31-43.

Politzer, R.L. (1983). An exploratory study of self reported language learning behaviours and their relation to achievement. Studies in Second Language Acquisition, 6, 54-63.

Politzer, R.L. & L. Weiss (1969). Characteristics and behaviors of the successful foreign language teacher. Stanford: Stanford Center for Research and Development in Teaching, Technical Report No. 5

Porter, P.A. (1983). Variations in the conversations of adult learners of English as a function of the proficiency level of the participants. Ph.D. dissertation, Stanford University.

Richards, J.C. (Ed.) (1978). Understanding second and foreign language learning issues and approaches. Rowley, MA: Newbury House.

Ripich, D.N. & F.M. Spinelli (Eds.) (1985). School discourse problems. San Diego: College Hill Press.

Ryan, E.B. (1983). Social psychological mechanisms underlying native speaker evaluations of non-native speech. Studies in Second Language Acquisition, 5, 148-159

Ryans, D.C. (1960). Characteristics of teachers. Washington, DC: American Council on Education.

Sato, C.J. (1986). Conversation and interlanguage development: Rethinking the connection. In Day, 23-45.

Scarcella, R.C. & C. Higa (1981). Input, negotiation, and age differences in second language acquisition. Language Learning, 31, 409-437.

Scarcella, R.C. & S. Krashen (Eds.) (1980). Research in second language acquisition. Rowley, MA: Newbury House.

Schacter, F.F. (1979). Everyday mother talk to toddlers: Early intervention. New York: Academic Press.

Scheffé, H. (1959). The analysis of variance. New York: John Wiley & Sons.

Schegloff, E., G. Jefferson & H. Sacks (1977). The preference for self-correction in the organization of repair in conversation. Language, 53, 361-382.

Sebastian, R.J., E.B. Ryan & L. Corso (1978). Social judgements of speakers with different degrees of accentedness. Paper presented at Meeting of the World Congress of Sociology, Uppsala, Sweden.

Sharwood-Smith, M. (1985). From in put to intake: On argumentation in second language acquisition. In Gass & Madden, 394-403.

Shatz, M., & R. Gelman (1973). The development of communication skills: Modifications in the speech of young children as a function of the listener. Monographs of the Society for Research in Child Development, 38.

Smith, I. (1982). Teaching English as a second language with the aid of selected films. Montreal: National Film Board of Canada.

Snow, C.E. (1981). Social interaction and language acquisition. In Dale & Ingram, 195-214.

Snow, C.E. & C.A. Ferguson (Eds.) (1977). Talking to children: Language input and acquisition. Cambridge: Cambridge University Press.

Snow, C.E., R. van Eeden & P. Muysken (1981). The interactional origins of foreigner talk: Municipal employees and foreign workers. International Journal of the Sociology of Language, 28, 81-91.

Spada, N.M. (1986). The interaction between type of contact and type of instruction: Some effects on the L2 proficiency of adult learners. Studies in Second Language Acquisition, 8, 181-200.

SPSS Inc. (1983). SPSSx user's guide. New York: McGraw Hill.

Stevick, E.W. (1974a). The meaning of drills and exercises. Language Learning, 24, 1-22.

Stevick, E.W. (1974b). Language instruction must do an about-face. Modern Language Journal, 58, 379-384.

Steyaert, M. (1978). A comparison of the speech of ESL teachers to native speakers and non-native learners of English. Minnesota Papers in Linguistics and Philosophy of Language, 5, 165-175.

Strong, M. (1983). Social styles and the second language acquisition of Spanish-speaking kindergartners. TESOL Quarterly, 17, 241-258.

Strong, M. (1984). Integrative motivation: Cause or result of successful second language acquisition? Language Learning, 34; 1-14.

Swain, M. (1981). Immersion education: Applicability for nonvernacular teaching to vernacular speakers. Studies in Second Language Acquisition, 4, 1-17.

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In Gass & Madden, 235-253.

Swisher, M.V. (1984). Signed input of hearing mothers to deaf children. Language Learning, 34, 69-85.

Tannen, D. (1982). The oral/literate continuum in discourse. In Tannen, 1-16.

Tannen, D.(Ed.) (1982). Spoken and written language. Norwood, N.J.: Ablex.

Tarone, E.(Ed.) (1982). Communication strategies, foreigner talk and repair in interlanguage. Language Learning, 30, 417-430.

Taylor, D.M. & R.C. Gardner (1969). Ethnic stereotypes: Their effects on the perception of communicators of varying credibility. Canadian Journal of Psychology, 23, 161-173.

Taylor, L.L., J.C. Catford, A.A. Guiora & K.L. Lane (1971). Psychological variables and the ability to pronounce a second language. Language and Speech, 14, 146-157.

Thorndike, E.L. & I. Lorge (1944). The teacher's word book of 30,000 words. New York: Columbia University Teachers College.

Tomlin, R.S. (1985). The treatment of foreground-background information in the on-line descriptive discourse of second language learners. Studies in Second Language Acquisition, 6, 115-142.

Tomlin, R.S. (1985). Foreground-background information and the syntax of subordination. Text, 5, 85-122.

Valdman, A. (1981). Sociolinguistic aspects of foreigner talk. International Journal of the Sociology of Language, 28, 41-52.

Varonis, E.M. & S. Gass (1982). The comprehensibility of non-native speech. Studies in Second Language Acquisition, 4, 114-136.

Varonis, E.M. & S. Gass (1984). Non-native/non-native conversations: A model for negotiation of meaning. Applied Linguistics, 6, 71-90.

Varonis, E.M. & S. Gass (1985). Repairs in NNS discourse and the evidence for second language development. Paper presented at the 1985 TESOL Summer Meeting, Georgetown University, Washington, D.C.

Wagner-Gough, J. & E.M. Hatch (1975). The importance of input data in second language acquisition studies. Language Learning, 25, 297-308.

Warren-Leubecker, A. & J.N. Bohannon (1982). The effects of expectations and feedback on speech to foreigners. Journal of Psycholinguistic Research, 11, 207-215.

Wepman, J.M. & B. Lozar (1973). The most frequently used words in spoken English. Journal of Psycholinguistic Research, 2, 129-136.

Wesche, M.B. & D. Ready (1985). Foreigner talk in the university classroom. In Gass & Madden, 89-114.

Wilk, R.E. & W.H. Edson (1963). Predictions and performance: An experimental study of student teachers. Journal of Teachers Education, 14, 308-317.

Winer, B.J. (1971). Statistical principles in experimental design (2nd ed.). New York: McGraw-Hill.

Winitz, H. (Ed.) (1981). Native language and foreign language acquisition. Annals of the New York Academy of Sciences 379. New York: The New York Academy of Sciences.

Wishart, D. (1978). Clustan user manual. Edinburgh Program Library Unit.

APPENDIX A

INSTRUCTIONS TO THE SUBJECTS

In this experiment you will be asked to view a short film (6 minutes) and you will see a few questions regarding the film. You will then be introduced to another person and you will be asked to have a conversation about anything except the film for approximately 5 minutes. The experimenter will then ask you to tell your partner the story of the film. Please try to ensure that the other person understands enough to answer the questions that you were shown. You will then be asked to meet another person and go through the same procedure. Thank you very much for your participation in this experiment. If you have any questions about these instructions, please ask the experimenter.

APPENDIX B

COMPREHENSION QUESTIONS AND ANSWERS*

PLEASE READ THE FOLLOWING QUESTIONS. IF YOU HAVE ANY TROUBLE UNDERSTANDING THESE QUESTIONS, PLEASE ASK FOR HELP.

1. Who is the story about?
2. Where does the story begin?
3. What happens after the woman gets married?
4. What is the woman doing when she has her first baby?
5. What happens to the woman after several years of working in the house and having children? – What happens to her body?
6. What does the woman do after the children go to school?

ANSWERS

1. Nina / a woman / a girl – 1 point
2. In a garden / forest / park – 1 point
3. She does housework – 1 point; she has children – 1 point
4. She's washing dishes – 1 point
5. Her body turns into a fridge / stove / etc. – 1 point
6. She goes back out to the forest – 1 point; she sits among the falling leaves / it's fall / autumn – 1 point

*Subjects were shown the questions only.

APPENDIX C

QUESTIONNAIRE

PLEASE ANSWER THE FOLLOWING QUESTIONS. IN MANY INSTANCES YOU NEED ONLY CIRCLE THE APPROPRIATE ANSWER BUT FEEL FREE TO ADD ANY RELEVANT COMMENTS.

1. Name_____
2. Occupation_____
3. Age_____
4. First language_____
5. Second languages_____
   (this could include languages you have studied but have not fully mastered)
6. When did you start learning your second language?
   a) age 1 - 7 years
   b) age 7 - 12 years
   c) age 12 - 18 years
   d) adult
7. When did you reach your present level in your second language? (How old were you when you started to talk the way you do now?)
8. How did you learn your second language?
   a) instruction
   b) by living in an environment where the language was spoken
   c) a combination of a & b
9. Did you actively pursue the learning of your second language? (did you talk to friends, read books, watch TV, go to the movies, listen to

records or the radio in the second language?)

a) yes, fairly often

b) only once in a while

c) no, practically never

10. Would you describe your proficiency in your second language at a conversational level as poor, fair, good, very good or excellent for each of the following:

a) fluency

b) comprehension

c) grammar

d) vocabulary

11. How would you rate yourself as a language learner? (poor, fair, good, very good, excellent)

12. Do you regularly come into contact with speakers whose first language is not English?

a) no

b) yes In what capacity?_____

13. What was your major interest in school or university?

14. When talking to your foreign partner, did you notice any changes or modifications in your own speech?

a) no

b) yes What were they?

15. Do you find it very difficult to explain something to a person who is just learning English?

a) no

b) yes What gives you the most trouble?

16. Did you have any particular problems with the tasks that you did today?

APPENDIX D
TRAIT DESCRIPTIONS FOR THE JACKSON PERSONALITY INVENTORY*

SCALE	DESCRIPTION OF HIGH SCORER	DEFINING TRAIT ADJECTIVES OF HIGH SCORER	DESCRIPTION OF LOW SCORER	DEFINING TRAIT ADJECTIVES OF LOW SCORER
ANXIETY	Tends to worry over inconsequential matters, more easily upset than the average person; apprehensive about the future.	Worried, tense, nervous, preoccupied, anxious, edgy, distressed, agitated, fearful.	Remains calm in stressful situations; takes things as they come without worrying, can relax in difficult situations, usually composed and collected.	Easy-going, patient, calm, serene, tranquil, relaxed, contented, placid, imperturbable.
BREADTH OF INTEREST	Is attentive and involved; motivated to participate in a wide variety of activities; interested in learning about a diversity of things.	Curious, interested, inquiring, involved, inquisitive, seeking, exploring.	Has narrow range of interests, remains uninterested when exposed to new activities; has few hobbies; confined tastes.	Inflexible, unobservant, narrow, insular, uninvestigative.
COMPLEXITY	Seeks intricate solutions to problems; is impatient with oversimplification; is interested in pursuing topics in depth regardless of their difficulty; enjoys abstract thought; enjoys intricacy.	Complex, contemplative, clever, discerning, intellectual, thoughtful, analytical.	Prefers concrete to abstract interpretations; avoids contemplative thought; uninterested in probing for new insight.	Uncomplicated, unreflective, straightforward, predictable, matter-of-fact.
CONFORMITY	Is susceptible to social influence and group pressures; tends to modify behavior to be consistent with standards set by others; follows suit; fits in.	Compliant, agreeing, acquiescent, adapting, accommodating, cooperative, concurring, emulating.	Refuses to go along with the crowd; unaffected and unswayed by others' opinions; independent in thought and action.	Individualistic, self-directed, self-reliant, unyielding, nonconforming, unrestrained, contradicting, disagreeing.
ENERGY LEVEL	Is active and spirited; possesses reserves of strength; does not tire easily; capable of intense work or recreational activity for long periods of time.	Lively, vigorous, active, persevering, industrious, tireless, dynamic, enthusiastic, eager.	Tires quickly and easily; avoids strenuous activities; lacks stamina; requires a great deal of rest; slow to respond.	Passive, listless, drowsy, lazy, languid.
INNOVATION	A creative and inventive individual, capable of originality of thought; motivated to develop novel solutions to problems; values new ideas; likes to improvise.	Ingenious, original, innovative, productive, imaginative.	Has little creative motivation; seldom seeks originality; conservative thinker; prefers routine activities.	Unimaginative, deliberate, practical, sober, prosaic, literal, uninventive, routine.
INTERPERSONAL AFFECT	Tends to identify closely with other people and their problems; values close emotional ties with others; concerned about others.	Emotional, tender, kind, affectionate, demonstrative, warm-hearted, sympathetic, compassionate.	Emotionally aloof; prefers impersonal to personal relationships; displays little compassion for other people's problems; has trouble relating to people; is emotionally unresponsive to those around him.	Unresponsive, distant, hard-hearted, taciturn, unsentimental, indifferent, cold.

ORGANIZATION	Makes effective use of time, completes work on schedule, is not easily distracted.	Orderly, disciplined, planful, tidy, consistent, methodical, precise, neat, meticulous, systematic	Frequently procrastinates, easily distracted, falls behind in assignments or duties, often loses things, personal effects frequently in disarray, handles situations in an unsystematic, unpredictable, way, rarely plans before doing things	Disorganized, inefficient, orderless, absent minded, forgetful
RESPONSIBILITY	Feels a strong obligation to be honest and upright, experiences a sense of duty to other people, has a strong and inflexible conscience.	Responsible, honest, ethical incorruptible, scrupulous, dependable, conscientious, reliable, stable, straightforward	Apathetic about helping others; frequently breaks a promise; takes little interest in community projects; can't be relied on to meet obligations; refuses to be held to answer for his actions	Unreliable, indifferent, unfair, remiss, neglectful, thoughtless, negligent, inconsiderate, self-centered, careless
RISK TAKING	Enjoys gambling and taking a chance; willingly exposes self to situations with uncertain outcomes; enjoys adventures having an element of peril; takes chances, unconcerned with danger.	Reckless, bold, impetuous, intrepid, enterprising, incautious, venturesome, daring, rash	Cautious about unpredictable situations; unlikely to bet; avoids situations of personal risk, even those with great rewards; doesn't take chances regardless of whether the risks are physical, social, monetary or ethical	Cautious, hesitant, careful, wary, prudent, discreet, heedful, unadventurous, precautionary, security-minded, conservative
SELF ESTEEM	Confident in dealing with others; not easily embarrassed or influenced by others; shows presence in interpersonal situations, possesses aplomb.	Self-assured, composed, egotistical, self-possessed, poised, self-sufficient	Feels awkward among people, especially strangers; ill at ease socially; prefers to remain unnoticed at social events; has low opinion of himself as a group member; lacks self-confidence, easily embarrassed.	Self-depreciating, timid, unassuming, modest, shy, humble, self-conscious
SOCIAL ADROITNESS	Is skillful at persuading others to achieve a particular goal, sometimes by indirect means; occasionally may be seen as manipulative of others, but is ordinarily diplomatic, socially intelligent.	Shrewd, sophisticated, tactful, crafty, influential, subtle, persuasive, discreet, worldly	Tactless when dealing with others, socially naive and maladroit; speaks in a direct, straightforward manner; insensitive of the effects of his behavior on others	Direct, frank, tactless, candid, unpolished, undesigning, outspoken, impolite, blunt, naive.
SOCIAL PARTICIPATION	Will eagerly join a variety of social groups, seeks both formal and informal association with others; values positive interpersonal relationships; actively social.	Sociable, friendly, gregarious, outgoing, "joiner," convivial, companionable, fun-loving, extrovert, congenial, cordial, good natured.	Keeps to himself; has few friends; avoids social activities.	Nonparticipant, solitary, "loner," unsociable, retiring, uncommunicative, withdrawn.
TOLERANCE	Accepts people even though their beliefs and customs may differ from his own; open to new ideas, free from prejudice, welcomes dissent.	Broadminded, open-minded, unprejudiced, receptive, judicious, impartial, dispassionate, lenient, indulgent.	Entertains only opinions consistent with his own; makes quick value judgments about others; feels threatened by those with different opinions; rejects people from different ethnic, religious, cultural or social backgrounds; identifies closely with those sharing his beliefs	Intolerant, cocksure, dogmatic, opinionated, narrow-minded, prejudiced, uncompromising.

VALUE ORTHODOXY	Values traditional customs and beliefs; his values may be seen by others as "old-fashioned;" takes a rather conservative view regarding contemporary standards of behavior; opposed to change in social customs.	Moralistic, conventional, strict, prim, devout, prudish, puritanical, righteous, rigid.	Critical of tradition; liberal or radical attitudes regarding behavior; questions laws and precedents; acts in an unconventional manner; believes that few things should be censored.	Modern, radical, liberal, unorthodox, contemporary, permissive.
INFREQUENCY	Respond in implausible or apparently random manner, possibly due to carelessness, poor comprehension, passive non-compliance, confusion or gross deviation.			