

THE ACQUISITION OF ENGLISH GRAMMATICAL FUNCTORS
BY CHILD SECOND LANGUAGE LEARNERS

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Mary Theresa Fabris

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ABSTRACT

A case study of seven children learning English as a Second Language was conducted to explore the hypothesis that second language learning is a creative process, governed by an innate language mechanism, which proceeds automatically regardless of the environment in which the second language is being learned. An attempt was made (a) to determine and compare the orders in which the children acquired twelve grammatical functors, (b) to infer their language processing strategies and (c) to investigate the effect of teaching upon the order of appearance and acquisition of the functors.

The subjects for the study were seven children between the ages of eight and ten from three different language backgrounds (Tagalog, Cantonese, Korean) learning English in a formal environment. An oral test, in the form of a conversation about a picture story, was administered at one month intervals over a six month period. On each test, Individual and Group Scores were computed for each functor.

The subjects' acquisition orders were very limited but did show similarities. Similarity in performance was further investigated by comparing the subjects' accuracy

orders based on Individual Scores on each test. Pearson Product Moment Correlations were extremely high. The group accuracy order on each test, based on Group Scores for nine functors, was compared to rank orders reported in the literature. Spearman Rank Order Correlations between groups were also significant.

The observed orders were explained in part by external features of English and in part by the learning strategies of the subjects. Error analysis revealed the operation of many strategies including holophrase learning, overgeneralization, simplification, avoidance, transfer of training and native language interference. Subjects showed a definite preference for forms which follow a regular pattern, are easily perceived and which can be memorized as holophrases.

Teaching had minimal influence on the order in which functors appeared in subject interlanguage and were acquired but did affect performance. A recency effect upon Group and Individual Scores was observed and subject performance tended to become more similar as testing progressed. Teaching also hastened the acquisition of certain functors.

The similarity in subject performance in this study supports the hypothesis that an innate mechanism directs second language acquisition while the use of a variety of learning strategies suggests that second language learning is a creative process. Although learners appear to proceed

according to a predetermined sequence, teaching can assist this natural process by helping the learner to perceive and practice difficult features of language.

An overview of the second language acquisition process is proposed and implications for teaching and future research are given. An investigation of some of the methodological controversies surrounding functor acquisition studies found that for this study (a) grouped data was a reliable measure of group performance, (b) elicited speech may be as accurate a reflection of subject competence as spontaneous speech and (c) a relationship between cross-sectional accuracy orders and longitudinal acquisition orders exists.

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Chapter 1

INTRODUCTION

The failure of the Audio-Lingual Method of second language teaching to produce the dramatic results originally anticipated has discredited theories of second language learning based on psychological models of stimulus-response conditioning and entailed a search for new explanations of the complex process of second language acquisition. Observation of the production of second language learners reveals that many errors do not merely reflect interference from the native language, as the audio-lingual habit theory would suggest, but are the results of the learner's systematic attempts to reconstruct the rules of the new language in the same manner as a child learning his first language.

Consequently the aim of much current second language research is to explore various aspects of the analogy between first and second language learning. Besides direct comparisons of the development of certain grammatical forms in first and second language learning, attempts are being made to determine acquisition orders similar to those evidenced in first language acquisition. In addition, error analysis attempts to identify the cognitive strategies other than

transfer which shape the second language learner's performance.

The present study attempts to further explore this new theory of second language learning. It is in part a study of acquisition order of a limited number of grammatical constructions and in part an error analysis of second language learners' attempts at producing these forms. If the second language learning process is indeed a creative process, and, if there is a reliable sequence in which grammatical items are acquired, current methods of second language teaching must be re-examined and modified. The present study, therefore, also attempts to clarify the relationship between second language learning and teaching by examining the effects of instruction on performance.

STATEMENT OF THE PROBLEM

The purpose of this study is to examine the development of the following twelve grammatical functors over a six month period in the oral interlanguage of seven children from three different language backgrounds learning English as a second language in a formal environment.

Article (a, an, the)
 Copula (be) singular
 Copula (be) plural
 Present Progressive (V + ing)
 Future Progressive (going to + V)
 Auxiliary (be) Singular
 Auxiliary (be) Plural
 Plural (N + s)
 Possessive (N + 's)
 Third Person Singular (V + s)

Past Regular (V + ed)
 Past Irregular (came, went, etc.)

The study attempts to answer three questions :

- 1) Do children of different language backgrounds learning English as a second language acquire the twelve functors in a similar order?
- 2) What language learning strategies are used by children learning English as a second language in their production of the twelve functors?
- 3) a) Does the order in which the twelve functors are acquired by children learning English as a second language depend upon the order in which they are taught?
 b) Does the order in which the twelve functors appear in the interlanguage of children learning English as a second language depend upon the order in which they are taught?

DEFINITIONS

Functors

Functors are words of high frequency such as articles, auxiliaries, copula and prepositions which convey little meaning in themselves but which modulate the major meanings of a sentence. The functor class also includes grammatical morphemes such as the noun and verb inflections which signal tense, number and possession.

Appear, Acquired

An often observed phenomenon in second language learning is the instability of a form in a learner's production before it is supplied correctly in all required contexts. A given form is said to appear on the first

occasion that it is used correctly in an obligatory context. A given form is considered to have been acquired when it is used correctly in all obligatory contexts. Numerical criteria for the scoring of functors as having been acquired are given in Chapter 3.

First Language (L1)

The first language is the language learned by the child in the home and the source of his first linguistic and cognitive experiences. The term first language is used interchangeably with native language (NL).

Second Language (L2)

A second language is any language learned once the first language has been established as a relatively stable system. A second language may be learned informally through the environment or formally in the classroom. In the latter situation, it is often referred to as the target language (TL).

Interlanguage (IL)

Interlanguage is the deviant linguistic system used by the second language learner in his attempts at meaningful production in the second language. The interlanguage, although constantly changing as the learner progresses toward the TL norm, is a reflection of the learner's developing grammatical system at a given point in time.

Strategies

Strategies are the conscious or unconscious cognitive processes which the learner employs in organizing linguistic information in order to express meaning in the second language.

Error

An error is any deviance in the performance of the L2 learner from the TL norm in the areas of phonology, syntax or semantics.

LIMITATIONS

1. Because the subjects were drawn from an elementary level E.S.L. (English as a Second Language) program, the study is limited to children between the ages of eight and ten learning English in a formal environment.

2. The size of the sample is limited to seven by the length of the testing period which required the participation of the subjects in the program for an eight month period.

DELIMITATIONS

1. Only a limited number of structures are examined in order to keep the data within reasonable proportions. The twelve functors were chosen because a method for their study has already been established and it is, therefore,

possible to compare the results of this and other studies. They were also chosen because they represent grammatical topics formally presented in the E.S.L. program. The effects of teaching on performance may, therefore, be observed.

2. The study considers only the subjects' oral production of the twelve functors.

3. The duration of the study was limited to the six month period when it was felt that most of the functors were likely to appear and begin to reach criterion in the IL of the subjects.

4. Of the many variables which affect L2 learning, the study is concerned primarily with the influence of formal teaching on the subjects' use of the twelve functors. Other variables such as age, sex, intelligence, personality, outside exposure to the TL, attitude and motivation are mentioned in the discussion only where relevant to the understanding of a subject's overall performance.

Chapter 2

REVIEW OF THE LITERATURE

The Review of the Literature is divided into four parts. In the section FIRST LANGUAGE ACQUISITION, aspects of first language theory and research relevant to the development of new theories of second language learning are discussed briefly. Since the impetus for much current second language research has been a reaction to the inadequacy of previous theories of second language learning, the evolution of second language theory is traced in the next section, THEORIES OF SECOND LANGUAGE LEARNING. The current research to which this study is directly related is discussed in the two sections, ERROR ANALYSIS AND STRATEGIES and SECOND LANGUAGE ACQUISITION STUDIES. A CONCLUSION follows.

FIRST LANGUAGE ACQUISITION

An extensive summary of current theories and research in L1 acquisition is found in Brown (1973). L1 acquisition is believed to be a creative, systematic process by which the child gradually reconstructs the adult grammar of his language. This process is said to be creative because the child actively processes linguistic information and forms hypotheses about language which then become the basis for

his novel utterances. It is said to be systematic since the child's production, although erroneous by adult norms, is consistent with his own developing system of rules.

It is believed that the L1 acquisition process is governed by an innate language learning mechanism which leads the child to make use of a particular set of learning strategies. Evidence for the existence of this innate mechanism comes from studies of children learning many different first languages. These studies reveal many similarities in the sequence of developmental stages through which all L1 learners pass and the kinds of errors produced. Further, studies of children learning the same first language have shown that certain grammatical structures are acquired in a relatively invariant order.

Brown's (1973) longitudinal study of three unacquainted children learning English as a first language revealed that they acquired fourteen grammatical functors in a similar order. A cross-sectional study of twenty-one children by de Villiers and de Villiers (1973) duplicated Brown's results. Klima and Bellugi's (1973) study of negation and interrogation and Chomsky's (1969) study of complex sentence forms showed similar consistency in the order in which these forms were acquired by L1 learners.

In searching for an explanation for the regularities observed in child speech, Slobin (1973) links cognitive and linguistic development and hypothesizes that at comparable stages of cognitive development, children will attempt to

express similar semantic intentions. The relative linguistic difficulty of the realization of those intentions in a given language will then determine the language specific acquisition order. Brown (1973) found that neither frequency in parental speech nor semantic or linguistic complexity alone could account for his observed acquisition order and suggests that the cumulative linguistic and semantic complexity of each item and its general audibility, or perpetual salience, in adult speech will determine the point at which it is acquired.

THEORIES OF SECOND LANGUAGE LEARNING

Audio-Lingual Habit Theory

Many recent language teaching methodologies, most notably the Audio-Lingual Method of the sixties, are based on a mechanistic theory of second language learning which assumes that the learning of a second language consists in the development of new language habits through the conditioning of new responses to familiar stimuli, with the result that previous learning (the NL) will interfere with the new. Lado (1957) maintains that the undesirable effects of NL interference can be predicted in advance through contrastive analysis (CA), a detailed description and comparison of the phonology, lexicon, grammar and culture of the native and target languages. By organizing the teaching syllabus to give earliest and most intensive treatment to assumed difficulties, that is, those items having no equiva-

lent in the NL, or being most different from NL forms, it is assumed that errors may be eliminated from the learner's production.

Not only has CA proven unreliable in predicting learners' errors (Corder, 1967; Richards, 1973a; Oller, 1971; Whitman and Jackson, 1972) but language teaching programs whose organization is based on CA predictions of difficulty and which rely upon intensive repetition and drill techniques have not been successful in producing competent second language users. Recent developments in cognitive psychology and transformational linguistics have undermined the principles upon which CA and the audio-lingual method are based (Wardhaugh, 1970; Dulay and Burt, 1972a; 1972b) and entailed a search for new theories of second language learning.

L2=L1 Theory

Although a definitive theory of second language learning has yet to be advanced, an increasingly accepted view seems to be that first and second language learning are cognitively similar processes governed by the same innate language learning mechanism and shaped by a similar set of language processing strategies. This, essentially, is the position stated by Corder (1967), Wolfe (1967), Jakobovits (1968), Cook (1969), Richards (1973b), Dulay and Burt (1972a; 1972b), Ervin-Tripp (1974) and Taylor (1974) and is based on the observation of many errors in L2 production which resemble those made by L1 learners and which

do not reflect the intrusion of NL forms.

While it has always been assumed that first and second language learning are similar processes in children, the L2=L1 hypothesis is unique in extending the analogy to older learners. Taylor (1974) suggests that the differences between child and adult L2 learners, which were previously ascribed to age-related neurological changes, are probably the result of affective variables and environmental factors rather than any real difference in brain function. Studies by Ervin-Tripp (1974) and Fathman (1975) suggest that older L2 learners, because of their more advanced level of cognitive development, may actually acquire syntactic features of language more rapidly than their younger counterparts. Consequently, theoretical discussions of L2 learning process and conclusions drawn from the results of current research are applied to L2 learners of all ages.

The L2=L1 hypothesis differs from previous theories in three other respects. Firstly, it recognizes the active role of the L2 learner in reconstructing the rules of the TL through the use of a wide range of strategies other than transfer. Learners' errors are considered to be evidence of this creative activity and are accepted as a necessary and inevitable part of the learning process. The earliest attempts at testing the L2=L1 hypothesis concern the definition of learner strategies through the analysis of L2 learners' errors. These studies and their findings are reviewed in the following section, ERROR ANALYSIS AND STRATEGIES.

Secondly, the L2=L1 hypothesis assumes that L2 learning, like the L1 process, is systematic; that is, the learner's production, although deviant by TL norms, is a reflection of the learner's developing system of rules at a given point in time. The systematic nature of L2 learning is explored in discussions of learner language systems (Sampson and Richards, 1973), interlanguage (Selinker, 1972), approximative systems (Nemser, 1971) and idiosyncratic dialects (Corder, 1971).

A third assumption of the L2=L1 hypothesis, developed by Corder (1967) and Dulay and Burt (1973; 1974b; 1974c) is that, since L2 learning is governed by an innate cognitive mechanism which functions in a similar manner in all learners, the regularity in acquisition order observed in L1 learning should also occur in L2 learning, regardless of the learner's previous linguistic background. It is assumed, however, that the L2 sequence will be different from the L1 sequence as a result of the greater cognitive maturity and previous linguistic experience of the L2 learner. Another major area of L2 research, therefore, concerns the determination of acquisition orders and is reviewed in the section SECOND LANGUAGE ACQUISITION STUDIES.

ERROR ANALYSIS AND STRATEGIES

If, as the L2=L1 theory suggests, L1 and L2 learners make use of a common set of strategies determined by the innate language mechanism, it can be expected that L2

learners, regardless of their previous linguistic background, will make similar errors in interlanguage performance and that these errors will resemble those made by children learning a first language. Error analysis, following the procedure outlined by Corder (1971; 1974) represents an attempt to infer these strategies. A knowledge of learner strategies is of value not only in revealing the system under which the learner is operating at a given point in time but ultimately in illuminating the nature of the L2 learning process.

Errors fall into two broad classes; interlingual errors, which are generated by interference from the NL, and intralingual errors "whose origins are found within the structure of English itself and through reference to the strategies by which a second language is acquired and taught" (Richards, 1973a:97). Error analysis is concerned primarily with the strategies which cause errors of the latter type.

In the search for strategies, George (1972) provides a useful model of the L2 learner as an efficiency seeking device whose function is to simplify vast quantities of input data and reduce the burden of learning to manageable proportions. Bertkua (1974), Hakuta (1974b), Taylor (1975) and Richards (1975) similarly consider simplification a central process in L2 acquisition. Selinker, Swain and Dumas (1975:149) recognize simplification as the "super-ordinate strategy" and relate all other strategies, including

transfer, to the process of simplification.

It must be noted that learner strategies are, and must remain, a matter of speculation. An observed error may be ascribed to any one of several causes depending upon the orientation of the researcher. Dulay and Burt (1972a; 1972b) distinguish between the level of product (observed error) and process (learner strategy) and suggest that one may never infer one from the other with absolute certainty. A further distinction should be made between strategies operating at the conscious level or strategies of communication and unconscious learning strategies. Since the goal of all language is communication, the L2 learner's erroneous utterances may also be the result of deliberate attempts to facilitate communication rather than a reflection of the learning process.

Interlingual Errors

Interference. Interference, although still recognized as a cause of error, is of diminishing importance in the repertoire of learner strategies. The theory of difficulty on which CA is based assumes that where two linguistic systems converge, positive transfer will occur; where they diverge, negative transfer, or interference, will result. The degree of difficulty of any item is assumed to be directly proportional to its degree of divergence from the NL form, the most difficult TL items being those with no equivalent in the NL.

In practice, error analyses by Duskova (1969), Buteau (1970), Richards (1973a) and Scott and Tucker (1971) found that most of the errors made by L2 learners were not predicted in advance by CA and were, in fact intralingual in nature. A new theory of difficulty (Oller and Ziahosseiny, 1970:185), which proposes that "wherever patterns are minimally distinct in form or meaning in one or more systems, confusion may result", accounts for this observation since the similarities within one language system are more numerous than those between languages, no matter how closely related. In the case of items having no equivalent in the NL, Buteau (1970) hypothesizes that their difficulty is related to their inherent linguistic complexity and their perceptibility in TL speech.

Nemser (1971) and Taylor (1975) suggest that language transfer is most common in the beginning stages of language learning when the learner is forced to rely on the only system of language that he knows, the NL. As familiarity with the TL increases, the TL itself becomes a more potent source of error as the learner attempts to base generalizations upon his existing knowledge of the TL. Wolfe (1967) believes that once the learner is aware that differences exist between the NL and TL, he will rely on strategies other than transfer which is seldom reliable.

An extreme version of the L2=L1 hypothesis, advanced by Dulay and Burt (1972a; 1972b; 1973; 1974a) totally rejects interference as a cause of error in the case of children

below the age of puberty. Although Dulay and Burt (1974a) present evidence, based on an error analysis of child production, that less than 4.7% of errors are traceable to interference, Cancino, Rosansky and Schumann (1975) found that even four to six year old children made interference errors similar to those of older learners. Hatch (1974) and Hakuta (1974b; 1976) also found interference errors in the interlanguage of child L2 learners.

Avoidance. Schacter (1974) suggests that L2 learners will, consciously or unconsciously, avoid constructions which are unfamiliar. Her study of relative clause usage by adult E.S.L. learners revealed that these structures are used freely by students whose NL has a parallel form but only rarely by those whose NL has no equivalent. Hakuta (1976) also found that interference manifests itself in this manner.

Frills. Dulay and Burt (1975) suggest that, while the surface structures of the NL may not transfer into TL performance, many aspects of the learning process do. One manifestation of process transfer is the indiscriminate use of inflections, e.g. "She's dancings", in ways not typical of L1 learner. The L2 learner knows from experience that language requires such frills and tends to overuse them.

Intralingual Errors

Overgeneralization. The most frequently cited cause of intralingual errors is overgeneralization which Taylor (1975:

77) defines as "a process in which language learners use a syntactic rule inappropriately when they attempt to generate a novel target language utterance." L2 learners, for example, may omit the third person singular "s", "he work", under pressure from other uninflected present tense forms. When the converse occurs, e.g., "I works", "you works", Richards (1973a) refers to this process as hypercorrection.

Redundancy Reduction. George (1972) describes redundancy reduction as the omission of forms perceived as redundant or meaningless. Articles and inflections, which carry little meaning in themselves, are often omitted as non-essential, e.g., "I go to store yesterday" carries the same message as "I went to the store yesterday". Another form of redundancy reduction (Richards, 1973a) is the failure to make all the necessary transformations in forming a TL utterance, e.g., the failure to invert the verb in a WH-question "What this is?"

Holophrase Learning, Prefabricated Patterns. Selinker (1972), Hakuta (1974a; 1976) and Wagner-Gough and Hatch (1975) observe that many L2 learners quickly memorize high frequency patterns such as copula verbs and stock phrases, e.g. "What's this?", "I don't know", and proceed to apply them in innumerable situations and to serve a variety of functions until the correct forms have been acquired.

Incorporation of Elements from the Previous Utterance.

Richards (1973a) and Wagner-Gough and Hatch (1975) cite numerous instances in which the learner combines part of a previous utterance into a novel utterance of his own. This may occur immediately in the case of questions and answers, e.g., "Do you read much?" "Yes, I read much", or a pattern may be stored and retrieved for later use.

Pooling. Hatch (1974:7) describes two types of learners: "rule formers" and "data gatherers". While the former produce language systematically, the latter simply use known forms in free variation to express meaning. Wagner-Gough and Hatch (1975) suggest that this learner pools information, e.g. subject referents "me", "my", "I", etc. and then draws from this pool at random as the need arises.

Transfer of Training. When any of the above mentioned errors are traceable to "identifiable items in training procedure", Selinker (1972: 216) ascribes them to transfer of training.

Performance Errors

A final class of errors mentioned by Corder (1967), Duskova (1970) and Richards (1973b) are performance errors or slips of the tongue which are made even by native speakers and represent a momentary lapse of memory. As such, they are not true errors as they indicate no lack of competence on the part of the speaker and are immediately correctable by him.

Developmental errors

Most of the strategies mentioned above as possible sources of intralingual errors have been cited in the L1 literature as well (Brown, 1973). Since it is known that L1 learners outgrow their errors, Richards (1973a) speculates that L2 learner errors may also be developmental, that is, they may disappear over time in the same way that children's L1 errors disappear as they reach maturity. At this point in the evolution of L2 theory, it is impossible to determine which errors are developmental and which are fossilizable, or permanent in nature. Selinker, Swain and Dumas (1975:50) suggest that "when more than one strategy intersects in second language learning there will be more power or stability in the resultant interlanguage".

SECOND LANGUAGE ACQUISITION STUDIES

Where error analysis seeks to define the strategies which cause a particular class of errors, studies of second language acquisition have as their ultimate goal the definition of universal processing strategies, a much broader class of cognitive activities which could predict the course of the L2 acquisition process under varying conditions and for different languages. Rather than focusing on individual errors, second language acquisition studies look at the learner's overall linguistic development and attempt to determine patterns or sequences of acquisition similar to those found in L1 learning. The rationale for such studies

is stated by Dulay and Burt (1974b:46) as follows :

...if it is true that universal cognitive mechanisms (or strategies) are the basis for the child's organization of a target language, and if it is the L2 system rather than the L1 system that guides the acquisition process, then the general sequence in which certain English syntactic structures are acquired should be the same, with only minor individual variations.

Early attempts in this direction compared L1 and L2 developmental sequences for isolated features of language. Ravem's (1966) study of a six year old Norwegian child's acquisition of English negatives and WH questions, Natalicio and Natalicio's (1971) study of the acquisition of English plurals by first to twelfth grade Spanish speakers and Milon's (1972) study of a Japanese child's acquisition of English negatives showed that in all cases the learners followed the established L1 sequence. Studies of syntactic development in adults as measured by T-units (Cooper, 1973) and complex sentence forms (Cook, 1973; d'Anglejan and Tucker, 1975) had comparable results.

Nevertheless, it is still expected (Corder, 1967; Dulay and Burt, 1973; 1974a; 1974b; 1974c) that the L2 sequence will be different from the L1 sequence as a result of the L2 learner's previous cognitive and linguistic experience. Dulay and Burt (1973; 1974b; 1974c) have conducted a series of studies of the acquisition of Brown's functors by child L2 learners to test this hypothesis.

Studies of Morpheme Acquisition

Procedure. Most recent studies of acquisition order concern the acquisition of Brown's functors. These were originally chosen by Dulay and Burt (1973) because a well developed research methodology already existed and L1 orders were established and available for comparison. In addition, functors are easily elicited, being obligatory in all multi-word utterances, and easily scored for correct usage.

Longitudinal studies which have been the basis for L1 research, are, as Swain, Dumas and Naiman (1974) suggest, both difficult and inefficient where older learners are concerned. The difficulty of finding older L2 learners who are willing to be observed for lengthy periods of time for a duration of many months is solved by conducting a cross-sectional study in which large numbers of subjects are tested once. de Villiers and de Villiers' (1973) successful duplication of Brown's L1 findings using a cross-sectional design is accepted as a measure of the reliability of this type of study (Dulay and Burt, 1973).

Since the older learner is capable of focusing attention on a task, studies of L2 acquisition usually rely on some type of testing procedure. Because many elicitation devices lack a meaningful communicative context and may negatively affect the subject's performance, Dulay and Burt (1973) developed the Bilingual Syntax Measure (BSM), a testing device which attempts to elicit a subject's natural speech through directed conversation about a set of pictures.

In an attempt to quantify the presence of functors

in child speech, Brown (1973) introduced the notion of the obligatory occasion as a test item for measuring the child's degree of mastery of a particular item. For example, the speaker who wishes to comment on the occurrence of an event, "It's raining", immediately creates obligatory occasions or contexts for the auxiliary "is" and the progressive "ing" inflection on the main verb. A young child, or L2 learner, wishing to express a similar intention, will create the context but may or may not supply the required functors depending upon his level of linguistic development. By counting the number of times a functor is correctly supplied in context, it is possible to score the child on his use of each functor. The BSM leads the subject to create obligatory occasions for the required functors. A score is then computed for each functor and a rank order established. This order is assumed (Dulay and Burt, 1973; 1974b; 1974c) to represent the order in which the functors will ultimately be acquired.

Findings. The first study conducted by Dulay and Burt (1973) revealed that three isolated groups of Spanish speaking children between the ages of five and eight exhibited similar rankings for the eight functors elicited by the BSM. The order was, as predicted, different from Brown's L1 acquisition order. A replication of Dulay and Burt's (1973) study by Bailey, Madden and Krashen (1974) using adult E.S.L. learners found a functor order similar to Dulay and Burt's. A sub-

sequent study by Dulay and Burt (1974b) using the BSM and three different methods of scoring, revealed similar rank orders for eleven functors for two large groups of Spanish and Chinese speaking children.

Other studies of L2 acquisition order have had encouraging results. Dato (1971) found that six English speaking children learning Spanish informally followed similar developmental patterns in the acquisition of certain aspects of the Spanish verb system. Hatch (1974) looking at auxiliary development and the acquisition of verb tense found sequence similar if not identical for her forty subjects. Fathman's (1975) study of the effect of age on the rate of L2 learning found similar rankings for twenty grammatical items by both older and younger groups. Larsen-Freeman (1975) using the BSM and separate tests of listening, reading, speaking (elicited imitation) and writing, found different morpheme rankings on each task. However, the order elicited by the BSM correlated significantly with Dulay and Burt's (1974b) findings, as did the other tests of productive skills (writing and speaking).

On the other hand, Hakuta's (1974b; 1976) longitudinal study of a five year old Japanese child's acquisition of Brown's functors over a forty week period revealed an order different from both Brown and Dulay and Burt. Cancino, Rosansky and Schumann (1975), studying the order of appearance of auxiliaries in declarative, negative and interrogative sentences by six Spanish speakers aged five to adult over a

six month period, did not find consistent patterns. Rosansky (1976) found similar inconsistency in the same subjects' acquisition of Brown's morphemes.

Critical Considerations. Functor acquisition studies are currently the subject of much controversy. Tarone (1974) cites numerous procedural difficulties in the Dulay and Burt methodology as well as certain statistical inaccuracies in their data. Rosansky (1976) doubts that given the gradual nature of the language acquisition process and the variability observed in both L1 and L2 learning, a single cross-sectional order represents the ultimate order of acquisition. Similarly, other researchers are cautious in assuming that cross-sectional orders are acquisition orders, preferring the terms accuracy order (Bailey, Madden and Krashen, 1974) or difficulty order (Larsen-Freeman, 1975) to describe cross-sectional orders.

Dulay and Burt (1974c) themselves suggest that ranking grammatical items in a linear order may be an inadequate means of describing performance since functors are not acquired in linear fashion, one after another. They offer, as an alternative to rank orders, an acquisition hierarchy or tree which specifies groups of items which are acquired together, one group as a prerequisite to the next, and which allows for greater individual variation in acquisition order.

Another problem raised by Rosansky (1976) concerns

the use of data collected by means of an elicitation device rather than spontaneous speech. She suggests that the use of a particular testing technique biases the results in favor of a particular rank order. Larsen-Freeman (1975) found that five different tasks produced five different functor orders leading her to conclude that there is a task related difficulty order.

Rosansky also questions the use of grouped data. She suggests that the computation of group scores obscures so much individual variability that correlations between rank orders based on such scores cannot be meaningfully interpreted.

A further criticism often levelled at studies of morpheme acquisition is that morphemes are only a minor aspect of language performance. Dulay and Burt (1974c) and Tarone, Swain and Fathman (1976) recommend that items of a higher order than functors must be measured before claims for invariant acquisition orders and attempts at defining language universals can be made. As Dulay and Burt (1975:30) point out, however, "... the items themselves are not of primary importance. The significance of this acquisition order is not which items are ordered, but that there is an order which is common to so many children of diverse backgrounds."

Determinants of Acquisition Order

The consensus (Hatch, 1974; Hakuta, 1974b; 1976;

Boyd, 1974; Larsen-Freeman, 1975; 1976; Wagner-Gough and Hatch, 1975; Dulay and Burt, 1974c; 1977) seems to be that no one factor alone can account for acquisition order. As the L2 process is currently understood, L2 learning is the product of internal processes (strategies) acting upon external information (language).

The recognition of the active role of the learner in the language learning process, as well as the low correspondence between the frequency of morphemes in adult speech and acquisition order in L1 learning (Brown, 1973) has focused attention on the internal processes or strategies which might account for the regularity in L2 orders.

Although many language learning strategies have been discovered through error analysis, these remain isolated processes. The interactions between these strategies, the conditions under which each operates and in which learners, have not yet been specified. Hatch (1974) suggests that personality and individual learning style will influence a learner's choice of strategies and lead to individual variations in acquisition order.

Early attempts at explaining acquisition in terms of external factors showed that neither Brown's notions of cumulative linguistic and semantic complexity (Dulay and Burt, 1974c), phonological complexity (Larsen-Freeman, 1976) nor teaching syllabus (Krashen, Madden and Bailey, 1975) could account for acquisition order. Wagner-Gough and Hatch (1975), however, suggest that external factors in

the form of frequency, the kind of language addressed to the learner and the learning environment have been overlooked in search for internal strategies. Hatch (1974) speculates that frequency, modified by transformational complexity and semantic power of a grammatical form, will influence its position in acquisition order. Frequency is also mentioned by Boyd (1975) who found that the late acquisition of certain structures by her subjects could be traced to their low frequency in teacher language. Larsen-Freeman (1976), after comparing the BSM orders determined by Dulay and Burt (1974b), Bailey, Madden and Krashen (1974) and her own (1975) tests of imitating and speaking with Brown's order of morpheme frequency in parental speech, concludes that frequency is the principal determinant of acquisition order. Dulay and Burt (1977), however, caution that the existence of a statistical correlation does not necessarily imply a causal relationship. They hypothesize that at certain stages or levels of linguistic development the learner is receptive to certain features of language; external input is important only insofar as it provides the necessary data upon which internal processes can act. These sensitive periods and internal processes remain to be specified.

The Effects of Teaching

The emphasis on internal factors which determine acquisition order and the fact that subjects for various morpheme acquisition studies have exhibited similar morpheme

orders regardless of the kind of instruction received (Krashen, Madden and Bailey, 1975) have led to the assumption that teaching has no effect on acquisition order. As a result there have been few studies which examine the effect of teaching on acquisition order.

A study of the effect of teaching on the performance of college level E.S.L. students by Upshur (1968) revealed that students' overall competence was not affected by the amount or kind of instruction received and that items taught formally were not necessarily the items assimilated into the learner's interlanguage. Fathman (1975) also found that the kind of program in which her subjects were enrolled did not significantly affect their performance with respect to accuracy and order of acquisition. Perkins and Larsen-Freeman (1975), studying the effects of teaching on adult learners, found that formal instruction may accelerate the rate at which items are acquired but will not significantly affect the order of acquisition.

CONCLUSION

This study is an attempt to explore certain aspects of the L2=L1 theory outlined above. Acquisition orders for twelve functors are determined and compared to see if there is any evidence for universal cognitive mechanisms which would produce a common L2 acquisition order. An attempt is made to interpret these orders in terms of the various internal and external factors currently believed to govern

the L2 acquisition process. Evidence for creativity in the L2 learning process is sought through analysis of the subjects' errors and strategies in the use of the functors. Further, since the functors measured in this study represent grammatical topics formally presented in the E.S.L. class, the effects of teaching on order of acquisition and appearance and subject performance in the use of the functors are also observed.

The study was undertaken, first of all, to contribute to a growing body of experimental data related to acquisition order and error analysis. For this reason, the twelve functors and an experimental design similar to that used in the studies described above have been chosen to permit a comparison of the results of this and other studies. However, because of recent methodological controversies, the testing procedure was repeated at one month intervals over a six month period so that both longitudinal and cross-sectional orders could be determined.

Secondly, since any experimental study in the field of education has its ultimate application in the classroom, it is hoped that this study, by exploring the L2 learning process and clarifying the relationship between teaching and learning will lead to the improvement of one instructional program and the creation of conditions for more effective language learning.

Chapter 3

METHODOLOGY

SUBJECTS

The subjects for the study were seven children between the ages of eight and ten from three different language backgrounds participating in an elementary level E.S.L. (English as a Second Language) withdrawal program in the core area of Winnipeg in the school year 1976-77. Students in this program are enrolled, immediately upon their arrival at the school, in regular classes at grade levels appropriate to their age and previous educational experience and then withdrawn, for varying periods of time throughout the day, for E.S.L. instruction.

Students are timetabled in such a way that they are in their home room for subjects requiring minimal language competence such as P.E., music or mathematics; when the regular class is engaged in reading, language arts and other subjects requiring a more advanced level of language competence, they are withdrawn to the E.S.L. classroom. In this way, E.S.L. students benefit from informal interaction with English-speaking peers and teachers and, at the same time, receive specific language instruction. E.S.L. support continues until the student

is able to cope with the regular program at his grade level.

The seven subjects for this study are described in the table below :

Table 1

Subjects

Name	Sex	Native Language	Arrival in Canada	Age (Dec.76)*	Grade
A.C.	F	Cantonese	4/76	10	4
J.A.	M	Tagalog	9/76	9	4
F.S.	M	Tagalog	4/76	8	3
L.P.	F	Tagalog	10/75	8	3
J.C.	F	Tagalog	1/76	9	3
J.P.	M	Tagalog	4/76	9	3
B.H.	F	Korean	4/76	9	3

* mid-point in the testing period.

All seven subjects began in the program in September, 1976. Prior to arrival in Canada, all had received some formal education and two (J.A. and A.C.) had received some E.S.L. instruction but had attained only minimal fluency. Of the six who arrived in Canada during the 1975-76 school year, J.P., L.P., B.H., and J.C. had been placed in a primary E.S.L. program which concentrates on oral language and pre-reading skills; A.C. in an elementary level E.S.L. reception class where attention was given to reading and writing as well as oral skills; and F.S. in a regular grade two program. All six participated in an informal one month summer enrichment program in the summer of 1976.

By the beginning of September, therefore, all had received some exposure to English although in varying

degrees and under varied circumstances. All were classed as beginners on the basis of their ability to communicate with native speakers of English and their ability to handle the normal classwork for their grade. Only the two grade fours (A.C. and J.A.) and F.S. were able to read and write in English. Of the other four, only one (B.H.) was literate in her own language but as this language uses a different alphabet she was considered a beginning reader.

TEACHING PROCEDURE

For the purposes of teaching and the following discussion, the subjects are divided into two groups: the Grade Threes (J.C., L.P., J.P., B.H., F.S.) and the Grade Fours (J.A., A.C.). The Grade Three group initially spent most of the day in the E.S.L. room. They received approximately forty minutes each day of oral language instruction based on an Audio-Lingual model in which grammatical patterns, including the twelve functors, were systematically introduced and practiced through conversations, games and various types of pattern drills. They also received beginning reading and writing instruction. The two Grade Fours initially spent approximately half the day in the E.S.L. room, receiving the same oral instruction as the Grade Three group as well as reading and writing practice at a more advanced level. They received additional instruction in grammatical topics slightly in advance of the group and performed related written exercises. As the year,

and the students, progressed, the amount of time in the E.S.L. room was gradually decreased.

All twelve functors were presented and practiced orally at first and later in written exercises by the Grade Fours. Initially, the subjects practiced the functors in tightly controlled exercises (conversations, pattern drills) progressing toward less structured activities (games, improvised dialogues) and, finally, were encouraged to use them in relatively free communication situations (group discussions, conversations with the teacher). Simplified grammatical explanations were given at the outset and the subjects' attention was focused on the items being practiced in the oral drills and written exercises.

The noun related morphemes (Article, Possessive, Plural) were presented early along with Copula and Auxiliary+ Present Progressive. These, along with the other verb forms (Future Progressive, Third Person Singular, Past Regular and Irregular) which were presented later, followed a similar manner of presentation. The statement or affirmative form was practiced first, followed by the short answer form in answer to yes-no questions, and then by the negative and interrogative transformations.

Although a definite syllabus was followed there were many digressions as explanations and practice were required or requested. Review was an important component of the program and each functor was practiced regularly following its initial presentation. Further, since at least three

groups of children were working in the E.S.L. room at any one time, it was not uncommon for a child who had finished his work to sit in on a lesson in progress with another group.

In spite of the withdrawal program, exposure to English outside the E.S.L. room was fairly limited. Although six of the seven children had at least one parent with some knowledge of English, the NL was maintained in the home in all cases. The community in which the school is located, and in which the children live, is settled predominantly by immigrant families from southern Europe and the Orient and is well supplied with ethnic stores and services, reducing the urgency for learning English for members of the larger immigrant groups. The school population reflects the ethnic structure of the community and an abundance of interpreters and NL speaking playmates is readily available to the E.S.L. student in the school as well as on the street. The E.S.L. class was often, with the exception of television, the immigrant student's major contact with English.

TESTING PROCEDURE

Testing

Testing took place over a six month period beginning at the end of October, 1976, after the subjects had received two months of uniform instruction, and continued at one-month intervals until the end of March, 1977. Three different tests, similar in format, were used in sequence so that

Tests I and IV, II and V, III and VI were the same. Each test consists of a storyboard, a sequential set of five 10"x16" colour cartoon-type pictures, taken from the SRA Language Development Program (1970) and a set of questions designed to guide the subject in relating the story, and, at the same time, to elicit the twelve desired functors by creating at least five obligatory occasions for the use of each. Storyboards were chosen to correspond with the social and linguistic experiences of children between the ages of eight and ten to maintain interest and minimize the introduction of new vocabulary. Copies of the three tests and the storyboards are found in APPENDIX A.

In order to obtain as close as possible a sampling of the subjects' natural speech, the testing situation was kept as informal as possible. Subjects were tested in the familiar surroundings of the E.S.L. classroom by the E.S.L. teacher and the focus of the conversations was on the storyboards and the ideas expressed by the subjects. A small cassette recorder with built-in microphone was used to record subject responses. Responses were neither corrected nor expanded although agreement or disagreement with an idea was sometimes expressed. Subject responses were occasionally repeated verbatim by the experimenter if it was felt they would be inaudible on tape.

After some informal conversation to put the subject at ease, the storyboard was shown and the nature of the task explained. Subjects were requested to respond in

complete sentences. A brief introduction to the whole story was given to establish the context for the discussion and to provide the names of characters in the story and some possibly unfamiliar vocabulary. The storyboard was examined frame by frame, and the subject asked to identify objects and people (Copula, Article, Plural, Possessive), describe actions (Auxiliary, Present Progressive) and anticipate future events (Auxiliary, Future Progressive). At the completion of all five frames the subject was helped to retell the story (Past Regular and Irregular). Final questions required the subject to relate the story to his own experiences (Third Person Singular).

In the course of questioning, it often became necessary to supply additional vocabulary items and to prompt in order to get a response started or to encourage the use of complete sentences. Care was taken in prompting not to provide any of the structures being tested and vocabulary items were presented in base form only on the assumption that the subjects would modify them in accordance with their own rule systems. In many instances, especially on early tests and with weaker subjects, some of the questions had to be explained or elaborated.

In order to test the subjects' understanding of the function as well as the form of the functors being tested, an attempt was made to discourage the use of holophrases or prefabricated patterns, particularly in the case of Copula and Auxiliary, which Hakuta (1974a) suggests first enter the

L2 learner's repertoire in this manner. Therefore, pronouns were avoided as much as possible in the questioning. For example, "What is Joe doing?" was asked rather than "What is he doing?" to discourage the subject from beginning his response with a pattern such as "he's", "she's" or "they're".

Recording

All tests were tape recorded and transcribed the same day. Subject responses were entered on test blanks like those in APPENDIX A. To facilitate error analysis and scoring of functors, each subject's responses were then grouped according to the functors provided in each. In addition, a Subject Data Sheet, as shown in APPENDIX B, was kept for each subject to record relevant information concerning the extent of formal teaching, exposure to English and possible motivational factors. As measures of fluency and comprehension, a record was also kept of the time required for each subject to complete each test, the number of questions requiring repetition or elaboration and the number of prompts required for vocabulary items and sentence starters.

SCORING

Individual Functor Scores

In scoring the subject's performance in the use of the twelve functors, a simple scoring device adapted from Dulay and Burt (1974b) was used. Each obligatory occasion

for the use of a functor is considered a test item with a possible value of 2. The subject receives a score of 0 if no functor is supplied, 1 if an incorrect form is provided and 2 if the correct form is used. After each testing session a percentage score, based on the ratio of actual scores to possible scores for all the obligatory occasions for a functor, was computed for each functor for each subject. A detailed account of the scoring for each functor follows.

Article (a, an, the). Article was scored for presence/non-presence as well as for choice of the correct form to express definite/nondefinite function. For example, "It's sun" would score 0; "It's a sun," 1/2; "It's the sun", 2/2.

Copula Singular (am, is, are; Copula Plural (are)). Copula was scored for presence/nonpresence and provision of the correct form to express person and number. For example, "Joe a boy"; would score 0/2; "Joe are a boy", 1/2; "Joe is a boy", 2/2. Both present and past forms were counted but singular and plural were tallied and scored separately. No distinction was made between contractable and uncontractable forms since, as Hakuta (1974b) observes, they appear to be acquired simultaneously by L2 learners. However, in order to permit comparisons with other studies of morpheme acquisition, a third copula category, Combined Contractable Copula, which includes both singular and plural contractable forms, was created.

Present Progressive (V + ing). Although the Present Progressive is made up of two components, the Auxiliary and the main verb + ing, this study, like other studies of morpheme acquisition considers each element separately. Therefore, "He working" would score 2/2 for Present Progressive but 0/2 for Auxiliary, while "He is work" would score 0/2 for Present Progressive and 2/2 for Auxiliary.

Future Progressive (Going to + V or "gonna" + V). Like the Present Progressive, the Future Progressive has an Auxiliary component but only the presence /nonpresence and correctness of the "going to" (as opposed to "go to") form was scored. Although most studies group Future Progressive together with Past and Present Progressive, it was intuitively felt that Future Progressive is acquired separately and a separate Future Progressive category was, therefore, created. However, for the purpose of comparison with other studies, a third progressive category, Combined Progressive, which includes past, present, and future progressive forms, was created. Criterion for scoring was simply the provision of the "-ing" inflection after an auxiliary. The concatenative "gonna" was necessarily omitted from this category.

There was some confusion in the use of "going to" to express direction rather than future intention, e.g. "What is he going to do?" "He's going to school". These responses were omitted from the scoring for Future Progressive but were included in the Combined Progressive and Auxiliary scores.

Auxiliary (be) Singular (am, is, are); Auxiliary (be) Plural (are). Like Copula, Auxiliary was scored for presence/non-presence and provision of the correct form to express person and number. Singular and plural were tallied and scored separately but both contractable and uncontractable forms were counted. For purposes of comparison with other studies, a Combined Contractable Auxiliary category, which includes both singular and plural contractable forms, was created.

Plural (N + s). The Plural category includes the three "s" allomorphs, /s/, /z/, /ɪz/, but not the infrequent irregular forms. Scoring was based solely upon presence/nonpresence of the plural inflection in obligatory contexts. Since many studies separate short and long plural, a Short Plural category was included for purposes of comparison. Although a separate Long Plural category was created, occasions for the use of long plural were so infrequent that this category was not considered in the analysis of the data.

Possessive (N + 's). Possessive markers on nouns only were considered. Possession in English is indicated by word order as well as by the 's marker. In scoring, one point was awarded for correct order e.g. "Joe house" 1/2, and one more for the provision of the "s" marker, e.g. "Joe's house" 2/2). If neither appeared, e.g. "house Joe" the occasion was scored 0/2.

Third Person Singular (V + s). The "s" inflection on the

main verb appearing after a third person singular subject in the present tense was scored for presence/nonpresence and provision of the correct marker. Irregular forms such as "does" and "has" were not counted.

Past Regular (V + ed). The past "-ed" inflection was scored for presence/nonpresence in obligatory contexts and for provision of the correct form. It should be noted that in the case of the Third Person Singular and Past Regular, provision of the progressive inflection "-ing" was not awarded a 1/2 score for the simple reason that the pervasiveness of the "-ing" inflection in the early stages of language learning would have made the scores for these two categories deceptively high. Provision of the "ed" ending in contexts requiring third person singular "s", and vice versa, were awarded 1/2, however.

Past Irregular (came, went, saw, etc.). In the case of verbs which take an irregular form in the past tense, scoring was simply 0 for an incorrect form and 2 for the correct form. The only occasions on which a partial score 1/2 was awarded, occurred when the subject offered an irregular third person form, e.g. "has" or "does", or a third person singular inflection since these forms represent a higher degree of refinement than an uninflected verb.

Scoring Problems

This scoring procedure presented two major problems.

The first of these was determining exactly what constitutes an obligatory occasion. For example, the experimenter, indicating a picture of two boys, may ask "Who are these boys?" and the subject may respond "It's Joe's friend." which is, on the surface, a perfectly well formed utterance. However, both pictorial and verbal contexts indicate a need for Plural Copula and Plural "s". The subject may not interpret the question as a plural; he may attend only to the picture and see that the experimenter inadvertently indicated only one of the boys in the picture and, therefore, see no need for Plural Copula or Plural. On the other hand, the subject either may not know or may be deliberately avoiding plural forms.

A similar situation occurs when a subject is asked a question such as "What did he do next?" and replies "He's washing the car." The subject either may not interpret the question as past or he may be incapable of supplying the required form and substitute a more familiar one. It is impossible to know, in either example, if an obligatory occasion for Plural or Past existed from the subject's point of view.

The problem was resolved by referring back to Brown (1973:255) who distinguishes four types of obligatory occasions :

- 1) Linguistic context, the child's own utterance
- 2) Nonlinguistic context
- 3) Linguistic prior context
- 4) Linguistic subsequent context



The examples above were interpreted as the second and third types of obligatory occasion and scored accordingly; that is, in the first example, the subject received half marks for provision of Copula and 0 for Plural; in the second, a 0 for Past Regular. This decision assumes that the learner has mastered the function as well as the form of the functor since he must not only produce the functor correctly but use it appropriately.

The second problem encountered was the failure of the scoring system to account for errors of overgeneralization. Overgeneralizations occurred frequently in the use of Article, particularly on early tests where subjects used articles indiscriminately with both singular and plural nouns. Neither the scoring for Article nor Plural reflects this type of error. A separate record was, therefore, kept of overgeneralizations since these, as well as other errors, imply that a form has not yet been completely mastered. Mastery of a form implies knowing not only its correct applications but its limitations as well. A score of 100% for Article may be deceptive if that subject is simultaneously supplying article 100% of the time with plural nouns.

These two problems concern the relationship of form and function which, as Hatch (1974) points out, are not always acquired together. By resolving the problems as described above, it is hoped that the test scores reflects the subjects' competence; that is, their mastery of both the form and function of the functors concerned.

Other problems occurred in transcription of the subjects' taped responses. In some cases, it was difficult to hear the subject on the tape or to perceive the presence of certain functors, particularly the past "-ed" inflection or the third person singular "-s". In other cases the subject's response was so confused or full of hesitations and false starts that it was impossible to interpret it meaningfully. While mazes probably offer much information about learner strategies, for the purpose of this study dubious or uncertain items were omitted entirely from the scoring procedure.

Accuracy Scores

In order to establish some means of comparing the individual subjects' levels of linguistic development, an accuracy score was also computed for each subject for each test. The accuracy score is simply the percentage correct on each test and was determined by computing the ratio between a subject's actual scores and his possible scores for all of the functors on a given test.

Average Scores

In order to examine the effects of NL interference on the use of individual functors throughout the testing period, an average score was computed for each functor for each subject. Average score was determined by totalling the actual and possible scores for each functor on all six tests and expressing the ratio as a percentage.

Group Scores

In order to compare the results of the six tests with other studies of morpheme acquisition, a Group Score was computed for each functor for each test. Following Dulay and Burt's (1974b) Group Score procedure, the whole group is treated as one subject and a percentage score for each functor is computed based on the ratio whose numerator is the total of the actual scores of all members of the group and whose denominator is the total of all their possible scores.

ANALYSIS OF RESULTS

Acquisition Order

Once the functor scores for each subject on each test had been computed, acquisition orders for each subject were determined. To allow for variability in the use of functors, Brown's (1973) criterion was used to determine acquisition point for each functor; a functor was considered acquired on the first of three consecutive tests on which it was used with 90% or greater accuracy.

Because many functor acquisition studies consider cross-sectional functor ranks rather than longitudinal acquisition orders, a Pearson Product Moment Correlation was used to compare the performance of the seven individual subjects with one another on each of the six texts. In order to compare this group of subjects with groups whose orders are reported in other studies of functor acquisition, rank orders for each test, based on Group Scores for the nine functors

common to this and other studies, were determined. A Spearman Rank Order Correlation was used to compare the rank orders from Tests I - VI with these other orders.

Error Analysis

The utterances supplied by the subjects in answer to the questions designed to elicit the 12 functors became the basis for error analysis. Once the utterances of each subject had been grouped by functors, deviant utterances were compared to a correct version of the same utterance and errors within each functor class were classified according to type and frequency. The kinds of errors within each functor group varied and are explained in the reporting of the results of the error analysis. Overgeneralizations which were not included in the original scoring procedure were also recorded along with the other error types for each functor group.

For each of the seven subjects, an Individual Error Profile which records the number and kinds of errors in each functor class was drawn up. For convenience in reporting, the information from these individual profiles was combined so that a single Group Error Profile emerged. The format for these Individual and Group Error Profiles is shown in APPENDIX C.

Effects of Teaching

In order to determine the relationship between teaching order and order of acquisition and appearance of

functors, teaching order, as recorded on the Subject Data Sheets, was simply compared to the acquisition orders determined for each subject and to the point at which functors appeared in the ILs of the individual subjects. Teaching order was also compared to Individual and Group Scores to determine any other effects teaching may have had on performance.

Chapter 4

RESULTS AND DISCUSSION

ACQUISITION ORDER

The first question posed in this study was :

Do children of different language backgrounds learning English as a second language acquire the twelve functors in a similar order?

To answer this question acquisition orders for the seven subjects were determined and compared. As the literature has shown, both longitudinal and cross-sectional studies have been used to determine acquisition order, although cross-sectional orders are more aptly called difficulty or accuracy orders. The design of this study made it possible to determine both longitudinal acquisition orders and cross-sectional difficulty or accuracy orders. These are compared and discussed separately below.

Longitudinal Acquisition Order

The longitudinal acquisition orders for each of the seven subjects from this study are presented in Table 2. The roman numeral in brackets following each functor denotes the test on which that functor was acquired; the arabic numerals represent the subject's accuracy score on that test.

The longitudinally determined acquisition orders were very limited. One subject, J.C., failed to reach criterion

Table 2

Longitudinal Acquisition Orders
(Subjects from this Study)

J.C.	A.C.	B.H.
--	Copula Singular (I - 61) Auxiliary Plural (I - 61)	Copula Singular (I - 55)
J.A.	L.P.	
Copula Singular (I - 77) Article (I - 77) Auxiliary Plural (I - 77) Future Progressive (I - 77)	Copula Singular (I - 64) Auxiliary Plural (I - 64)	
Copula Plural (III - 80) Possessive (III - 80)	Copula Plural (II - 69) Future Progressive (II - 69)	
Present Progressive (IV - 78) Auxiliary Singular (IV - 78)	Article (IV - 87)	
F.S.	J.P.	
Copula Singular (I - 63) Future Progressive (I - 63)	Copula Singular (I - 61)	
Copula Plural (II - 72)	Copula Plural (II - 60)	
Auxiliary Plural (III - 78) Possessive (IV - 73)	Future Progressive (IV - 69)	

on any of the functors, while two others, B.H. and A.C., who had already acquired one and two functors respectively by the time of Test I, did not acquire any others during the six month testing period. Only one subject, J.A., had acquired more than half of the functors by the end of the testing period. However, as the accuracy scores on the first test indicate, the subjects were at different levels of development at the outset of the testing period. Because of these differences, as well as individual subjects' different styles and rates of learning, variation in achievement is anticipated. In fact, a comparison of the accuracy scores on the final test (APPENDIX D. Table 26) and the number of functors acquired by each subject shows a direct correspondence.

Because the orders determined in this study were so limited, the results of two other longitudinal studies of acquisition order (Hakuta, 1974b; Rosansky, 1976) are introduced here for purposes of comparison and discussion. The seven orders from this study and those determined by Hakuta and Rosansky are presented in Table 3.

Hakuta's subject, Uguisu, was a five year old Japanese child learning English informally. Her acquisition order is based on spontaneous speech collected over a forty week period. Rosansky's subject, Jorge, was a Spanish speaking adolescent, also learning English informally, and is based on spontaneous speech collected from the third to the twelfth month of his exposure to English. The Hakuta

Table 3

Longitudinal Acquisition Orders
(Nine Learners Compared)

J.C. (Tagalog)	A.C. (Cantonese)	B.H. (Korean)
--	Copula Singular Auxiliary Plural	Copula Singular
J.A. (Tagalog)	L.P. (Tagalog)	J.P. (Tagalog)
Copula Singular Article Auxiliary Plural Future Progressive	Copula Singular Auxiliary Plural	Copula Singular
Copula Plural Possessive	Copula Plural	Copula Plural
Present Progressive Auxiliary Singular	Article	Future Progressive
F.S. (Tagalog)	Uguisu (Japanese)	Jorge (Spanish)
Copula Singular Future Progressive	Present Progressive Auxiliary (Complete) Copula (Complete)	Article Short Plural
Copula Plural	Possessive	Copula (Complete, contractable)
Auxiliary Plural	Past Irregular	Ing
Possessive	Plural	Auxiliary (Complete, contractable)
	Article	
	3rd Person	
	Past Regular	
	Gonna - Auxiliary	

study, like this one, accepts Brown's (1973) criterion of 90% accuracy in the use of a functor over three consecutive tests as a measure of acquisition; for the Rosansky study, a criterion of 80% was used.

It is evident from looking at the nine orders together that language acquisition is not sudden and dramatic but a slow and gradual process. It is interesting to note the difference in the number of functors acquired by Uguisu (10) over forty weeks and the number acquired by subjects from this study (0 - 8) over approximately thirty weeks or Rosansky's Jorge (5) over approximately forty-five. This is the converse of the findings of the Ervin-Tripp (1974) and Fathman (1975) studies cited previously which found that older L2 learners acquire syntax more rapidly than their younger counterparts.

A detailed comparison of these nine orders follows. An attempt is made to account for the observed orders in terms of the various external and internal factors cited in the literature as possible determinants of acquisition order.

Copula. The most striking similarity in the nine orders reported here is the early acquisition of Copula. For six of the seven subjects from this study, Copula Singular was either the first, or among the first, functors to be acquired. For one of these, Copula Plural was acquired second. For three others, Copula Plural also appears in second place but as these three subjects had acquired two or

more morphemes by Test I, Copula Plural was actually acquired in third place or later.

Jorge acquired complete Copula, contractable forms only, at about the same time as subjects from this study acquired Plural Copula. Uguisu, on the other hand, acquired complete Copula, contractable and uncontractable forms, in first place. However, Hakuta specifies that Uguisu acquired Copula early but without number, that is, she supplied copula in all obligatory contexts but used only singular forms. Her acquisition of complete Copula, therefore, may also have come somewhat later.

Two possible explanations for the early acquisition of Copula are frequency and transfer. The presence of an equivalent of Copula Singular but not Plural in the NLs of all of the subjects may have facilitated the acquisition of Copula Singular through positive transfer while interference may have increased resistance to the acquisition of Copula Plural. In addition, Copula occurs with great frequency in English speech. Brown (1973) found that, of his fourteen functors, Copula was the most frequent in the parental speech of his subjects. Similarly, Wagner-Gough and Hatch (1975) suggest that adults simplify language addressed to children and L2 learners, thereby increasing the frequency of certain forms in the learner's input. This explanation seems plausible in the case of Uguisu, a five year old child, and the subjects for this study who have been in various types of E.S.L. programs which usually begin with naming activities requiring

the frequent use of Copula. In fact, the early acquisition of Copula Singular by the subjects from this study appears to be the result of their frequent and accurate use of patterns such as "this is" and "it is" which were introduced early in the teaching program, while the overgeneralization of these same forms to contexts requiring Copula Plural is responsible for lower scores and later acquisition of that functor.

Auxiliary. Although Auxiliary is identical in form to Copula, the later acquisition of Auxiliary is anticipated. Brown (1973) found that auxiliary occurs less frequently than Copula in adult speech and hypothesized that, because of its involvement in the larger Present Progressive construction, it is lower in perceptual salience and more grammatically and semantically complex.

The Plural Auxiliary, however, was among the first group of functors to be acquired by three of the subjects from this study and in third place in another's order. Auxiliary Singular, on the other hand, was acquired by only one of the subjects in the equivalent of sixth place. Uguisu, however, acquired complete Auxiliary in first place but, like Copula, without number. Jorge also acquired complete Auxiliary, but contractable forms only, earlier than any of the subjects from this study.

Reference to the subject's utterances and the use of holophrases may explain the early acquisition of Auxiliary

Plural by the subjects from this study and the difference in acquisition point between Jorge and the subjects from this study. As explained in Chapter Three, an attempt was made to discourage the use of holophrases or prefabricated patterns including the contracted Copula and Auxiliary. It was noted in the subject's utterances that most errors in the use of Auxiliary were errors of omission following a singular noun subject, i.e., in those instances where they were not able to use a familiar pattern. In answer to questions requiring the Plural Auxiliary, however, subjects quite freely substituted the pronoun "they" for a plural or compound subject and correctly supplied the Plural Auxiliary "are" according to the pattern "They are ...". Plural Auxiliary thus appears to precede Singular Auxiliary in acquisition order. The restriction of Rosansky's category to contractable forms only, as well as her criterion of 80%, may account for Jorge's seemingly earlier acquisition of Auxiliary since he was able to rely on holophrase forms.

Progressive. The early acquisition of Progressive is anticipated (Brown, 1973) since the "ing" inflection is perceptually salient, of high frequency and semantically simple. Further, it encodes a semantic notion common to all the subjects NL's and signalling tense by means of a verb affix is a grammatical device common to all NL's represented here with the exception of Cantonese (A.C.). Present Progressive was acquired by only one of the subjects

from this study in the equivalent of sixth place. The Future Progressive, however, was among the first items acquired by two of the subjects, in second place in another subject's order and in third place in that of another.

Uguisu, on the other hand, acquired Present Progressive in first place and Future Progressive in last. However, Hakuta's Future Progressive category includes the auxiliary as well as the concatenative "gonna" which may have delayed acquisition point. Jorge also acquire Progressive -- Past, Present and Future forms -- earlier than the subjects from this study.

Future Progressive is usually considered a part of the larger Progressive class (Brown, 1973; Dulay and Burt, 1973; 1974b; 1974c) because, like Past and Present Progressive, it requires the use of Auxiliary and the transformation of a base form, in this case "go", by the addition of "ing". It is suggested here that this is not the case with Future Progressive. While Present and Past Progressive do require the transformation of each different verb that is used, Future Progressive is, in fact, a holophrase or prefabricated pattern -- "going to" or "gonna" -- which learners can memorize and use to express Future intent without having mastered the "ing" transformation. The early acquisition of Future Progressive by the subjects from this study is attributed to their use of "going to" as a holophrase or prefabricated pattern. Depending on the distribution of Present, Past and Future Progressive forms in Jorge's corpus,

his early acquisition of Progressive may be the result of a similar phenomenon.

Article. Article was among the first items acquired by one subject from this study and was acquired third by one other. Article was among the first items acquired by Rosansky's Jorge but was in fifth place in Uguisu's order.

Article occurs frequently in adult speech and, being a separate rather than a bound morpheme, should be easily perceived. However, articles are usually given weak stress and, particularly in the indefinite form "a", may be difficult to perceive in normal speech. Brown (1973) considers Article to be of low grammatical but high semantic complexity which, he suggests, may account for its late acquisition by L1 learners. Semantic complexity should not be important where the cognitively advanced L2 learner is concerned except in the case of L2 learners whose NL does not use article to mark the definite/nondefinite distinction. In fact, Hakuta attributes Uguisu's late acquisition of Article to interference from Japanese. The similarity of article function in Spanish, Tagalog and English may account for its earlier acquisition by the three subjects concerned.

Plural and Possessive. Because Plural and Possessive are morphologically similar, their points of acquisition are compared. With the exception of Jorge, Plural does not reach criterion early. None of the subjects from this study had acquired it by the end of the testing period while

Uguisu only acquired it in fourth place. Possessive, however, was acquired by two of the subjects from this study in approximately fourth place and occurred in second place in Uguisu's order. Jorge did not acquire Possessive.

Although Plural and Possessive are equally perceptible and encode semantic notions common to all the language groups represented, Plural occurs more frequently than the Possessive in adult speech and would appear to be grammatically simpler than Possessive since it requires only one transformation, the addition of the "s" affix, while Possessive is signalled by both word order and the "s" marker. Earlier acquisition of Plural is, therefore, anticipated.

Jorge alone of the four learners who acquired Plural and/or Possessive followed this sequence. His order (Plural before Possessive) could be explained by NL interference since Spanish forms plurals in the same manner as English but reverses English word order for Possessive. Similarly, Uguisu's Possessive before Plural order could be the result of transfer from her NL, Japanese, which follows the English word order for Possessives but does not mark Plural. However, the two Tagalog speakers, for whom both English Plural and Possessive are different from their NL forms, also acquire Possessive first.

Hatch (1974) suggests that the semantic importance of a form as well as its complexity will influence acquisition point. The Plural marker is often redundant in the presence of a modifier such as "these", "those", "two", "three", etc.

and may, therefore, be perceived as less important than Possessive which is more dependent on the overt markings than context for its expression.

Third Person Singular, Past Regular and Irregular. Of the nine L2 learners whose orders are reported here, Uguisu alone acquired these forms. All three functors express semantic notions common to the NL's of the learners and all are low in grammatical complexity. However, the Third Person Singular "s" and Past Regular "ed" inflections are difficult to perceive and often lack semantic importance. The Present Continuous tense is most often marked by no inflection, while Past time can often be determined from the context of a sentence. The Past Irregular although more salient, than the other two forms, is so unpredictable that the past form of each irregular verb must be memorized separately. In the case of one subject, A.C., whose NL marks verb tense by context only, interference may also be a factor in her late acquisition of these forms.

Although there do appear to be similarities in the longitudinal acquisition orders exhibited by the seven subjects from this study and two other orders examined in this section, the orders are too brief to permit a more detailed comparison of longitudinal orders. Therefore, a second method was used to compare subject performance.

Cross-sectional Orders

The purpose of determining and comparing acquisition

orders is to reveal similarities in the L2 acquisition process in different learners. Many studies, rather than determining longitudinal acquisition orders, simply compare cross-sectional orders, that is, the rank orders based on subject accuracy in the use of functors in the IL. Therefore, the cross-sectional orders for the subjects from this study were also compared. While these cross-sectional orders may or may not reflect the ultimate order in which the functors will be acquired, they do permit more objective comparisons of subject performance than the limited acquisition orders of the subjects from this study.

At the conclusion of each test, the subjects' functor scores (APPENDIX F) were compared by means of a Pearson Product Moment Correlation. At the same time, the individual subject scores were compared with the Group Score (G.S.) for each test to determine if the latter is a reliable representation of all subjects' performances on a given test. These comparisons are presented in Table 4.

The correlations thus determined are extremely high. It is especially interesting to note, in the light of previous language learning theory, that the highest correlations do not necessarily occur between subjects of the same language background. While the correlations between the performances of four of the Tagalog subjects (J.A., J.P., L.P., F.S.) did tend to be the highest, the performance of the Cantonese speaker (A.C.) correlated highly with these as well. The correlations between J.C. and B.H. and other

Table 4

Pearson Product Moment Correlations between Individual
Subject Scores and Group Scores on Tests I - VI

Test I

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
J.C.	0.51						
F.S.	0.65	0.76					
L.P.	0.88	0.66	0.57				
J.P.	0.88	0.65	0.54	0.96			
A.C.	0.66	0.21	0.49	0.61	0.55		
B.H.	0.72	0.76	0.53	0.86	0.86	0.54	
G.S.*	0.90	0.74	0.75	0.95	0.94	0.70	0.89

Test II

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
J.C.	0.74						
F.S.	0.91	0.83					
L.P.	0.93	0.73	0.88				
J.P.	0.88	0.79	0.82	0.89			
A.C.	0.82	0.68	0.83	0.82	0.66		
B.H.	0.73	0.82	0.74	0.69	0.68	0.78	
G.S.*	0.95	0.88	0.95	0.94	0.91	0.87	0.84

Test III

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
J.C.	0.69						
F.S.	0.87	0.81					
L.P.	0.84	0.81	0.97				
J.P.	0.84	0.85	0.98	0.96			
A.C.	0.92	0.78	0.91	0.94	0.90		
B.H.	0.75	0.91	0.79	0.82	0.84	0.82	
G.S.*	0.89	0.89	0.96	0.97	0.97	0.95	0.91

*Group Score

Table 4 (continued)

Test IV

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
J.C.	0.65						
F.S.	0.90	0.65					
L.P.	0.94	0.64	0.94				
J.P.	0.87	0.85	0.89	0.84			
A.C.	0.73	0.71	0.67	0.70	0.69		
B.H.	0.60	0.68	0.47	0.51	0.57	0.65	
G.S.*	0.92	0.86	0.89	0.89	0.93	0.85	0.75

Test V

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
J.C.	0.91						
F.S.	0.91	0.86					
L.P.	0.93	0.83	0.76				
J.P.	0.89	0.88	0.97	0.76			
A.C.	0.91	0.84	0.85	0.86	0.87		
B.H.	0.78	0.83	0.85	0.74	0.85	0.67	
G.S.*	0.97	0.94	0.95	0.90	0.96	0.92	0.88

Test VI

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
J.C.	0.73						
F.S.	0.99	0.75					
L.P.	0.95	0.79	0.95				
J.P.	0.90	0.84	0.94	0.90			
A.C.	0.91	0.72	0.91	0.89	0.85		
B.H.	0.90	0.85	0.83	0.90	0.94	0.88	
G.S.*	0.96	0.86	0.98	0.97	0.96	0.94	0.97

*Group Score

members of the group tended to be the lowest, while the correlations between J.C. and B.H. alone were usually quite high. B. H.'s performance may be more different because of the effect of her NL, Korean; J.C., however, is another speaker of Tagalog.

The situation is clarified by referring to Accuracy Scores (APPENDIX D. Table 26). Five of the subjects, (J.A., J.P., L.P., F.S., A.C.), appear to be at similar levels of linguistic development. J.C. and B.H. also appear to be at similar levels of development but at a level somewhat lower than the other members of the group. It is hypothesized that at lower levels of linguistic development performance is more random, i.e. errors are not only more frequent but more varied. At more advanced levels, performance becomes more similar because there is simply less room for improvement. In fact, subject performance did tend to become more similar as testing progressed as a comparison of the correlations on Tests I and VI indicates.

In spite of the differences mentioned above, performance of the subjects from this study is remarkably similar regardless of the NL or level of linguistic development of the learners. Whether the convergence in performance as testing progressed is the result of levelling off as higher levels of proficiency are reached, or the result of some common environmental factor, is the subject of further investigation in a later part of this chapter, THE EFFECT OF TEACHING.

Since the individual-group score correlations were also very high for all subjects on all tests, Group Score was accepted as a valid representation of the group performance on each test and further comparisons involving grouped data were undertaken. Rank orders based on the Group Scores for Test I to VI, which are presented in Table 5, were established and compared by means of the Spearman Rank Order Correlation to Dulay and Burt's (1974b) and Rosansky's (1976) morpheme orders. The Dulay and Burt order is based on a single administration of the BSM to 60 Spanish and 55 Chinese speaking children aged five to eight; Rosansky's order is based on single spontaneous speech samples from six Spanish speaking subjects, two children, two adolescents and two adults.

Certain adjustments were made in the functor categories of this study to make such a comparison possible. Copula and Auxiliary categories were limited to contractable forms but both Singular and Plural were included in the category. Short Plural was separated from the Plural category while the Progressive category was broadened to include past, present and future forms. Consequently, the correlation is based on nine morpheme categories rather than the original twelve used for this study. Table 5 presents the group scores for all 12 functor categories from this study as well as the five specially created ones.

It should also be noted that both Dulay and Burt (1974b) and Rosansky (1976) used scoring methods other than

Table 5
Group Scores, Tests I - VI

Test	I	II	III	IV	V	VI
Article	89%	78%	87%	95%	89%	87%
Copula Singular	100	98	98	98	100	100
Copula Plural	67	86	96	94	89	94
*Combined Copula	88	98	98	97	100	98
Present Progressive	88	80	91	86	76	92
Future Progressive	65	78	77	78	94	95
*Combined Progressive	78	84	90	84	84	96
Auxiliary Singular	81	80	85	62	83	88
Auxiliary Plural	77	79	94	85	86	95
*Combined Auxiliary	80	80	90	74	88	94
*Short Plural	54	52	55	74	56	65
*Long Plural	50	78	0	14	71	--
Combined Plural	53	60	54	65	60	65
Possessive	67	62	60	85	84	78
3rd Singular	6	10	26	21	18	38
Past Regular	4	2	7	16	9	1
Past Irregular	20	28	6	35	30	18

*Dulay and Burt (1974b) and Rosansky (1976) categories.

the Group Score Method (GS) used in this study. The Group Mean (GM) is arrived at by averaging the functor scores of subjects who had more than three obligatory occasions for each functor. Since this study made a deliberate attempt to create at least five obligatory occasions for each functor, there are few instances where a subject has less than three occasions for a functor. As a result, the rank orders based on Group Means were, in most cases, identical to the Group Score orders. It is also felt that the mathematical manipulation involved in GM scoring, averaging the percentage functor scores rather than computing a percentage based on the subjects' actual scores, is a less accurate measure of subject performance than Group Score. The Group Mean was, therefore, not used for this study.

Dulay and Burt's third method of scoring, the Syntax Acquisition Index (S.A.I.), involves computing an accuracy score for each subject and then noting the accuracy levels at which each functor is acquired. Functors are then ranked according to the lowest level at which they may be acquired.

The L2 orders for the nine common morphemes from Tests I to VI and the Dulay and Burt (1974b) and Rosansky (1976) orders are summarized in Table 6. The Spearman Rank Order correlations between these orders are presented in Table 7.

The resultant correlations are not as high as those shown in Table 4. All, nevertheless, reach significance at the .05 level and five are significant at the .01 level.

Table 6
L2 Rank Orders

Test	I	II	III	IV	V	VI	D&B ^a GS	D&B ^b GM	D&B ^c SAI	ROS ^d GS	ROS ^e GM
Combined Copula (Contractable)	1	1	1	1	1	1	2	2.5	2.5	5	4
Article	2	4	4	2	2	4	1	1	2.5	4	3
Combined Auxiliary (Contractable)	3	3	2.5	5.5	3	3	5	5	4	2	5
Combined Progressive	4	2	2.5	4	4.5	2	3	2.5	1	1	1.5
Possessive	5	5	5	3	4.5	5	8	7.5	6.5	6	6
Short Plural	6	6	6	5.5	6	6	4	4	5	3	1.5
Past Irregular	7	7	9	7	7	8	7	7.5	6.5	7	7
3rd Singular	8	8	7	8	8	7	9	9	8.5	9	9
Past Regular	9	9	8	9	9	9	6	6	8.5	8	8

^aDulay and Burt (1974b), Group Score

^dRosansky (1976), Group Score

^bDulay and Burt (1974b), Group Mean

^eRosansky (1976), Group Mean

^cDulay and Burt (1974b), Syntax Acquisition Index

Table 7

Spearman Rank Order Correlations
between L2 Functor Orders

Test	I	II	III	IV	V	VI
Dulay and Burt (Group Score)	0.75	0.68	0.65	0.66	0.71	0.65
Dulay and Burt (Group Mean)	0.75	0.70	0.68	0.68	0.71	0.67
Dulay and Burt (SAI)	0.86*	0.91*	0.82*	0.77	0.82*	0.88*
Rosansky (Group Score)	0.65	0.75	0.70	0.51	0.61	0.72
Rosansky (Group Mean)	0.64	0.69	0.61	0.63	0.60	0.65

* $p < .01$ All others significant at the .05 level.

Rank orders from this study were also compared to Brown's (1973) and de Villiers' (1973) L1 orders but correlation coefficients failed to reach significance. The results of these correlations, based on nine common functors, are presented in Table 8.

Table 8

Spearman Rank Order Correlations between
L1 Functor Orders and Group Scores from Tests I - VI

Test	I	II	III	IV	V	VI
Brown	-0.22	-0.08	-0.27	-0.01	-0.24	-0.15
de Villiers (Method I)	0.08	0.16	-0.05	0.27	0.05	0.08
(Method II)	-0.20	-0.10	-0.36	-0.07	-0.24	-0.18

Conclusion

A comparison of longitudinal acquisition orders indicates that there are many similarities between the acquisition orders of the seven subjects from this study and two other longitudinal orders determined in studies by Hakuta (1974b) and Rosansky (1976). Differences between these orders could be explained by NL interference and by a clarification of the functor categories used. Although no single invariant order emerges, certain generalizations about acquisition order can be made. There appear to be certain functors which are acquired early: Copula, Auxiliary, Progressive, Article. Others appear to be acquired around mid-point: Possessive and Plural. Still others are candidates for late acquisition: Past Regular and Irregular, Third Person Singular "s".

The similarity in subject performance which was inferred from the comparison of longitudinal acquisition orders was supported by a comparison of cross-sectional accuracy orders. Correlations between the cross-sectional orders of the individual subjects from this study were extremely high on each of the tests. Group Orders on Test I to VI also correlated significantly with the rank orders of two unrelated groups of L2 learners established in studies by Dulay and Burt (1974b) and Rosansky (1976) in spite of differences in environment, NL, level of linguistic development, age of the learners and sampling procedures used.

In answer to the question posed at the beginning of this section :

Do children of different language backgrounds learning English as a second language acquire the twelve functors in a similar order?

it cannot be said that subjects acquire the functors in a similar order since so few of the functors were actually acquired. However, it can be stated that there is a great deal of similarity in the difficulty or accuracy orders of the subjects as indicated by a comparison of cross-sectional rank orders. This commonality in the L2 learning process provides further evidence for the existence of an innate cognitive mechanism which guides the L2 acquisition process.

Whether the similarity in cross-sectional orders prefigures similarity in the order in which the functors will ultimately be acquired is a matter of speculation. However, similarities in cross-sectional order indicate that L2 learners are experiencing similar difficulties in their acquisition of English as a second language. An examination of the Group Scores in Table 5 shows that certain functors such as Copula, Auxiliary, Progressive and Article received relatively high scores (80% or better) throughout the testing period. Others, such as Plural and Possessive scored in the mid-range (50% - 80%); while others, Third Singular, Past Regular and Irregular, scored 50% or less throughout the testing period. It does not seem unreasonable to anticipate that acquisition order will follow this pattern; that is, that the high scoring items will be the first to be acquired,

followed by the middle range items and finally the low scoring functors. In fact, the functors which were acquired earliest by the subjects from this study were among those in the top range.

This information is consistent with Dulay and Burt's Functor Tree (Figure 1) which was introduced (Dulay and Burt, 1974c) as a refinement of L2 rank orders. This tree, which is based on the order of acquisition of pairs of functors¹, specifies groups of functors which are acquired at about the same time, one group as a pre-requisite to the next. With the exception of Plural, the performance of the seven subjects from this study falls within this framework.

The relationship between longitudinal and cross-sectional orders requires further study and is explored further in a discussion of research problems in the CONCLUSION of this study. However, some methodological problems encountered in this study in the determination of longitudinal acquisition orders with respect to the determination of acquisition point and the definition of functor categories suggest that cross-sectional orders may be more useful than longitudinal acquisition orders in comparing L2 learner performance.

This study accepted Brown's (1973) criterion for

¹ Criterion for acquisition in drawing up the tree was a score of 90% or better on a single test by a subject who had at least 3 occasions for the use of a functor.

determining acquisition, that is, a functor is considered acquired on the first of three consecutive tests on which it is used with 90% accuracy or better. The individual scores presented in APPENDIX F show, however, that in several cases subject performance satisfied this criterion and then dropped off to unacceptable levels. For example, A.C. used Copula Plural with 100% accuracy for three consecutive tests and then dropped off to 86%. A similar pattern was observed in L.P.'s use of Auxiliary Singular; J.C.'s use of Copula Singular and Copula Plural; J.P.'s use of Present Progressive and Auxiliary Plural; and F.S.' use of Article. Variability in the performance of subjects from this study appears to persist beyond the point at which functors appear to have been acquired.

Another methodological problem, which affects the determination of both longitudinal and cross-sectional orders, concerns the definition of functor categories. To say that a learner has acquired a certain grammatical form implies that he has mastered its function as well as its form. However, as observed in the discussion of longitudinal acquisition order, the subjects from this study showed a distinct preference for holophrases, such as contractable Copula and Auxiliary. While they were able to use the holophrase forms appropriately, they were unable to use Copula and Auxiliary as accurately outside of these patterns. Although the subjects appear to have acquired the functors in question, it is doubtful whether the acquisition of a

holophrase represents the acquisition of a functor in all its possible applications.

The difficulty in determining acquisition point and of devising a category or means of testing which would encompass all the applications of a grammatical form suggest that the determination of true acquisition orders is perhaps an unreasonable undertaking. Since the ultimate goal in comparing acquisition orders is to find evidence for similarities in the L2 learning process in different learners, a more appropriate research method may be the comparison of cross-sectional difficulty orders based on clearly defined and limited grammatical categories.

In the discussion of longitudinal acquisition order, some of the possible determinants of acquisition order were examined. The observed orders appear to be influenced by external factors related to the nature of the L2 such as grammatical complexity, semantic importance, frequency and perpetual salience of a functor. Internal factors in the form of NL transfer and interference were also found to account for some individual variations in the acquisition of Plural, Article and Possessive. The use of holophrases or prefabricated patterns, particularly in the case of Copula, Auxiliary and Future Progressive, appears to have had a considerable influence on the acquisition of these functors by the subjects from this study.

However, examination of orders alone, whether longitudinal or cross-sectional, limits the discussion to

factors common to all of the learners, that is, external factors related to the L2 or interference and assumes that the learner's performance is determined mainly by these forces. However, the L2=L1 theory suggests that L2 learning is a creative process and that the learner is active in forming and testing hypotheses about the TL. If this is the case, his utterances, correct or deviant, should provide evidence for this creative activity. The IL production of the subjects from this study was, therefore, further examined for evidence of these internal processes, or strategies.

ERROR ANALYSIS AND STRATEGIES

Internal factors, or language strategies are best determined by looking directly at the learners' production through error analysis. Therefore, the second question raised in this study concerns learner strategies:

What kinds of strategies are used by children learning English as a second language in their production of the twelve functors?

To answer this question, an error analysis was conducted. The various types of errors within each functor group were tabulated and considered in terms of the various learning and communication strategies outlined in the REVIEW OF THE LITERATURE. The results of this error analysis are reported below by functor. Although the discussion primarily concerns grouped data, frequent reference is made to individual performance.

Because NL interference was, until recently, considered to be the major determinant of L2 performance, special consideration has been given to this strategy. Average scores for each of the functors for each of the subjects were computed and are presented in APPENDIX D, Table 27. If a subject's performance is being significantly affected by NL interference, it is assumed that his scores will reflect this influence throughout the testing period. Average scores can reveal this information more clearly than the complete data for each subject.

Article

Two types of error in the use of Article were found: omission and a/the confusion. A third class of errors, overgeneralizations, which were not included in the Individual and Group scores for Article because they actually occurred within other functor groups such as Possessive and Plural, were recorded separately and are included in the table of article errors.

Table 9
Errors in the Use of Article

Test	I	II	III	IV	V	VI
Group Score	87%	78%	87%	95%	89%	87%
Occurrences	125	106	220	123	137	271
Omissions	14	19	17	6	14	26
a/the Confusions	9	9	28	0	3	19
Overgeneralizations	20	15	27	8	7	13

Errors of omission generally occurred more frequently

than a/the confusions and remained fairly constant throughout the testing period as did Group Score for Article. Overgeneralizations tended to decrease as the testing progressed.

On the basis of a contrastive analysis of English and the NLs of the subjects, B.H. would be expected to make the most errors since her NL uses no articles at all. Cantonese uses article to express the definite/indefinite distinction as does English but these articles are not obligatory. Tagalog uses the definite article only; indefinite function is marked by the omission of the article.

Average scores for Article (APPENDIX D. Table 27) show that B.H. scored the lowest on Article as anticipated. However, the average score of one of the Tagalogs (J.C.) was only one point better than B.H.'s and her errors of omission were equally frequent. Reference to the Accuracy scores (APPENDIX D. Table 26) shows that these two subjects were also the least advanced linguistically. Errors of omission appear to be linked more closely to overall competence than NL background since the distribution of errors and average scores are about the same for the other subjects. The most primitive strategy in the use of article seems to be complete simplification or omission; once the subjects begin providing article, there are few errors of a/the confusion.

A third class of error within the Article group are overgeneralizations, or the provision of an article in contexts where it is not required. Overgeneralizations were most frequently made to plural nouns, especially after the pattern

"This is", e.g. "This is a boys"; although overgeneralizations were also made after the plural copula, e.g. "These are a boys." One subject, B.H., persistently overgeneralized the definite article to proper names, e.g. "The Joe is playing." While her NL does not use articles, it does make use of an elaborate system of honorifics, particles and inflections attached to proper nouns and verbs to show respect for the person spoken to or about. It could be that she is seeking an honorific form in English and her misuse of the definite article is an example of interference. Two of the Tagalog speakers, whose NL occasionally uses the definite article with proper nouns, also make this error but much less frequently.

Although errors of overgeneralization were not recorded in the Article score, there does appear to be a relationship between the number of overgeneralization errors made by an individual subject and his accuracy in article usage. For example, J.A., who acquired Article at or before Test I, made only three overgeneralization errors on Tests I and II and none at all afterwards. Similarly, L.P., who acquired Article on Test IV, made eight overgeneralization errors on Tests I to III but only three on Tests IV to VI. With the exception of A.C., other individual scores reflect this diminishing trend. A.C. made only three overgeneralization errors in the whole testing period although her Article scores were no higher than those of subjects who made frequent errors of this nature. However, A.C. is an exceptionally shy child

who seldom speaks voluntarily and, when addressed directly, answers carefully and with a minimum of words. Her infrequent overgeneralizations and the general economy of her speech seem to be a reflection of her personal learning style.

Slobin (1973) observed that the use of linguistic markings in L1 learning typically follows a four stage pattern: no marking, appropriate marking in limited cases, overgeneralization of marking and finally correct marking. Subjects in this study appear to be following a similar pattern in their use of article. The least advanced are most likely to omit article; as competence increases, article is supplied in some obligatory contexts with occasional errors; before finally being acquired, article is overgeneralized to many inappropriate contexts. Both Group and Individual data reflect this pattern.

Copula Singular

Without exception, subjects used Copula Singular with a high degree of accuracy from the earliest test. Table 10 summarizes the types and frequency of errors that were made.

Table 10
Errors in the Use of Copula Singular

Test	I	II	III	IV	V	VI
Group Score	100%	98%	98%	98%	100%	100%
Occasions	45	90	74	43	73	66
Omissions	0	2	1	1	0	0
Person	0	0	0	0	0	0
Number	0	0	0	0	0	0
Segmentation	0	0	0	1	0	0

Errors of omission occurred only four times in 391 trials and there were no errors of person or number. Two of the errors of omission were committed by the same subject and occurred after a noun subject. The other two were omissions after the pronouns "this" and "it" and were committed by two different subjects. One segmentation error, "that's is", in which the subject supplied Copula after a contracted form, occurred.

These errors reinforce the observation made in the discussion of acquisition order that Copula Singular has been learned as a holophrase or prefabricated pattern. Further evidence for holophrase learning is found in the preference of five of the seven subjects for contracted forms of Copula after pronoun subjects in spite of Brown's (1973) hypothesis that uncontracted forms are phonologically and linguistically simpler. Uncontracted "is" was found only as part of the deictic pattern "This is" and after noun subjects, while the contracted "'s" occurred regularly after pronouns but only rarely after noun subjects.

Copula Plural

Error types and frequencies for Copula Plural are presented in Table 11. There were only four errors of omission for Copula Plural out of 254 trials but 47 errors of number occurred. Almost half of these occurred on the first test and prompted an effort to teach Copula Plural between Test I and II. Errors of number promptly decreased from 70% of all utterances requiring Copula Plural on Test I, to 24% on Test II,

to only 8% on Test VI.

Table 11
Errors in the Use of Copula Plural

Test	I	II	III	IV	V	VI
Group Score	67%	86%	96%	94%	89%	94%
Occasions	27	42	53	57	37	48
Omissions	0	1	0	0	2	1
Number	19	10	4	6	4	4
Segmentation	0	0	3	8	3	6

Most errors in the use of Copula Plural were traceable to the overgeneralization of prefabricated patterns such as "this is" and "it is" to contexts requiring Copula Plural. While these errors may be the result of interference since all of the subjects NLs use an equivalent of Copula Singular but not Plural, they may also be the result of transfer of training since these patterns were introduced early and practiced throughout the training program.

Further evidence for holophrase learning and transfer of training comes from segmentation errors such as "they're is" and "they're are" in answer to identification questions such as "What are these"? intended to elicit Copula Plural. Transfer of training is a probable interpretation for such errors since they did not appear until Test III, at which time quantitative statements with "there is" and "there are" were being introduced and practiced. One particularly interesting error of this nature was B.H.'s use of the construction "this is are" in Plural Copula contest. To her,

"this is" seems to be one unit used as a demonstrative, while "are" performs the Plural Copula function.

Auxiliary Singular

Auxiliary Singular, although identical in form to Copula, was generally lower in score than Copula Singular. The exceptionally low score on Test IV was largely the result of one subject's (B.H.) poor performance on that test rather than a reflection of a general trend.

As Table 12 indicates, the errors of omission were most frequent (60 out of 305 trials). There were no errors of person or segmentation errors but one error of number occurred when a subject supplied the Plural Auxiliary "are" after a noun subject.

Table 12

Errors in the Use of Auxiliary Singular

Test	I	II	III	IV	V	VI
Group Score	81%	80%	85%	62%	83%	88%
Occurrences	68	51	46	45	52	43
Omissions	13	10	7	16	9	5
Person	0	0	0	0	0	0
Number	0	0	0	1	0	0
Segmentation	0	0	0	0	0	0

There is evidence that Auxiliary Singular, like Copula Singular, is used as a prefabricated pattern by the subjects from this study. As in the case of Copula Singular, most of the subjects preferred the contracted form of Auxiliary Singular (Pronoun + 's) and used the full form "is" most

often after noun subjects. Contracted "'s" occurred after a noun subject on only one occasion.

Auxiliary Singular, however, was omitted more frequently than Copula Singular and omissions occurred after pronoun as well as noun subjects. The greater length of the present and future progressive constructions probably exceed the learner's processing span and necessitate the deletion of the less salient and meaningful components of these constructions. The omission of Auxiliary Singular after pronoun subjects suggests that in many cases subjects are not using holophrases since they are able to separate a contracted form into its component parts and omit the auxiliary. This does not alter the hypothesis that the contracted forms of Copula and Auxiliary first enter the L2 learner's repertoire as prefabricated patterns but does suggest that subjects from this study are at a stage of development where they are beginning to understand the function of the separate components of the holophrase form.

Auxiliary Plural

As Table 13 shows, performance on Auxiliary Plural was quite different from performance on Copula Plural to which it is identical in form. Although group scores for Auxiliary Plural and Copula Plural are comparable throughout the testing period, the frequencies of error types within each group varied reflecting the different functions of these two identical constructions and supporting the hypothesis that form and function are acquired separately.

Table 13

Errors in the Use of Auxiliary Plural

Test	I	II	III	IV	V	VI
Group Score	77%	79%	94%	85%	86%	95%
Occasions	15	47	55	50	35	45
Omissions	3	5	2	5	4	2
Number	1	10	3	5	2	0
Segmentation	0	0	0	0	0	1

Unlike Copula Plural, errors of omission and number were evenly balanced for Auxiliary Plural while there was only one segmentation error of the "they're are" type. As in the case of Auxiliary Singular, it is hypothesized that the greater length of the progressive constructions leads to the deletion of the auxiliary which appears to be less important in the larger construction.

Most errors of omission and number followed noun subjects which, as previously explained, were encouraged by the questioning technique. However, most subjects showed a definite preference for the pronoun "they" and used the pattern "they are" or "they're" with great frequency and accuracy. This is ascribed to a strategy of simplification since the use of "they" saves the subject from repeating a lengthy plural or compound subject. Subjects are also secure in substituting a pronoun for a plural subject since only one third person plural pronoun "they" exists in English. In the singular, however, pronoun substitution is more complicated since it involves the choice of one of three third person singular pronouns "he", "she" or "it"; the subjects, there-

fore, usually maintain the singular noun subject and subsequently omit the auxiliary. The superior performance in the use of Auxiliary Plural, and its earlier acquisition seem to be the result of this simplification strategy and the regularity of the Auxiliary Plural form.

Plural

Plural errors were of two types: omissions and overgeneralizations. As in the case of Article, errors of the latter type were not included in Group and Individual Scores but were recorded separately and are reported in the table of Plural errors.

Table 14

Errors in the Use of Plural

Test	I	II	III	IV	V	VI
Group Score	53%	60%	54%	65%	60%	65%
Occasions (Short)	56	54	77	80	63	66
Omissions (Short)	26	26	34	21	28	23
Occasions (Long)	8	27	1	14	24	-
Omissions (Long)	4	6	0	12	6	-
Overgeneralizations	0	0	4	2	2	2

Errors of omission decreased somewhat in proportion as the testing period progressed while overgeneralizations increased briefly then declined. These tended to be isolated instances, possibly a form of hypercorrection or the addition of "frills".

Frequent omission of Plural by the subjects from this study may be the result of interference, since none of the

subjects' NLS signal plural by means of a noun inflection, or the result of a simplification strategy which dictates the omission of perceived non-essentials. In this instance, the former hypothesis is preferred since the individual subjects from this study were slower to acquire Plural than the Spanish speaking L2 learner (Jorge) whose order was introduced into the discussion of longitudinal acquisition order. The group also performed poorly in the use of Plural in comparison to two other groups of L2 learners, both of which included speakers of Spanish which forms Plural in the same manner as English.²

Average scores for Plural indicate that performance was generally low. A.C. and J.A., the two Grade Fours, who had frequent practice in the written form of Plural including the different Plural endings, e.g. "s", "es" and "ies", scored the highest overall. All subjects supplied Plural most often in response to identification questions when the objects being named were the focus of the utterance; when an occasion for plural arose incidentally as a part of a larger construction it was more likely to be omitted.

Short and Long Plural were separated for this analysis since many studies in both L1 and L2 learning indicate that Long Plural is more difficult phonologically and, hence, acquired later than Short Plural. Although in many instances this tendency appears to be reversed in this study,

² See discussion of Acquisition Order, pp. 48-76.

there were so few occasions for Long Plural and so many of these involved vocabulary items which are generally found in the Plural and had been learned as holophrases, e.g. "dishes", that the Long Plural scores are not considered to be an accurate measure of the subjects' mastery of this form.

Possessive

Possessive has two components: word order and the "'s" inflection attached to the noun-possessor. As Table 15 indicates, errors fell into three classes: errors of both order and omission, errors of omission only and avoidance.

Table 15
Errors in the Use of Possessive

Test	I	II	III	IV	V	VI
Group Score	67%	62%	60%	85%	84%	78%
Occasions	45	60	45	63	58	53
Order and Omission	6	8	4	2	1	6
Omission	18	30	28	15	17	11
Avoidance	0	2	1	0	1	6

Out of 319 trials there were only 27 errors of word order and omission, 21 of these committed by one subject (J.C.); the remaining six errors were evenly distributed among three others while three subjects (A.C., F.S., J.P.) made no errors of this kind at all. Errors of omission only, which were more common, were committed with almost equal frequency by all members of the group. A further class of error, which was added later to account for certain utterances, was avoidance.

Three of the Tagalogs (J.A., L.P., J.P.) avoided Possessive by using forms such as "He's the friend of Joe", which in themselves are grammatically correct but not common in English usage. Reference to their NL reveals that this is a direct translation of the Tagalog possessive.

With the exception of J.C., interference does not seem to be a major factor in shaping performance. Cantonese signals possessive by word order only while Korean follows a pattern similar to English: possessor+particle object. A.C., as predicted, makes no errors of word order, yet, B.H., whose NL possessive is most like English, does. At the same time, two of the Tagalogs made no errors of word order at all even though their NL uses the reverse word order of English.

While A.C. and B.H. may simply be translating NL forms, Possessive word order does not seem to be a problem for four of the five Tagalogs. As Brown (1973) and Slobin (1973) suggest, word order is one of the most salient features of language and the first to be acquired by L1 learners. This also seems to be the case with this group of L2 learners. L1 learners proceed by forming and testing hypotheses about language. In the case of Possessive, these hypotheses are likely to include both correct and incorrect word orders. Similarly, B.H.'s errors of word order indicate that she is testing hypotheses about English Possessive rather than simply translating her NL form. The large number of errors of word order in J.C.'s corpus suggests that this particular subject is either influenced more by interference or relies

more heavily than the others on translation of NL forms to communicate in English. Otherwise, performance in Possessive as shown by average score appears to be more closely linked to overall proficiency rather than the product of NL interference.

Verb Related Morphemes

The verb related morphemes -- Present and Future Progressive, Third Person Singular, Past Regular and Irregular -- have been grouped for the purpose of error analysis. The correct and incorrect verb forms actually offered by the subjects in each context, rather than the error types within each functor class, are reported in order to reveal the strategies with which the learners approach the English verb system.

Present Progressive. Although the "ing" inflection and auxiliary were scored separately, the Present Progressive construction is studied as whole for the purpose of error analysis. Performance in the use of Present Progressive is summarized in Table 16.

Table 16

Performance in the Use of Present Progressive

Test	I	II	III	IV	V	VI
Group Score	88%	80%	91%	86%	76%	92%
Occasions	44	52	56	51	50	48
Auxiliary + ing	33	37	48	39	35	42
- ing	5	4	3	5	3	2
Auxiliary + uninflected	4	7	2	4	6	3
Uninflected	1	1	2	3	4	1
Past Irregular	-	3	1	-	2	-
- s	1	-	-	-	-	-

The Present Progressive was used with a high degree of accuracy by all subjects from the start of the testing period. The most frequent errors were omissions of either the Auxiliary or the "ing" inflection. As observed in the error analysis of Auxiliary, it seems that the compound nature of the Present Progressive increases the complexity of the construction as a whole and, in the interest of simplicity, one component or another is omitted. Occasionally both the Auxiliary and the inflection were omitted and an uninflected form used. This tended to become more frequent between Tests III and V when the seemingly uninflected Past Regular and Irregular were introduced.

Once again, prefabricated patterns were observed to be a source of error. This was evident in the overgeneralization of familiar Past Irregular forms such as "said" or "went" to contexts requiring Present Progressive. The pressure of familiar forms was also evident in the performance of B.H. who frequently used the pattern "Auxiliary + clean up" even though with other verbs she supplied Present Progressive with great accuracy.

Future Progressive. As in the case of Present Progressive, the entire Future Progressive construction is examined here for the purpose of error analysis. Subject performance in the use of Future Progressive is summarized in Table 17.

Table 17

Performance in the Use of Future Progressive.

Test	I	II	III	IV	V	VI
Group Score	65%	78%	77%	78%	94%	95%
Occasions	42	46	47	43	44	43
Auxiliary + going to	17	28	33	29	32	37
Auxiliary + go to	1	2	-	-	-	-
going to	8	7	3	4	8	4
go to	3	1	-	2	2	-
Auxiliary + ing	3	3	5	1	-	2
ing	1	-	1	2	-	-
Auxiliary + uninflected	6	3	4	-	2	-
Uninflected	1	1	1	2	-	-
Past Irregular	2	1	-	3	-	-

About half of the errors involved some misinformation of Future Progressive. Most often "going to" was used without the Auxiliary although occasionally a misformed version of "going to" was offered with or without Auxiliary. Other errors included the use of a correct or misformed version of Present Progressive, Past Irregular or a totally uninflected verb instead of Future Progressive.

Future Progressive improved more rapidly than the other verb related morphemes and, of these, received the highest score on Test VI. The nature of the Future Progressive as a prefabricated pattern, "going to", and the preference of the subjects from this study for such regular forms may account for its rapid and dramatic improvement in subject performance. Transfer of training also appears to have influenced the subjects' use of Future Progressive. Only one subject, the Grade Three, who had already acquired Future

Progressive on his own by Test I, used the colloquial "gonna" form; all other subjects used the more formal "going to" form which had been presented in the language class.

Further, occasions for Future Progressive are easily recognizable since questions designed to elicit Future Progressive automatically provide the "going to" form in the question, e.g. "What is Joe going to do next?". Subjects are then able to incorporate a whole chunk of the question into their response. This is quite clear in two subjects' production of utterances such as "Joe is going to do clean up the car."

Third Person Singular. As Table 18 indicates, Third Person Singular improved considerably over the testing period but never managed to attain the level of proficiency of the two progressive tenses.

Table 18

Performance in the Use of Third Person Singular

Test	I	II	III	IV	V	VI
Group Score	5%	10%	26%	21%	18%	38%
Occasions	53	48	57	48	39	60
-s	3	5	15	10	7	22
Uninflected	33	27	35	31	23	33
Auxiliary + ing	8	1	1	2	1	1
-ing	2	2	1	2	-	-
Auxiliary + uninflected	5	12	5	2	8	2
Miscellaneous	2	1	-	1	-	2

The most common errors were omissions. It is assumed that, in the case of these subjects, the use of uninflected

forms in contexts requiring Third Person "-s" represents the beginning of differentiation of the two English present tense forms rather than a lack of linguistic maturity since, even on Test I, they were using inflected forms (Present and Future Progressive) with a fair amount of accuracy.

On the first test, the most common error other than omission was the overgeneralization of some form of Present Progressive. This tendency diminished as testing progressed. A more common error throughout the testing period was the use of Auxiliary, usually a contracted form, and an uninflected verb. This may represent the overgeneralization of Auxiliary to other verb forms, or, given the nature of Auxiliary as a holophrase, it could be a segmentation error, i.e., the subjects may be interpreting "he's" or "she's" as a subject pronoun rather than pronoun + auxiliary. However, as auxiliary was sometimes omitted after pronoun subjects in Present and Future Progressive contexts and there was only one segmentation error in Auxiliary Singular and Plural, it seems more likely that Auxiliary is being overgeneralized to all verb forms.

Miscellaneous errors include one of a kind errors such as the use of Past Regular, Past Irregular and Future Progressive in contexts requiring Third Singular. In addition, there were three instances of incorporation strategies. Following a question such as "What does your father do on Saturday?", certain subjects offered responses such as "My father do work(s)." This seems to be a strategy used

most often by less linguistically advanced subjects (J.C. and B.H.) rather than a general trend.

The influence of holophrases and prefabricated patterns was also observed in the use of Third Singular. The "s" affix was first and most frequently used with verbs such as "looks", e.g. "He looks mad.", "feels", "wants", "likes" which do not usually occur in Present Progressive form and which had been introduced in classroom drills or the reading series. Overgeneralization of Third Person Singular to other verb contexts always occurred with these few familiar verbs.

Past Regular. Subject performance in the use of Past Regular is summarized in Table 19.

Table 19
Performance in the Use of Past Regular

Test	I	II	III	IV	V	VI
Group Score	9%	2%	7%	16%	9%	1%
Occurrences	42	54	37	45	51	38
-ed	-	1	2	5	3	-
Uninflected	20	24	28	27	35	31
Auxiliary + ing	9	11	-	4	3	2
-ing	4	4	2	4	1	1
Auxiliary + uninflected	6	13	4	1	6	1
-s	3	-	1	4	3	1
Miscellaneous	-	1	-	-	-	2

Past Regular was consistently the lowest scoring of all the functors tested, reaching a peak score of 16% at the time it was being most actively practiced. The most frequent

errors throughout the testing period were errors of omission. These increased as the gradual differentiation of verb tense took place, until, by Test VI, the use of uninflected forms accounted for most of the subjects' responses.

On Test I, omissions accounted for approximately half of the errors committed; the other half were versions of Present Progressive, and three uses of the "s" ending. The use of the "s" ending recurred throughout the testing period, becoming most frequent on Tests IV and V when this form was being actively practiced. It was most often used, as previously indicated, with verbs which had been picked up as holophrases such as "looks", "likes" and "wants". Use of Auxiliary and uninflected verb, presumed to be an over-generalization of Auxiliary or a segmentation error, was also observed as were four incorporation strategies such as "What did Mother do?" "Mother do go to the store".

Past Irregular. Performance in Past Irregular, the last of the verb-related morphemes is summarized in Table 20.

All subjects performed considerably better on Past Irregular than on the Past Regular. Once again, half of the errors involved the use of an uninflected verb. Other errors include the overgeneralization of some form of Present Progressive or Third Singular, particularly on Tests IV to VI when it was being practiced actively. Miscellaneous errors include the use of Future Progressive and two incorporation errors of the type previously mentioned. Once again, an

increase in the number of uninflected forms used was noted as the subjects gradually differentiated between the various verb forms.

Table 20
Performance in the Use of Past Irregular

Test	I	II	III	IV	V	VI
Group Score	20%	28%	6%	35%	30%	18%
Occasions	41	58	56	55	55	50
Past Irregular	8	13	3	14	14	6
Auxiliary + Past Irregular	-	3	-	-	-	1
Uninflected	19	19	34	31	15	33
Auxiliary+Uninflected	6	7	7	2	7	1
Auxiliary+ing	3	8	6	2	9	3
-ing	2	6	4	-	3	-
-s	-	1	1	5	5	4
Miscellaneous	3	1	1	1	2	2

The drop in score on Tests II and VI is related to the vocabulary items required by the test form and the nature of Past Irregular as a pattern which must be memorized. Past Irregular is, in fact, a holophrase and items such as "said", "saw" and "went" which occur frequently in normal speech and beginning reading series are quickly acquired by the subjects. These familiar forms were frequently overgeneralized to contexts requiring other verb forms, including Present and Future Progressive in which the subjects were most proficient. However, the number of different Past Irregular forms in English, none of which can be generalized from a regular pattern, severely limits the number of Past Irregular forms that the L2 learner is likely to know. On Tests I and II

(and IV and V), there were occasions for Past Irregular forms such as "said", "saw" and "went" which were familiar to the subjects. Test III, which was repeated for Test VI, required some less common Past Irregular forms and hence, scores were lower on these two tests.

Discussion. A definite pattern was observed in the use of verb related morphemes. At the beginning of the testing period, subjects were most familiar with Present Progressive and overgeneralized this form to contexts requiring the other verb related morphemes (Future Progressive, Third Singular, Past Regular and Irregular). As familiarity with these forms increased, the overgeneralization of Present Progressive diminished and the use of unmarked verbs became more common. It appears that subjects progressively differentiate between the overtly marked and more familiar Present and Future Progressive and the other less obviously marked forms. As the increasing use of uninflected forms and the overgeneralization of Third Person "s" across the Third Person, Past Regular and Irregular categories indicate, the distinction between these minimally marked forms is less clear. In this case, the use of uninflected forms, which is usually interpreted as the most primitive level of verb usage, represents an increased level of sophistication and the beginning of the differentiation of verb tense.

The verb related morphemes, particularly the ones introduced later, also provide insight into some interesting

language learning strategies. Evidence for holophrase learning can be found in the ease with which Future Progressive was acquired, the use of Third Person "s" with familiar verbs in inappropriate contexts and the frequent overgeneralization of Past Irregular. One strategy most clearly shown by the verb related morphemes was the incorporation of a part of the question into the subject's response, as described by Richards (1973a) and Wagner-Gough and Hatch (1975).

Incorporations occurred rarely on early tests but by Tests V and VI were being used quite freely by three of the subjects. Incorporation, however, is probably a communication rather than a learning strategy since it is used under the pressure of a situation requiring an immediate response; it is doubtful that forms used in this way are assimilated into the learner's IL. The late emergence of this strategy indicates that as subjects become more experienced in using the TL they acquire communication devices to facilitate interactions with native speakers.

The influence of NL interference on the verb related morphemes, although less obvious than other strategies was also noted. On the basis of contrastive analysis, A.C. would be expected to have the greatest difficulty with verb related morphemes since her NL, Cantonese, does not indicate tense by modifying the verb but through the context of the sentence. Further, since words in her NL do not terminate with the phonemes /s/, /t/ or /d/, the production of these sounds on

English verbs may be more difficult for her. Verb related morphemes should be easiest for B.H. since her NL, Korean, signals tense by the addition of a verb ending in the same manner as English. Tagalog, the NL of the other five subjects, does modify a base form to indicate tense but, unlike English, uses a prefix rather than a suffix.

As anticipated, A.C.'s average scores (APPENDIX D, Table 27) for Auxiliary Singular, Present Progressive, Past Regular and Third Singular were among the lowest of the group in spite of the fact that her accuracy scores placed her around the middle of the group. Her scores for Auxiliary Plural, Future Progressive and Past Irregular, however, which tend to be acquired as holophrases, are comparable to those of the other subjects.

B.H., on the other hand, for whom the English verb system should be the easiest as a result of NL transfer scored low on all the verb related morphemes including Future Progressive, Past Irregular and Auxiliary Plural. Her performance in these areas is most like J.C.'s, while the other four Tagalogs, who were at more similar levels of overall accuracy, obtained higher scores on all of the verb related morphemes. Once again proficiency in the use of a functor seems to be linked more closely to overall proficiency than to influences from the NL, although interference seems to be affecting one subject more than the others.

Unique Errors

In addition to the errors observed within each functor

category there were numerous unique errors which reveal additional processing strategies used by the subjects and provide evidence for variations in individual learning style. B.H., generally the least linguistically advanced of the subjects, also produced some of the most interesting utterances such as "He is car brushing the car" and "Because he's the bad guy is in the jail is." Hatch (1974:7) describes two types of language learners: "rule formers" who assimilate each new piece of linguistic information into their existing grammar, and "data gatherers" who simply collect linguistic information and then use these forms in free variation. B.H. appears to be one of the latter. Not only were utterances like those above typical of her performance but, as her individual scores (APPENDIX F, Table 34) indicate, her performance was the most erratic and variable of all the subjects from this study. At the other extreme was A.C., a rule former, whose utterances, as previously indicated, were always precise and clearly organized, with a minimum of grammatical frills.

Unique errors also revealed creativity in the subjects' use of vocabulary items. On Test I, J.A. produced "Joe's father are lawnmower the grass". Similarly, on Test III, J.P. produced "The cowboy is horsing" and B.H., on Test VI, "He's shotting the gun." In each case, the subject was able to take a vocabulary item, in this case a noun and a Past Irregular, and incorporate it into a familiar grammatical pattern.

Another error which occurred in every subject's performance was the confusion of the third person pronouns, "he" and "she". However, in most cases, the subjects corrected themselves immediately, suggesting that these represent performance errors or slips of the tongue rather than a lack of linguistic competence.

Conclusion

Error analysis was conducted in order to determine the language learning strategies or internal processes which shape L2 performance and provide evidence for the learners' active and creative involvement in the L2 learning process. Numerous strategies were revealed through the subjects' systematic attempts to simplify language in order to facilitate learning and communication.

The most prevalent strategy was the use of prefabricated patterns or holophrases which influenced the use of all functors. While the use of holophrases improved performance and hastened the acquisition of certain functors, e.g. Future Progressive, Copula and Auxiliary, the extension of holophrase forms of Third Person Singular and Past Irregular to contexts requiring other verb forms led to many errors. The use of prefabricated patterns could also be called a transfer of training strategy since many of the patterns had been practiced in the E.S.L. class.

Although the use of holophrases appears to contradict the creativity hypothesis, the manner in which these patterns

are used to express a wide range of meanings and in a variety of contexts suggests that they are an interim simplification device. Holophrases, however, are only one manner in which L2 learners simplify language. Simplification was also observed to operate more directly in the omission of seemingly non-essential or redundant markings such as Article, Auxiliary, Plural and the verb-related morphemes.

Such processes of simplification are also used by L1 learners in their creative attempts to reconstruct adult grammar. Another strategy common to both L1 and L2 learners is overgeneralization. Overgeneralization was observed to operate in the application of certain functors in inappropriate contexts such as the use of articles with plural nouns; the addition of plural "s" to singular nouns; and the use of holophrases in inappropriate contexts.

In the use of functors such as Article, Possessive and the verb related morphemes, the subjects appear to be following developmental patterns similar to those observed in L1 learning rather than translating from their NL into English. A definite progression in the kinds and frequencies of errors made by the subjects was observed within these functor groups.

Interference, once believed to be the major determinant of L2 performance was also observed to operate, both through overt errors, such as the general disregard for Plural, errors of word order in the use of Possessive by one of the Tagalog subjects, A.C.'s difficulties with verb related

morphemes and B.H.'s creation of English honorifics; and less obviously through the use of avoidance strategies by several Tagalogs in contexts requiring Possessive. Its effects were observed to be more pronounced in certain subjects and the degree of dependence upon this strategy may, in fact, be a peculiarity of learning style. Subject accuracy in the use of functors appears to be more closely linked to overall proficiency than to NL interference.

The strategies mentioned above have been referred to as learning strategies, that is, the strategies by which language is processed and assimilated. Some of the learners' errors, however, appear to be the result of communication strategies or deliberate attempts to speed communication under the pressure of a situation requiring an immediate response. One such strategy is the use of incorporations, or the inclusion of a block of words from a question into the subject's response without regard for the necessary transformations.

The choice of strategies by a subject appears to be a product of learning style which in turn is related to the learner's personality. One subject, an extremely shy child, in an attempt to speak as little as possible, made many simplification errors or errors of omission; another more extroverted child spoke more freely, using inflections almost at random and making many errors of overgeneralization. Some of the less linguistically advanced or confident subjects rely more heavily on communication strategies such as the

use of incorporations than more advanced subjects; some subjects appeared to be influenced more by their NL than others.

Analysis of the errors made by the subjects from this study in their use of the twelve functors indicates that many strategies or internal processes interact to shape L2 performance and support the hypothesis that L2, like L1, learning is an active, creative process. An examination of longitudinal acquisition orders has shown that external factors related to the nature of the language being learned also affect the L2 acquisition process. In the following section, the effect of another external influence upon L2 learning, teaching, is explored.

THE EFFECTS OF TEACHING

The last question posed in this study has two parts :

- a) Does the order in which the twelve functors are acquired by children learning English as a second language depend upon the order in which they are taught?
- b) Does the order in which the twelve functors appear in the interlanguage of children learning English as a second language depend upon the order in which they are taught?

Ideally, the effect of teaching on order should be studied by comparing the orders of an experimental group, whose input is strictly controlled, and a control group whose members are learning the language informally. In this study, there is no control group nor was the input to the subjects

limited to teaching; the observed orders may, therefore, just as easily be the result of numerous other environmental variables as the product of instruction. Further, no attempt was made to evaluate the effectiveness of the instructional methods used. However, since a definite syllabus was followed and a deliberate effort was made to drill and provide meaningful practice for the twelve functors, an attempt is made to compare the order of presentation and subject performance.

In order to compare the order in which the functors were formally presented to the subjects with their points of acquisition and appearance in subject IL, Tables 21 and 22 show the number of subjects in each group who acquired or first used a functor on a particular test. The arrows at the bottom of the page indicate the functors which were presented or reviewed substantially in the interval between tests.

As these tables show, few of the functors reached criterion during the testing period and most of the functors had already appeared by the time of Test I. However, it was intuitively felt, because of the convergence of individual scores as testing progressed and the number of errors which could be ascribed to transfer of training, that teaching did have some effect on performance. Therefore, to clarify the relationship between teaching and performance, Table 23 compares Group Scores with the order of teaching. Group Score having been established as a reasonable indicator of the performance of all the individuals in the group, the

Table 21

Comparison of Point of Acquisition and Order of Teaching of the Twelve Functors

TEST	I		II		III		IV		V		VI		TOTAL
	A	B	A	B	A	B	A	B	A	B	A	B	
Article		1			1								2
Copula Singular	4	2											6
Copula Plural			3		1								4
Present Progressive								1					1
Future Progressive	1	1	1				1						4
Auxiliary Singular								1					1
Auxiliary Plural	1	2			1								4
Plural													0
Possessive					1		1						2
3rd Singular													0
Past Regular													0
Past Irregular													0

A + B	↓	↓	↓	↓	↓	↓
Cop. S.	Cop. Pl.	Aux. S.	Review	Past R.	3rd S.	
Aux. S.	Aux. S.	Aux. Pl.	Past R.	Past I.		
P. Prog.	Aux. Pl.	P. Prog.	Past I.	3rd S.		
Plural	Article	Past R.				
Poss.	F. Prog.	Past I.				
Article						
B						
Cop. Pl.						
Aux. Pl.						
F. Prog.						

A = Grade Three Group

B = Grade Four Group

Table 22

Comparison of Point of Appearance and Order of Teaching of the Twelve Functors

TEST	I		II		III		IV		V		VI		TOTAL
	A	B	A	B	A	B	A	B	A	B	A	B	
Article	5	2											7
Copula Singular	5	2											7
Copula Plural	5	2											7
Present Progressive	5	2											7
Future Progressive	5	2											7
Auxiliary Singular	5	2											7
Auxiliary Plural	3	2	2										7
Plural	5	2											7
Possessive	5	2											7
3rd Singular	1	1	1		1		1				1	1	7
Past Regular	1	1	1				2		1				6
Past Irregular	4	2	1										7

A + B	↓	↓	↓	↓	↓	↓
Cop. S.	Cop. Pl.	Aux. S.	Review	Past R.	3rd S.	
Aux. S.	Aux. S.	Aux. Pl.	Past R.	Past I.		
P. Prog.	Aux. Pl.	P. Prog.	Past I.	3rd S.		
Plural	Article	Past R.				
Poss.	F. Prog.	Past I.				
Article						
B						
Cop. Pl.						
Aux. Pl.						
F. Prog.						

A = Grade Three Group

B = Grade Four Group

Table 23

Comparison of Group Scores and Order of Teaching of the Twelve Functors

TEST	I	II	III	IV	V	VI
Article	87%	78%	87%	95%	89%	87%
Copula Singular	100	98	98	98	100	100
Copula Plural	67	86	96	94	89	94
Present Progressive	88	80	91	86	76	92
Future Progressive	65	78	77	78	94	95
Auxiliary Singular	81	80	85	62	83	88
Auxiliary Plural	77	79	94	85	86	95
Plural	53	60	54	65	60	65
Possessive	67	62	60	85	84	78
3rd Singular	6	10	26	21	18	38
Past Regular	9	2	7	16	9	1
Past Irregular	20	28	6	35	30	18
	↓	↓	↓	↓	↓	↓
*Cop. S. Aux. S. P. Prog. Plural Poss. Article	Cop. Pl. Aux. S. Aux. Pl. Article F. Prog.	Aux. S. Aux. Pl. P. Prog. Past R. Past I.	Review Past R. Past I.	Past R. Past I. 3rd S.	3rd S.	
**Cop. Pl. Aux. Pl. F. Prog.						

*Grade Three and Four Groups.

**Grade Four Group only.

discussion primarily concerns the effect of teaching on group performance although reference is also made to Individual Functor Scores presented in APPENDIX F, Tables 29 - 35.

It should be recalled at this point that the teaching of functors involved not only the outright presentation of the functor but also, particularly in the case of the verb related morphemes, practice in its various transformations. Further, grammatical topics other than the twelve functors were introduced and practiced during the testing period. Thirdly, informal review occurred frequently as the necessity arose so that the subjects received continued practice in all of the functors once they had been formally introduced.

Test I

Prior to the first test, Article, Copula Singular, Auxiliary Singular, Present Progressive, Possessive and Plural had been presented and practiced orally by all subjects. The Grade Threes had performed written exercises which required them to use Singular Copula and Article and had been introduced to the written form of Plural in connection with spelling and phonics. The Grade Fours had received written practice in all items presented orally as well as oral and written practice in Copula and Auxiliary Plural and Future Progressive.

Six of the seven subjects reached criterion on Copula Singular, the first of the functors to be presented. However, of the other functors introduced early, only Article was

acquired by one of the Grade Four subjects. While the two Grade Fours reached criterion on Auxiliary Plural, in which they alone had received instruction, one of the Grade Threes, who had not been instructed in this functor also reached criterion on Test I. Similarly, while one of the Grade Fours reached criterion on Future Progressive and the other scored much higher than four of the Grade Threes, the fifth Grade Three also reached criterion on Future Progressive on Test I.

Of the functors which had not been taught to the Grade Threes, Copula Plural and Future Progressive had already appeared in the interlanguage of all five; and Auxiliary Plural had appeared in the ILs of three of the five Grade Three subjects. Of the functors which had not been presented formally to any of the subjects, Past Irregular had appeared in the ILs of six of the subjects while Third Singular and Past Regular were already being used by two of the subjects.

While teaching order seems not to have had an effect on acquisition and appearance of functors, Group Scores do tend to reflect the relative emphasis given to the functors. In general, Group Scores for Article, Copula Singular, Present Progressive were high (80% or better). Group Scores for Copula Plural, Future Progressive, Auxiliary Plural, Possessive and Plural, which had been presented slightly later or to only part of the group, were in the mid-range (50% - 80%). The untaught morphemes, Third Singular, Past Regular and Past Irregular, scored low (20% or less).

Test II

Because of the poor performance of the Grade Threes in the use of Copula Plural, an intensive effort was made to practice this form between Tests I and II. Practice in Plurals continued and the "a/an" article distinction was presented and practiced orally and in writing by all subjects. The Grade Threes were introduced to the Auxiliary Plural and Future Progressive while the Grade Fours practiced the negative and interrogative transformations of Future Progressive orally and in writing.

Copula Plural reached criterion in the IL of three of the Grade Three subjects and Future Progressive was acquired by one more Grade Three subject. Auxiliary Plural appeared for the first time in the IL of the last two Grade Three subjects. Of the remaining three untaught functors, Past Regular and Third Singular continued to be used by only two and three of the subjects respectively, but all seven are now using the Past Irregular.

The influence of teaching on Group Score was again observed. Copula Plural improved dramatically from 67% to 86%. Similarly, Future Progressive improved from 65% to 78% in Group Score but by as much as 42% in Individual Score. The other functors which were practiced in the interval, Auxiliary Singular and Plural, Plural, showed only negligible improvement; those not emphasized, Article (a/the), Present Progressive and Possessive were observed to regress slightly in both Group and Individual Scores.

Test III

Between Tests II and III, Present Progressive was reviewed and the Grade Threes began writing Copula Plural and Auxiliary (Singular and Plural) + Present Progressive. The week prior to testing, Past Regular and Irregular were introduced orally only to the whole group.

Auxiliary Plural was acquired by one of the Grade Threes and Article by another, while one of the Grade Fours reached criterion on both Copula Plural and Possessive. Third Singular, which still had not been presented formally, appeared in the IL of another of the Grade Threes. In spite of the formal presentation of Past Regular, it had not yet appeared in the ILs of four subjects.

The Group Scores indicate that Copula and Auxiliary Plural continued to improve. Article and Present Progressive regained their Test I levels while the functors not emphasized in the interval, Plural, Possessive and Future Progressive, dropped slightly in Group Score. Scores for Past Regular remained low and Past Irregular actually dropped in score from 18% to 6% in spite of formal presentation. However, as previously noted, Test III required some less familiar Past Irregular forms than the other two tests. Third Singular, the only remaining untaught morpheme, inexplicably showed improvement, and four of the seven subjects are now using this functor at levels of accuracy from 30% to 50%.

Test IV

Christmas vacation intervened between Test III and IV and the new term began with a review of all the functors taught in the first term. Past Regular and Irregular were then taken up again, orally by the whole group and in written form by the Grade Fours.

One of the Grade Threes acquired Article on Test IV and another acquired Possessive while one of the Grade Fours acquired both Auxiliary Singular and Present Progressive. Third Singular appeared in the interlanguage of another of the Grade Threes and two others used Past Regular for the first time.

Group Scores remained relatively stable for most of the functors although Plural, Possessive and Article improved somewhat over Test III levels. The drop in score for Auxiliary Singular appears to be the result of poor performance on the part of two subjects rather than a general trend. Past Regular increased slightly from 7% to 16% in Group Score but by as much as 64% in Individual Score. Past Irregular similarly increased by 19% over the Group Score on Test III while Third Singular dropped slightly from 26% to 21% in Group Score but has now appeared in the IL of five of the seven subjects.

Because Test IV was a re-administration of Test I, a more appropriate comparison, which allows for control of vocabulary items, is between Test I and IV. Article, Copula Singular and Present Progressive, which received high scores

on Test I, showed little change. All of the other functors, including Third Singular, which had not been formally taught, showed varying degrees of improvement.

Test V

Between Tests IV and V continued attention was given to the Past Regular and Irregular and their negative and interrogative transformations. The Grade Threes were introduced orally to the Present Continuous Tense while the Grade Fours practiced these forms both orally and in writing.

Because acquisition point was defined as the first of three consecutive tests on which accuracy in the use of a functor exceeded 90%, acquisition of functors could not be determined on Tests V and VI. The only new morpheme to appear on Test V was Past Regular in the IL of one of the Grade Three subjects.

In spite of teaching, Group Scores for the Third Singular, Past Regular and Past Irregular declined from Test IV levels although all three showed a slight improvement over Test II, the identical test administered three months previously. Present Progressive, which had been given little formal attention since the introduction of the Past Regular and Irregular and Third Singular, dropped by 10% in Group Score. Most of the other functors remained relatively stable with the exception of Future Progressive which improved by 16% over Test II and IV levels.

Test VI

Between Tests V and VI, emphasis was on the Present Continuous Tense and its negative and interrogative transformations. No functors were acquired on Test VI but one each of the Grade Threes and Fours used the Third Person "s" inflection for the first time.

Group Scores on Test VI generally remained at about the same level as Tests III and V. Third Singular, which was being practiced at the time of testing, improved by 20% from Test V but by only 12% over the Test III score. Of the two Past tense forms, which were not stressed between Tests V and VI, scores for Past Regular declined from both Test III and V levels; Past Irregular, although it regressed since Test V, registered a 12% improvement over Test III which required the identical Past Irregular forms.

Conclusion

Does the order in which the twelve functors are acquired by children learning English as a second language depend upon the order in which they are taught?

Although the functors which were acquired by the subjects in the course of this study were among those presented early in the instructional program, there is no clear correspondence between order of teaching and acquisition. Teaching order could be used to explain the acquisition of certain functors by certain subjects. Copula Singular, for example, the first functor presented, was acquired by six of the seven subjects on Test I. Subsequently, however, the

acquisition of functors did not follow the order of teaching. Copula Plural, which appeared second in four orders, was not among the first items taught; it was introduced to the Grade Fours shortly before Test I and to the Grade Threes between Tests I and II. Similarly, Auxiliary Plural and Future Progressive, which were presented at about the same time as Copula Plural, were usually acquired before the functors which were presented very early such as Auxiliary Singular, Present Progressive, Article, Possessive and Plural, which were acquired later or not at all.

Not only did acquisition order not coincide with teaching order but there were two instances of functors reaching criterion in subject IL before their formal presentation. On Test I, one of the Grade Threes acquired Future Progressive and another, Auxiliary Plural, both functors which had been presented to the Grade Fours only.

Although the order of teaching did not appear to influence acquisition order, the acquisition of certain functors did appear to coincide with the time of formal teaching. For example, on Test I, both of the Grade Fours acquired Auxiliary Plural and one acquired Future Progressive, functors in which they alone were receiving instruction at the time of testing. On Test II, three of the Grade Threes acquired Copula Plural and another Future Progressive, both functors which had been emphasized in the interval.

Finally, the similarity in longitudinal acquisition order between subjects from this study and two untutored

learners and the high correlations between functor ranks of this group of subjects and two unrelated groups of L2 learners, suggests that this particular teaching program has not significantly affected acquisition order.

Does the order in which the twelve functors appear in the interlanguage of children learning English as a second language depend upon the order in which they are taught?

Once again, the evidence is contradictory. As Table 22 (p. 107) shows, most of the functors were already present in IL prior to Test I. Of those that were not, Auxiliary Plural, Third Singular, Past Regular and Irregular, several cases of subjects whose first use of these functors coincides with formal presentation have been noted. For example, two Grade Threes, who had not been introduced to Auxiliary Plural before Test I used it on Test II for the first time, after formal presentation. Prior to the teaching of Past Regular, it was used by only two of the subjects. After three months of teaching, this form had appeared in the IL of six of the seven subjects. However, before Past Irregular had been taught, all seven subjects were using it and prior to the teaching of Third Singular, it was present in the IL of five subjects. Appearance, therefore, like acquisition, does not appear to depend solely upon formal teaching.

Although it may not have significantly affected the order of appearance and acquisition of functors, teaching, nevertheless, seems to have had an effect upon performance.

A recency effect was noted in both Group and Individual Scores. Group Scores for certain morphemes were observed to rise slightly at times when these functors were being actively practiced and then to decline slightly when the focus was elsewhere; individual scores show more dramatic examples of this phenomenon. Occasionally this recency effect was also observed to affect acquisition point in that the acquisition of certain morphemes appeared to coincide with formal presentation. While, in most cases, this recency effect may have little effect on the order in which functors are finally acquired, it does suggest that cross-sectional studies which rely on a single speech sample should specify the input to the subject at the time of testing since the frequency of an item in the environment may be reflected in subject performance.

Further, as previously observed in Table 4 (pp. 61 - 62) which reports the Pearson Product Moment Correlations between Individual Scores on each test, the subjects' ILs became more alike as their time in the program increased. While this could be the result of a levelling off of performance, as the subjects reach higher levels of overall proficiency, the accuracy scores (APPENDIX D, Table 26) indicate that there is as great a range in subject competence on Test VI as on Test I. It would seem that a similar environment is responsible for uniformity in subject performance.

Teaching also seems to have affected the position

of certain functors in rank order. A gradual rise in functor scores would be predicted as a normal result of growth over the six month period. Further, a more marked increase would be anticipated in the case of items presented early as a result of the cumulative effects of practice. While a general increase in functor scores was noted in group and individual performance, certain other changes were not predictable on the basis of normal growth or teaching order.

A comparison of Group Scores on Test I and VI shows that the high score items from Test I (Article, Copula Singular, Auxiliary Singular and Present Progressive) were also among the high score items on Test VI. Similarly, the low score items on Test I (Third Singular, Past Regular and Irregular) remained at a low level of proficiency. Plural and Possessive, which began in the mid-range, remained there. However, Copula and Auxiliary Plural and Future Progressive, which also began in the mid-range, improved dramatically and moved up to the top range by Test VI, surpassing in Group Score some of the top score items from Test I and reaching criterion in several of the subjects' ILs.

There are two possible explanations for the subjects rapid acquisition of these forms. The first is that these three forms can be learned as holophrases. However, the fact that these forms improved rapidly only after teaching, suggests that teaching is also responsible and leads to a modification of the hypothesis that L2 learners proceed automatically as their innate language mechanism directs.

Dulay and Burt (1977) hypothesize that at certain points in linguistic development, L2 learners are sensitive to certain features of language and will automatically select these from the linguistic environment. The frequency of an item in the input data and its perceptual salience are considered important only insofar as they make the required items easily accessible to the L2 learner and provide the raw material for his creative activity.

Such a hypothesis could account for the failure of teaching to produce significant changes in subject proficiency in the use of most of the functors. It may also account for the complete lack of progress of a functor such as Past Regular, which, although presented formally and used at the time of teaching, rapidly fell out of use once attention was turned to other forms. Even though this functor was isolated and practiced, the subjects simply may not have been ready to adopt it.

However, the dramatic improvement in the three functors mentioned above signals a potential weakness in the readiness hypothesis and vindicates the teaching process. Although the L2 learner may be linguistically ready for a particular item, he may not be able to perceive it, either as a result of NL interference or perceptual difficulties due to age related changes in language learning ability. Teaching, by isolating certain features of language and rendering them more salient may make them more accessible to the L2 learner and hasten their appearance and acquisition. Further, the

L2 learner may fail to use grammatical forms once perceived, either because of NL related phonological difficulties or through the conscious or unconscious operation of a simplicity principle or strategy of communication. By increasing the opportunities for practice of a certain form, teaching may increase the learner's ease and confidence in using it in natural speech.

In the case of Copula and Auxiliary Plural and Future Progressive, the subjects from this study were obviously ready for these forms since, prior to teaching, they were using other functors to perform plural function and express future intent. Once the correct forms had been presented and practiced, they were readily assimilated and acquired. Without teaching, subjects either may have failed to perceive these functors for which they were ready, or been comfortable overgeneralizing more familiar functors to contexts requiring Copula and Auxiliary Plural and Future Progressive.

Although language learning may be directed by an innate mechanism, the readiness hypothesis is overly simplistic in assuming that this mechanism functions in an identical fashion in all learners and fails to account for individual variations in age, intelligence and perceptual ability which may affect the outward manifestations of this structure. As shown by the subjects from this study, not all L2 learners are adept at selecting from the linguistic environment the grammatical forms for which they are ready.

A study of the effects of teaching on the performance of the subjects from this study has shown that teaching may have some part in determining order of acquisition and appearance of functors by drawing attention to features of language which might otherwise have been overlooked or ignored. Teaching also appears to affect performance through the operation of a recency effect. Although it does not appear to be a major determinant of acquisition order, teaching may be important enough to explain minor differences between group and individual acquisition and accuracy orders.

Chapter 5

CONCLUSIONS AND APPLICATIONS

A case study of seven L2 learners was conducted in order to explore certain aspects of the hypothesis that first and second language learning are similar processes. The L2 = L1 theory suggests that L2 learning, like the L1 process, is a creative process governed by an innate language learning mechanism which functions in a similar manner in all learners and leads them to make use of similar language processing strategies in reconstructing the adult grammar of the language being learned. Because this process is believed to be guided from within, the role of teaching is considered insignificant in shaping the L2 acquisition process.

Recent studies compare the order in which L2 learners acquire certain grammatical functors in order to reveal similarities in the L2 process which would provide evidence for the existence of an innate language learning mechanism. Errors produced by L2 learners are examined in order to determine the kinds of language learning strategies used by the learners and provide evidence for their creative activity. Because of the emphasis on the role of the innate mechanism and learner strategies in shaping the L2 process, there have

been few studies which examine the effect of teaching or other external influences on the L2 acquisition process.

This study was, therefore, conducted to determine and compare the orders in which a group of child E.S.L. learners acquire twelve English grammatical functors, which have been the basis of many L1 and L2 acquisition studies; to infer the kinds of language learning strategies used by the children; and to examine the effects of teaching on performance. The study attempts to answer three questions :

- 1) Do children of different language backgrounds learning English as a second language acquire the twelve functors in a similar order?
- 2) What language learning strategies are used by children learning English as a second language in their production of the twelve functors?
- 3) a) Does the order in which the twelve functors are acquired by children learning English as a second language depend upon the order in which they are taught?
b) Does the order in which the twelve functors appear in the interlanguage of children learning English as a second language depend upon the order in which they are taught?

The subjects for the study were seven children between the ages of eight and ten from three different language backgrounds (Tagalog, Cantonese, Korean) learning English as a second language in an elementary level E.S.L. withdrawal program. Samples of the subjects' oral production were collected using an oral test, in the form of a conversation about a picture story, administered at one month intervals over a six month period. In the course of each test, at least five occasions for the use of each of the twelve

functors (Article, Copula Singular and Plural, Auxiliary Singular and Plural, Present Progressive, Future Progressive, Possessive, Plural, Third Person Singular, Past Regular and Irregular) were created. Each subject was scored on his use of each functor on each test; Group Scores for each functor were also computed for each test.

Longitudinal acquisition orders for each of the subjects were determined using Brown's (1973) criterion of 90% accuracy in the use of a functor over three consecutive tests, and compared with one another and with two other longitudinal orders reported in the literature. Cross-sectional accuracy orders for the individual subjects on each of the six tests were also compared using the Pearson Product Moment Correlation. Group Scores were used to determine functor rank orders for the group on each test; these orders were then compared with the rank orders of two other groups of L2 learners reported in the literature.

Subjects' errors in the use of the twelve functors were categorized and tallied and attempts were made to infer their causes. Finally, the order in which the functors had been presented to the subjects in the E.S.L. class was compared with the individual acquisition orders and points of appearance of the functors in subject IL and with the Group Scores on each test.

The results of these analyses are presented below. On the basis of this information, an overview of the L2 acquisition process is proposed and the practical applications

of this study with regard to language teaching and research methodology are presented.

Acquisition Order

The longitudinal acquisition orders of the seven subjects from this study were very brief. A comparison of these orders with one another and with two other longitudinal orders established in studies by Hakuta (1974b) and Rosansky (1976) showed many similarities. Copula was acquired early by all subjects. Article, Auxiliary and the two Progressive forms were also acquired early but in slightly different orders by different learners. Points of acquisition for Plural and Possessive were more variable; Past Regular, Past Irregular and Third Person Singular were acquired by only one of the subjects. The differences observed were ascribed to differences in the functor categories used in the different studies and to NL interference, or transfer, rather than differences in the learning process.

Since the subjects from this study acquired very few of the functors over the testing period, a more detailed comparison of subject performances was made using the subjects' cross-sectional difficulty or accuracy orders as determined by the individual functor scores on each test. On each of the six tests, Pearson Product Moment Correlations between subject performances were extremely high. A further comparison of the functor rank orders of this group of subjects on each of the six tests and the rank orders of two

unrelated groups of L2 learners reported in studies by Dulay and Burt (1974b) and Rosansky (1976), using the Spearman Rank Order Correlation, also reached significance.

A comparison of the longitudinal and cross-sectional orders, which are sometimes interpreted as predictors of acquisition order, showed that those items which were acquired early (Copula, Auxiliary, Article, Present and Future Progressive) were among those that scored high throughout the testing period. Items which scored in the mid-range (Plural, Possessive) were just beginning to reach acquisition in the ILs of the more advanced subjects. The low score items (Past Regular and Irregular, Third Person Singular) were not acquired by any of the subjects.

While cross-sectional orders and acquisition orders are probably not identical, difficulties in establishing longitudinal orders related to the determination of acquisition point and the distinction between a subjects' use of holophrases and his true mastery of a functor, suggest that cross-sectional orders, using carefully defined categories, may be more useful than longitudinal orders in establishing similarities in L2 learner performance.

Although an invariant order of acquisition for the twelve functors was not found in this study, the high correlations between the performances of the subjects from this study, suggest that subject performance is being shaped by similar forces. The high correlations between this group of subjects and two unrelated groups of L2 learners suggests

that these influences are universal in nature and not solely related to the environment in which English is being learned. Such commonality in the L2 process would seem to support the hypothesis that universal cognitive mechanisms shape the L2 process as the L2 = L1 theory suggests.

Strategies

An attempt was made to explain the longitudinal acquisition orders in terms of factors common to all of the learners. It was found that the orders were influenced by external factors related to the nature of the TL such as grammatical complexity, semantic importance, perceptual salience and the frequency of a functor in normal speech and the teaching environment. The regularity of a form which enabled the learner to memorize it as a holophrase or pre-fabricated pattern also appeared to influence acquisition point. Internal factors in the form of NL transfer and interference appear to shape acquisition order as well.

Internal factors, or strategies, were examined in greater depth through error analysis. The most pervasive strategy, common to all of the subjects and affecting performance in all of the functors, was the use of holophrase forms. Subjects memorized regular forms such as contracted Copula and Auxiliary or Future Progressive, and then over-generalized them to many inappropriate contexts. Besides being the result of the learner's attempts to simply language, the use of holophrases was also traceable to a strategy of

transfer of training since many of these forms had been practiced in the E.S.L. class. The use of holophrases is interpreted as one means by which L2 learners simplify the task of language learning. Simplification was also observed to occur directly in the omission of functors perceived as non-essential such as Article, Auxiliary, Plural, Possessive and the verb related morphemes; through overgeneralization of familiar forms and functors to contexts requiring other functors or no marking at all; and the use of communication strategies, such as the incorporation of blocks of words from a question into a response.

There was evidence that many of the errors ascribed to the above strategies were developmental in nature since the subjects appeared to be following developmental patterns similar to those observed in L1 learning. This was most noticeable in the use of Article, Possessive, and the verb related morphemes. Certain other errors were assumed to be performance errors. Unique errors, not related to the use of the twelve functors pointed to differences in learning style.

Once again, the effects of NL interference were observed both through overt errors and avoidance strategies. Interference, however, was not found to be a central process in shaping L2 performance. The use of transfer, as any other strategy, appeared to be linked to learning style, its effects being more marked in certain subjects. Further, the similarities in subject performance, regardless of the NL of the

learner suggest that other factors are more important in shaping the L2 acquisition process. Subject accuracy in the use of the functors was more closely linked to overall proficiency than to NL interference.

No single determinant of the L2 acquisition orders emerged; nor did a single strategy account for the learners' errors. The use of a wide variety of strategies implies that the L2 learner is actively involved in the learning process and exercising his creative linguistic abilities.

The Effects of Teaching

The order in which the functors appeared in the IL of the subjects and were acquired by the subjects was compared with the order in which they were taught. Teaching appeared to have a minimal influence on the order of appearance and acquisition of functors. The effects of teaching on performance, however, were more obvious. Group and Individual Scores reflect the emphasis given to a functor in the teaching program at the time of testing. Scores tended to rise at times when a functor was actively practiced and to drop off when attention was elsewhere.

Teaching was also observed to have a dramatic effect on the speed at which certain functors (Copula and Auxiliary Plural, Future Progressive) were acquired while other functors were seemingly unaffected by the teaching process. This observation contradicts certain aspects of a readiness hypothesis advanced by Dulay and Burt (1977) and at the same

time vindicates the teaching process. According to this hypothesis, L2 learners proceed according to a predetermined plan and automatically select grammatical constructions from the linguistic environment when they are linguistically ready for them. While this may be the case, it was found that even though L2 learners might be ready for certain forms, they were either unable to perceive them or unwilling to use them. Teaching, by isolating and practicing these forms appears to hasten their acquisition; in the case of forms for which the learners are not ready, teaching has little effect.

The influence of teaching was also observed in numerous errors of transfer of training where items which had been taught in one context were inappropriately used in others. The convergence of subject scores as testing progressed is also assumed to be the result of the environment shared by the subjects. The indication from this study is that teaching, while it may not be the principal determinant of acquisition order or performance, is a sufficiently important variable to be considered in conducting and interpreting studies of L2 acquisition.

SECOND LANGUAGE LEARNING -- AN OVERVIEW

L2 acquisition is obviously a very slow and gradual process. Very few of the functors were acquired over the six month testing period and the instability of functors in the subjects' ILs persisted. The progress in individual functor and accuracy scores was slow, in some case minimal in spite

of teaching.

The similarity in performance between all the L2 learners whose orders were examined in this study suggests that this process is guided from within by an innate language mechanism and follows a predetermined sequence. Only further studies of acquisition order will be able to determine this sequence exactly. That such a sequence exists does not imply that the learner is passive in the L2 process; L2 learners make use of a wide variety of language learning strategies as revealed through error analysis. The sequence in which language items are acquired appears to be the product of these internal processes or strategies acting upon external features of the language being learned.

The learning of a language is an enormous undertaking and the learner can absorb only limited amounts of linguistic information at one time. The simplification and systematization of the new language is, therefore, the learners most urgent need in learning and communicating and the goal of his language learning strategies. L2 learners, therefore, seize upon the most regular aspects of language, those forms requiring only minimal choices and which can be memorized and used as holophrases; or those which require few transformations of a base form. However, before even these forms can be memorized and adopted, they must be perceived and have some communicative importance. Therefore, L2 learners seem to prefer forms which occur with reasonable frequency, are perceptually salient and have semantic importance. Once

a form has been adopted into the learner's IL, it is generalized to many contexts until all the required constructions have been acquired. This process is further complicated by interference from the learner's NL and idiosyncrasies of learning style.

The role of instruction in this predetermined process is unclear if the learner automatically selects the items to be learned as he is ready for them. However, there is evidence that even young L2 learners have experienced some changes in language learning ability since L1 acquisition and may have difficulty in selecting and using certain TL items. This problem is explored further in the discussion of the pedagogical applications of this study.

APPLICATIONS

The first two questions posed in this study concerning acquisition order and strategies led to some theoretical conclusions about the L2 acquisition process. The third question, which concerns the impact of teaching on the L2 process, and an investigation of research problems in studies of L2 acquisition lead to some practical applications of this study for language teaching and future research.

Pedagogical Implications

The hypothesis that L2 acquisition is determined by innate mechanisms and proceeds according to a predetermined

sequence seems to hold out a pessimistic future for language teaching. However, the fact that the L2 process cannot be significantly shaped by teaching does not negate the role of teaching altogether.

Dulay and Burt (1973, 1974a) suggest that the teaching of syntax is unnecessary in the case of children below the age of puberty. They suggest that child L2 learners need to be provided with a rich linguistic environment and opportunities for creative use of the language and they will automatically acquire syntax.

The subjects for this study, who are also below the age of puberty, have shown, however, that even young L2 learners may not be able to abstract certain linguistic forms from natural speech. Krashen and Seliger (1975) suggest that adult learners benefit from the isolation of TL rules since some yet unidentified age-related cognitive variable makes it difficult for them to extract syntactic rules from the TL speech environment in the manner of L1 learners. Younger L2 learners too may need this concession, in addition to the other conditions specified by Dulay and Burt.

There is now strong evidence that the learning of L2 grammatical structures follows a similar sequence in all learners. Teaching, logically, should be most successful if it follows this natural sequence. However, at present, the sequence for even a limited number of minor constructions is unclear. Nevertheless, awareness of areas of difficulty as

revealed by studies such as this one, may be useful in sequencing items to be taught to facilitate the natural process and to avoid learner and teacher discouragement by the early introduction of forms for which the learner is not yet ready.

The investigation of learner strategies in this study showed that learners rely heavily on the use of prefabricated patterns to express meaning in the TL and that these were often a cause of error. However, the early acquisition of certain items was precisely due to their regularity of form which enabled subjects to use them as prefabricated patterns. Hakuta (1974a) suggests that prefabricated patterns are at first used indiscriminately and without understanding, and only later differentiated into their individual components and their meanings fully grasped. It is not known if this process accelerates or hampers the eventual acquisition of these forms. Teaching, by emphasizing the regularity of language, may capitalize on this natural strategy and, while it may not hasten the acquisition of certain structures, may provide the learner with some useful communicative devices.

Similarly, overgeneralization was observed to be a cause of error. However, the generalization of linguistic forms from one context to another is a legitimate language learning strategy. Teaching can encourage the use of this strategy by providing many opportunities where generalization can lead to the correct use of language.

The influence of the NL on L2 learning is, likewise,

viewed negatively because interference is often observed to be a cause of error. However, the NL is also responsible for positive transfer. Just as some errors in this study were ascribed to NL interference, the ease with which certain functors were acquired was also the result of the influence of the NL. Awareness of a learner's NL is important in anticipating potential difficulties and capitalizing on what the learner already knows.

Since processes such as holophrase learning, over-generalization and transfer are naturally used by the learner in acquiring a second language, they should be used to the student's advantage. Observation of the L2 learner's production in the TL can provide the astute teacher with information about the learning strategies preferred by the learner as well as his misconceptions about the TL and lead to effective teaching strategies and appropriate remediation.

An effective language teaching program must take into account what is currently known about the L2 process. The L2 = L1 theory suggests that L2 learning is a creative process which follows a reliable sequence as determined by an innate language mechanism. A teaching program, rather than imposing a syllabus and a method from without, must assist this natural process not only by providing a rich linguistic environment but by drawing attention to problem areas of language and helping the learner to exercise his natural language learning ability.

Finally, teaching has an important role in moti-

vation. Although few functors were actually acquired by the subjects from this study, many other signs of growth were evident. For example, the decrease in testing times shown on the tables of Individual Scores (APPENDIX F) and the number of repetitions and prompts required by the subjects indicates growth in fluency and comprehension. There was also growth in overall accuracy. While these achievements might have been made independently of the instructional program, many learners may require the stimulation of teaching and a teacher's interest and encouragement if L2 learning is to take place.

Research Methodology

Since much controversy currently surrounds the validity of studies of functor acquisition which make use of grouped data, elicited speech and cross-sectional rank orders, an investigation of these problems using the data collected for this study follows. Such an investigation has implications for the execution and interpretation of studies of this nature.

Grouped Data. Rosansky (1976), in analyzing the data based on the spontaneous speech of her six subjects, found a great deal of variability both at the level of individual ranks and group means. At the level of individual ranks, she found that the cross-sectional orders of her six subjects on one speech sample did not correlate significantly with one another. At the level of group means, she found that, in her

study, the variation around the mean was excessively high for all functors. Dulay and Burt (1973, 1974b) recognized variability in L2 performance but assumed that the large size of the sample would offset the effect of individual variation. However, Rosansky also observed large variance about the mean in the Bailey, Madden and Krashen (1974) study which is based on BSM data from seventy-two subjects and the de Villiers' (1974) L1 study based on spontaneous speech from twenty-one subjects. She concludes that rank orders and statistical correlations based on grouped data, which obscures individual variability, cannot be meaningfully interpreted.

Variability in this study was also examined at the level of group means and individual ranks. For two of the tests, the mean, standard deviation and variance for four of the functors were computed. The results are presented in Table 24.

Table 24

Mean, Standard Deviation and Variance for Four Functors.

Functor		Article	Plural	Present Progressive	Past Irregular
Test I	Mean	87	52	86	7
	S.D.	12.3	19.2	25.6	15.3
	σ^2	152.2	369.8	653.3	233.0
Test VI	Mean	87	65	92	19
	S.D.	9.1	19.6	10.3	18.9
	σ^2	83.7	385.0	105.8	355.3

Although large variation about the mean is observed

in this study too, it is suggested that variance in itself may not be important if the relationship between items in rank order remains relatively stable. For example, Subject A may score 25 on a functor while Subject B may score 80. The variance, although high, may not be significant if that functor occupies the same position in each subject's rank order.

Variability was also investigated at the level of individual scores by comparing the subjects' functor scores with one another and with the Group Score for each test. As shown in Table 4 (pp. 61 - 62), not only did subjects' performance correlate significantly with one another throughout the testing period but the Individual Score-Group Score correlations were also extremely high. In spite of the high variance in this study, similarities in individual performance are great enough that Group Score is considered representative of the performance of all the individuals in the group.

Elicited Speech. Rosansky (1976) is also critical of studies which base their findings on speech samples collected by means of an elicitation device rather than on spontaneous speech. She found that her two adolescent subjects correlated positively on BSM orders but negatively on orders based on spontaneous speech. Further, for each individual subject she found that there was no correlation between the BSM and spontaneous speech orders. She also reports that in a study in which the BSM was administered to L1 learners, the resul-

ting order resembled the L2 BSM order rather than Brown's (1973) and the de Villiers' (1973) L1 orders based on spontaneous speech. She concludes that the testing device biases the results in favour of a particular order.

Since this study considered elicited speech only rather than the spontaneous utterances of the subjects, it is not possible to offer empirical support for one or the other. A hypothesis is, however, advanced in support of elicitation devices with reference to vocabulary variables, and the use of prefabricated patterns and avoidance strategies by L2 learners.

It has been observed in both L1 and L2 learning that new structures are first used with familiar vocabulary while new vocabulary is assimilated into established grammatical patterns. It can be expected, therefore, that morphemes in the course of development will more likely be used correctly with familiar vocabulary, while only the more stable morphemes will be easily generalized to new vocabulary items. Since the learner uses only familiar vocabulary in his spontaneous speech, his performance will probably reflect his optimum competence. A testing situation, however, which leads the learner into unfamiliar areas of vocabulary and syntax may tap his competence more fully than a spontaneous speech sample.

It has also been observed (Hakuta, 1974b; 1976; and this study) that many structures first enter a learner's IL

as prefabricated patterns. It seems likely that in spontaneous speech, the learner will rely on the simplest and most familiar forms, i.e. the pattern. While the subject may be able to use the pattern correctly, he may not be able to generalize from that pattern to other obligatory contexts. An elicitation device can tap this lack of competence; a spontaneous speech sample cannot.

An example from this study illustrates this point. It was observed that Past Irregular was acquired early by Uguisu (Hakuta, 1974b) but by none of the subjects from this study. Past Irregular alone of the functors does not follow a predictable pattern; each form is unique and must be memorized as a pattern. In spontaneous speech, a subject may use a few familiar Past Irregular forms and appear to have acquired that functor while an elicitation device may require the subject to supply Past Irregular forms which he simply may not know. This explanation was used to explain the poor performance of the subjects from this study on Past Irregular on Test III and VI and may also account for Uguisu's earlier acquisition of Past Irregular since her order is based on spontaneous speech.

It has also been observed (Schacter, 1974; Hakuta, 1976; and this study) that L2 learners deliberately avoid constructions which are difficult or unfamiliar. Since the L2 learner is unlikely to use such forms spontaneously, elicitation may once again be a more effective measure of learner competence.

Cross-sectional vs. Longitudinal Studies. Because the de Villiers (1973) L1 cross-sectional order correlated with Brown's (1973) longitudinal order, Dulay and Burt (1973; 1974b; 1974c) assume that their cross-sectional order is the L2 acquisition order. Rosansky (1976) wonders if, given the amount of variability in individual performance, one cross-sectional slice can ever be considered representative of the whole L2 process. For one of her adolescent subjects, cross-sectional order on the final spontaneous speech sample did not correlate with his longitudinal acquisition order. A comparison of his rank orders at one month intervals also showed fluctuation.

Longitudinal orders for the subjects from this study were too limited to permit a comparison of individual or group longitudinal and cross-sectional orders. Therefore, another test of internal consistency was performed. Since Group Score was established as a reliable measure of group performance, a Pearson Product Moment Correlation was used to compare the Group Scores from test to test. The results of this comparison are summarized in Table 25.

A similar test of internal consistency was performed on individual subject scores (APPENDIX E. Table 28). The correlations obtained in all cases are extremely high, indicating that group and individual performances were consistent from test to test. There appears to be much less variability in this study than Rosansky found in hers. Further, as indicated in Chapter 4, there does appear

to be a similarity between cross-sectional accuracy and longitudinal acquisition orders. One cross-sectional slice from this study would probably give a fairly accurate indication of the ultimate order in which functors will be acquired.

Table 25

Pearson Product Moment Correlations between Group Scores

Test	I	II	III	IV	V
II	0.96				
III	0.94	0.95			
IV	0.93	0.95	0.91		
V	0.94	0.97	0.93	0.96	
VI	0.92	0.96	0.97	0.92	0.96

Nevertheless, one constant characteristic of both L1 and L2 learning is the instability of grammatical forms in a learner's interlanguage. A form may, at one moment, be used correctly and then omitted entirely in the next utterance. This phenomenon is illustrated graphically in Figure 2 which traces the accuracy pattern for four of the functors in the ILs of two of the subjects. Functors can be observed to fluctuate by as much as 80% in the case of B.H.'s Plural. An order based on Test II would give quite a different picture from one based on Test V. At the level of Group Score, fluctuations were also evident but not as dramatic.

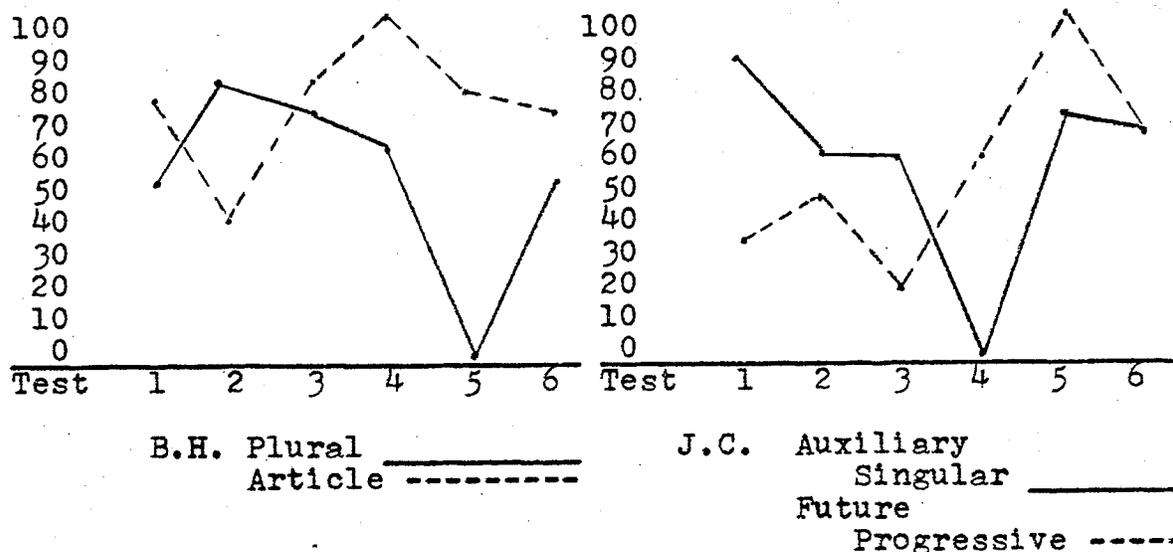


Figure 2

Individual Variability in the Use of Functors

Such variability suggests caution in predicting acquisition orders from cross-sectional samples. Since acquisition order is a precise measure, the only accurate means to determine it is to wait until all functors have been acquired. However, difficulties in determining longitudinal orders as discussed in Chapter 4, related to the establishment of adequate criteria for acquisition and the delimitation of functor categories, suggest that the determination of true acquisition orders may not be a realistic undertaking. Since the purpose of determining and comparing orders is to seek similarities in L2 learning, cross-sectional accuracy orders can still be of great value. They may, in fact, be more useful in comparing the performances of L2 learners by permitting comparisons based on actual scores rather than rank orders.

Recommendations

An investigation of problems in functor acquisition research and problems encountered in conducting this study leads to several suggestions for future research. The use of grouped data and elicited speech were supported in this study by the high correlations between group and individual scores and the hypothesis that a testing device may measure the L2 learner's competence more accurately than a spontaneous speech sample.

Although a correspondence between cross-sectional accuracy orders and longitudinal orders was found in this study, the difficulties in determining the latter suggest that cross-sectional orders may be more useful in establishing similarity in L2 learner performance. These must be defined as difficulty or accuracy orders and studies, especially those which rely on a single speech sample, must specify the input to the subjects at the time of testing or sampling since a recency effect has been observed.

In the determination of longitudinal orders, there is a need for the refinement of criteria for establishing point of acquisition since the instability of functors in learner IL in this study made even Brown's criteria of 90% over three consecutive tests inappropriate. In both cross-sectional and longitudinal studies, there is also a need for the development of functor categories which would encompass as many of the applications of a functor as possible and testing situations which discourage the use of holophrase forms in order to measure a subject's true competence.

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APPENDICES

APPENDIX A. Test Forms

Test I - Father at Home (Storyboard 14)

It's Saturday morning. Mr Brown is working in the yard and his son, Joe, is helping him.

*Functors elicited

Frame I

Who is this boy? <u>It's Joe.</u>	CS
Who is this man? <u>It's Joe's father.</u>	CS, P
Where are Joe and his father? <u>They're in the yard.</u>	CP, A
Whose house is this? <u>It's Joe's house.</u>	CS, P
Whose car is this? <u>It's Father's car.</u>	CS, P
What are Joe and his father doing now? <u>They're washing the car.</u>	AP, PP, A
What does Joe use to wash the car? <u>He uses soap and water.</u>	3S
What are Joe and his father going to do next? <u>They're going to paint the fence.</u>	AP, FP, A

Frame II

What are these? (brushes) <u>They're brushes.</u>	CP, Pl
What are Joe and his father doing now? <u>They're painting the fence.</u>	AP, PP, A

*Functor code:

Article - A
 Copula Singular - CS
 Copula Plural - CP
 Auxiliary Singular - AS
 Auxiliary Plural - AP
 Present Progressive - PP

Future Progressive - FP
 Possessive - P
 Plural - Pl
 3rd Singular - 3S
 Past Regular - PR
 Past Irregular - PI

Test I (continued)

	Functors elicited
What does Joe use to paint the fence? _____ <u>He uses a brush.</u>	3S, A
What are Joe and his father going to do next? _____ <u>They're going to cut the grass.</u>	AP, FP, A
 Frame III	
What is Father doing now? <u>He's cutting the grass.</u>	AS, PP, A
What's this? (lawnmower) <u>It's a lawnmower.</u>	CS, A
What are these? (wheels) <u>They're wheels.</u>	CP, Pl
What's this? (rake) <u>It's a rake.</u>	CS, A
What is Joe doing? <u>He's raking the grass.</u>	AS, PP, A
What is Joe going to do with the grass? _____ <u>He's going to put it in the garbage.</u>	AS, FP, A

Frame IV

What are these? (houses) <u>They're houses.</u>	CP, Pl
What are these? (boys) <u>They're boys.</u>	CP, Pl
Who are these boys? <u>They're Joe's friends.</u>	CP, P, Pl
What does this boy want? <u>He wants to play baseball.</u>	3S
What is Joe going to do? <u>He's going to ask Father.</u>	AS, FP
What does Joe want to do? <u>He wants to play baseball.</u>	3S

Frame V

What are Joe and his father doing? <u>They're talking.</u>	AP, PP
Who is waiting for Joe? <u>Joe's friends are waiting.</u>	P, Pl, AP, PP

Test I (continued)

Functors
elicited

What is Father going to say? He's going to say yes. AS, FP

What is Joe going to do? He's going to play. AS, FP

Now - you tell me the story...

How many things did Joe and his father do? _____ PI, PI

They did 3 things.

What did Joe and his father do first? _____ PR, A

They washed the car.

Then what did Joe and his father do? _____ PR, A

They painted the fence.

What did Joe do next? He raked the grass. PR, A

Who did Joe see? He saw his friends. PI, PI

What did Joe have in his hands? He had a basket. PI, A

Why did his friends come to see him? _____ PR

They wanted to play baseball.

What did Joe do? He asked his father. PR

What did his father say? His father said yes. PI

What did Joe do? He went with his friends. PI, PI

Discussion

What does your father do on Saturday? _____ ? 3S

What did you and your father do last Saturday? _____ ? PR, PI

Occasions for

Article - 15	Future Progressive - 6
Copula Singular - 6	Possessive - 5
Copula Plural - 6	Plural - 9
Auxiliary Singular - 6	3rd Singular - 5
Auxiliary Plural - 6	Past Regular - 6
Present Progressive - 6	Past Irregular - 6

Number of questions - 40.

14 / Father at Home

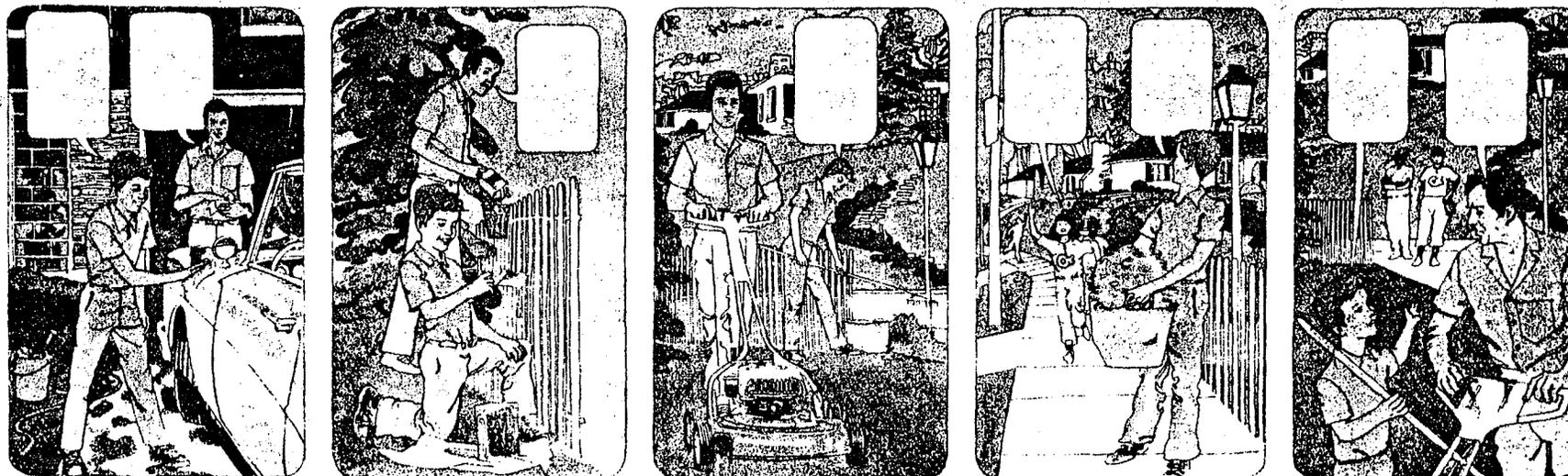


Figure 3

Test I Storyboard*

*David and Joseph R. Gladstone, Language Development Program, Science Research Associates (Canada) Ltd., 1970.

APPENDIX A. (continued)

Test II - Mother at Home (Storyboard 12)

This is a story about a boy named Richard, his sister, Susan, and their mother.

	*Functors elicited
Frame I	
Who is this woman? <u>She's Richard's mother.</u>	CS, P
Who is this man? <u>He's a storekeeper.</u>	CS, A
Where are Mother and the man? <u>They're in the store.</u>	CP, A
What are Mother and the man doing? <u>They're talking.</u>	AP, PP
What is Mother going to do next? _____ <u>She's going to make lunch.</u>	AS, FP

Frame II

What is this boy's name? <u>His name is Richard.</u>	CS
What are Richard and Mother doing? _____ <u>They're setting the table.</u>	AP, PP, A
What are these?(plates) <u>They're plates.</u>	CP, Pl
What are these? (spoons) <u>They're spoons.</u>	CP, Pl
What are Mother and Richard going to do next? _____ <u>They're going to eat.</u>	AP, FP

Frame III

What is this girl's name? <u>Her name is Susan.</u>	CS
---	----

*Functor code:

Article - A	Future Progressive - FP
Copula Singular - CS	Possessive - P
Copula Plural - CP	Plural - P
Auxiliary Singular - AS	3rd Singular - 3S
Auxiliary Plural - AP	Past Regular - PR
Present Progressive - PP	Past Irregular - PI

Test II (continued)

	Func-tors elicited
What is Susan to Richard? <u>She's Richard's sister.</u>	CS, P
What is Richard to Susan? <u>He's Susan's brother.</u>	CS, P
What are Richard and Susan doing? <u>They're eating.</u>	AP, PP
Whose chair is this? <u>It's Mother's chair.</u>	CS, P
What are these? (apples) <u>They're apples.</u>	CP, Pl
What are these? (shakers) <u>They're shakers.</u>	CP, Pl
What is Richard doing? <u>He's playing with the shakers.</u>	PP, A Pl, AS
What is Mother doing? <u>She's telling him to stop.</u>	AS, PP

Frame IV

What happened? <u>Richard spilled the milk.</u>	PR, A
How does Mother look? <u>She looks angry.</u>	3S
What is she going to do? <u>She's going to spank him.</u>	AS, FP
How does Richard feel? <u>He feels sad.</u>	3S
What is he going to say to Mother? <u>He's going to say "I'm sorry."</u>	AS, FP, CS
What is Susan doing? <u>She's cleaning the table.</u>	AS, PP, A

Frame V

What are Mother and Susan doing? <u>They're washing the dishes.</u>	AP, PP, A Pl
What is Richard going to do? <u>He's going to play outside.</u>	AS, FP
What are Mother and Susan going to do when they've finished the dishes? <u>They're going to watch T.V.</u>	AP, FP

Test II (continued)

Functionals
elicited

Now - you tell me the story...

- What did Mother do first? She went to the store. PI, A
- Where did she go after shopping? She went home. PI
- What did she do at home? She made lunch. PI
- Who helped her? Richard helped her. PR
- What did the children do next? They ate. PI
- What did Richard do? He spilled the milk. PR, A
- What did Mother do? She spanked him. PR
- What did Richard say? He said, "I'm sorry." PI, CS
- What did Susan do? She cleaned the table. PR, A
- What did Mother and Susan do after lunch? They washed the dishes. PR, A, Pl
- Where did Richard go? He went outside. PI

Discussion

- Tell me three things your mother does for you. _____ 3S(3)
- At your house, whose work is it to do the dishes? _____ P
- ...cook the meals? _____ P
- How did you help your mother yesterday? _____ PR, PI

Occasions for

Article - 9	Future Progressive - 6
Copula Singular - 9	Possessive - 6
Copula Plural - 5	Plural - 6
Auxiliary Singular - 7	3rd Singular - 5
Auxiliary Plural - 6	Past Regular - 7
Present Progressive - 7	Past Irregular - 7

Number of questions - 42

12 / Mother at Home

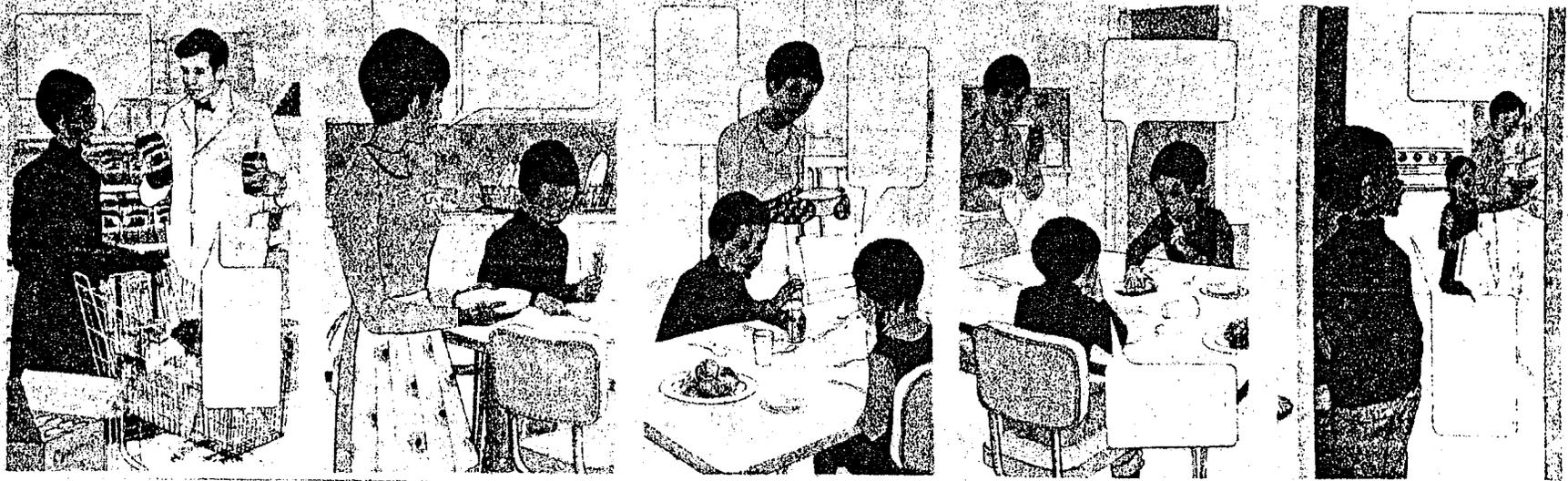


Figure 4

Test II Storyboard*

*David and Joseph R. Gladstone, Language Development Program, Science Research Associates (Canada) Ltd., 1970.

APPENDIX A. (continued)

Test III - The Cowboy (Storyboard 91)

This is a story about a cowboy who chases and catches a thief.

Frame I	*Functors elicited
What are these men? <u>They're cowboys.</u>	CP, Pl
What is this man? <u>He's a sheriff.</u>	CS, A
Who is the other man? <u>He's the sheriff's helper.</u>	CS, A, P
Where are the cowboys? <u>They're in the jail.</u>	CP, A
What are the cowboys wearing? <u>They're wearing...s.</u>	AP, PP, Pl(2)
What are these? (pictures) <u>They're pictures.</u>	CP, Pl
Who are these men? <u>They're thieves.</u>	CP, Pl
Whose picture is this? <u>It's a thief's picture.</u>	CS, A, P
What are the cowboys doing? <u>They're talking.</u>	AP, PP
What are the sheriff and his helper going to do? <u>They're going to catch the thief.</u>	AP, FP, A

Frame II

Where is the sheriff now? <u>He's outside.</u>	CS
Who does he see? <u>He sees the thief.</u>	3S, A
How does the thief look? <u>He looks mad.</u>	3S
What is the thief doing? <u>He's running.</u>	AS, PP
What is the lady in the window doing? <u>She's watching.</u>	AS, PP

*Functor code

Article - A
 Copula Singular - CS
 Copula Plural - CP
 Auxiliary Singular - AS
 Auxiliary Plural - AP
 Present Progressive - PP

Future Progressive - FP
 Possessive - P
 Plural - Pl
 3rd Singular - 3S
 Past Regular - PR
 Past Irregular - PI

Test III (continued)

	Functors elicited
How does she feel? <u>She feels scared.</u>	3S
What is the sheriff going to do? <u>He's going to follow the thief.</u>	AS, FP, A

Frame III

Where are the sheriff and the thief now? <u>They're in a bar.</u>	CP, A
What are the sheriff and the thief going to do? <u>They're going to fight.</u>	AP, FP
What are the other cowboys going to do? <u>They're going to hide.</u>	AP, FP

Frame IV

What is the sheriff doing? <u>He's shooting the thief.</u>	AS, PP
What does he use to shoot the thief? <u>He uses a gun.</u>	3S, A
What's he going to do with the thief? <u>He's going to put him in jail.</u>	AS, FP

Frame V

Where is the thief now? <u>He's in jail.</u>	CS
What is the sheriff doing? <u>He's ripping the thief's picture.</u>	AS, PP, A, P
Why? <u>Because he caught the thief.</u>	PI, A
How does the thief look now? <u>He looks mad.</u>	3S
What are the sheriff and his helper going to do tomorrow? <u>They're going to catch another thief.</u>	AP, FP

Test III - (continued)

Now - you tell me the story... Functors
elicited

Where did the story start? It started in the jail. PR, A

Then where did the sheriff go? He went outside. PI

Who did he see? He saw the thief. PI, A

What did the sheriff do then? He followed the thief. PR, A

Where did the thief go? He went to a bar. PI, A

How did the cowboys in the bar look? _____ PR
They looked scared.

What did the sheriff do? He shot the thief. PI, A

Where did he take the thief? He took him to jail. PI

What did he do to the thief's picture? _____ PR
He ripped it.

What did the sheriff do to the door? He locked it. PR

Discussion

How many T.V. shows did you watch yesterday? _____ ? PR

This cowboy catches thieves, What else does a 3S
cowboy do? _____ ?

Whose work is it to put out fires? teach children? CS (3),
help sick people? It's a fireman's work, etc. P (3)
A (3)

Occasions for

Article - 19	Future Progressive - 6
Copula Singular - 8	Possessive - 5
Copula Plural - 5	Plural - 5
Auxiliary Singular - 6	3rd Singular - 6
Auxiliary Plural - 6	Past Regular - 6
Present Progressive - 6	Past Irregular - 6

Number of questions - 41

APPENDIX A. (continued)

91 / The Cowboy *

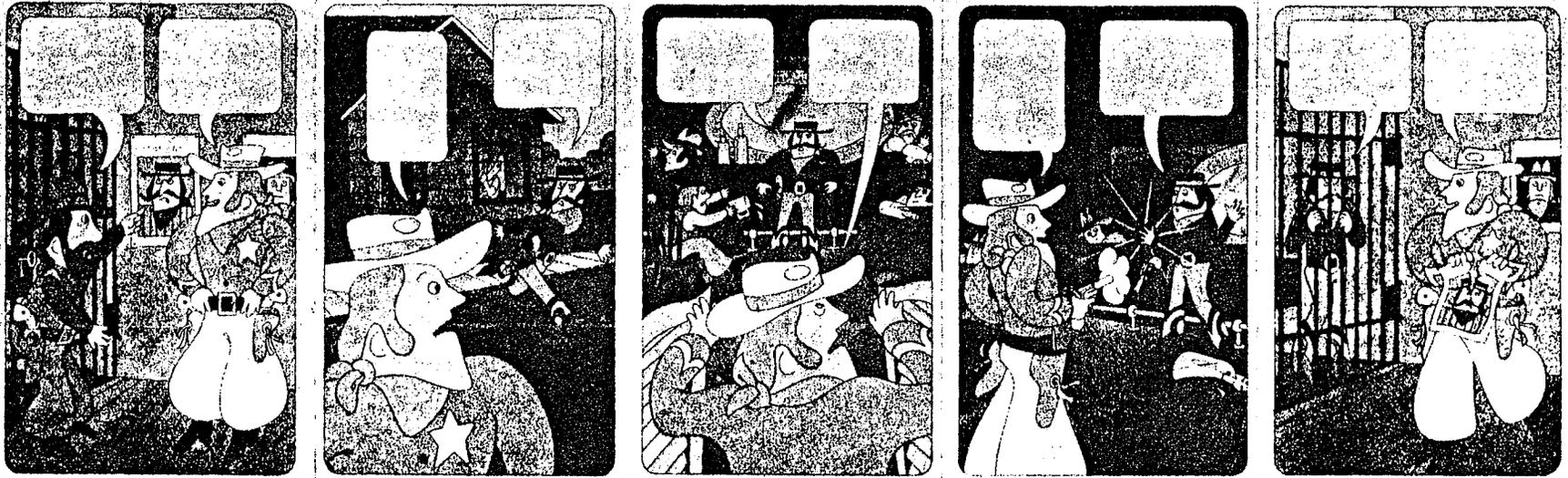


Figure 5

Test III Storyboard*

*David and Joseph R. Gladstone, Language Development Program, Science Research Associates (Canada) Ltd., 1970.

APPENDIX B. Subject Data Sheet

Name _____

Birthdate _____ Arrival in Canada _____

First Language _____ Languages of Parents _____

Grade _____ E.S.L. Training _____

I Date _____ Items taught	Comments
II Date _____ Items taught since I	Comments
III Date _____ Items taught since II	Comments
IV Date _____ Items taught since III	Comments
V Date _____ Items taught since IV	Comments
VI Date _____ Items taught since V	Comments

APPENDIX C. Individual and Group Error Profile

Test	I	II	III	IV	V	VI
ARTICLE						
Score						
Occasions						
Omissions						
a/the confusions						
Overgeneralizations						
COPULA SINGULAR						
Score						
Occasions						
Omissions						
Person						
Number						
COPULA PLURAL						
Score						
Occasions						
Omissions						
Number						
AUXILIARY SINGULAR						
Score						
Occasions						
Omissions						
Person						
Number						
AUXILIARY PLURAL						
Score						
Occasions						
Omissions						
Number						
POSSESSIVE						
Score						
Occasions						
Order						
Omissions						
Avoidance						
PLURAL						
Score						
Occasions (short)						
Omissions (short)						
Occasions (long)						
Omissions (long)						
Overgeneralizations						

APPENDIX C. (continued)

Test	I	II	III	IV	V	VI
PRESENT PROGRESSIVE						
Score						
Occasions						
-ing						
Auxiliary + ing						
Uninflected						
Aux. + uninflected						
Others						
FUTURE PROGRESSIVE						
Score						
Occasions						
going to						
Auxiliary + going to						
Uninflected						
Auxiliary + ing						
-ing						
Aux. + uninflected						
Others						
THIRD SINGULAR						
Score						
Occasions						
-s						
Uninflected						
Aux. + uninflected						
Others						
PAST REGULAR						
Score						
Occasions						
-ed						
Uninflected						
Aux. + uninflected						
Others						
PAST IRREGULAR						
Score						
Occasions						
Past Irregular						
Uninflected						
Aux. + uninflected						
Others						

APPENDIX D. Accuracy and Average Scores

Table 26

Accuracy Scores, Tests I - VI

Test	I	II	III	IV	V	VI
J.A.	77	75	80	78	79	86
L.P.	64	69	72	87	80	81
F.S.	63	72	78	73	81	83
J.P.	61	60	76	69	71	78
A.C.	61	68	65	74	73	70
B.H.	55	50	68	68	65	70
J.C.	54	55	55	54	60	60

Table 27

Average Scores, Tests I - VI

Subjects	J.A.	J.C.	F.S.	L.P.	J.P.	A.C.	B.H.
Article	97	78	94	92	86	89	77
Copula Singular	100	96	98	100	100	100	98
Copula Plural	89	89	96	91	92	94	75
Present Progressive	95	87	95	95	93	54	77
Future Progressive	100	53	100	94	88	88	48
Auxiliary Singular	95	59	86	93	92	66	69
Auxiliary Plural	98	71	88	100	94	98	67
Plural	77	43	53	69	44	80	52
Possessive	96	30	86	78	70	90	64
3rd Singular	35	5	36	25	30	1	7
Past Regular	6	1	12	16	8	--	1
Past Irregular	31	12	26	36	19	24	10

APPENDIX E. Test of Internal Consistency, Individual Subjects

Table 28

Pearson Product Moment Correlations between
Individual Performances on Tests I - VI

L.P.

Test	I	II	III	IV	V
II	0.85				
III	0.83	0.85			
IV	0.87	0.87	0.83		
V	0.84	0.91	0.70	0.85	
VI	0.76	0.76	0.92	0.79	0.66

B.H.

Test	I	II	III	IV	V
II	0.76				
III	0.97	0.85			
IV	0.71	0.50	0.75		
V	0.64	0.56	0.66	0.58	
VI	0.77	0.78	0.82	0.42	0.81

J.A.

Test	I	II	III	IV	V
II	0.92				
III	0.80	0.86			
IV	0.94	0.94	0.89		
V	0.88	0.97	0.86	0.97	
VI	0.87	0.94	0.88	0.95	0.96

Table 28 (continued)

J.C.

Test	I	II	III	IV	V
II	0.85				
III	0.72	0.88			
IV	0.47	0.79	0.81		
V	0.68	0.86	0.74	0.74	
VI	0.60	0.81	0.87	0.76	0.80

F.S.

Test	I	II	III	IV	V
II	0.80				
III	0.68	0.85			
IV	0.77	0.89	0.85		
V	0.70	0.91	0.92	0.91	
VI	0.69	0.89	0.91	0.89	0.96

J.P.

Test	I	II	III	IV	V
II	0.87				
III	0.87	0.95			
IV	0.80	0.92	0.92		
V	0.81	0.88	0.92	0.89	
VI	0.79	0.92	0.93	0.97	0.93

A.C.

Test	I	II	III	IV	V
II	0.89				
III	0.80	0.85			
IV	0.92	0.92	0.73		
V	0.85	0.96	0.92	0.83	
VI	0.86	0.87	0.92	0.92	0.96

APPENDIX F. Individual Functor Scores

Table 29

Functor Scores, J.C. (Tagalog)

Test	I	II	III	IV	V	VI
Article	82	74	73	79	73	83
Copula Singular	100	100	90	83	100	100
Copula Plural	60	92	94	100	88	86
*Combined Copula	82	100	92	93	100	90
Present Progressive	100	88	89	88	83	75
Future Progressive	30	43	17	57	100	67
*Combined Progressive	75	93	87	80	92	86
Auxiliary Singular	88	57	57	0	71	67
Auxiliary Plural	0	43	75	78	60	100
*Combined Auxiliary	73	46	67	54	73	86
*Short Plural	38	50	20	45	57	38
*Long Plural	--	80	--	0	67	--
Combined Plural	38	64	20	38	60	38
Possessive	13	28	29	39	56	8
3rd Singular	0	0	0	0	0	22
Past Regular	0	0	0	0	7	0
Past Irregular	25	13	0	25	13	0
Time (minutes)	15	15	11	13	11	10
Repetitions	15	14	16	12	7	11
Prompts	9	13	13	8	8	0

*Dulay and Burt (1974b) and Rosansky (1976) categories.

APPENDIX F. (continued)

Table 30

Functor Scores, J.P. (Tagalog)

Test	I	II	III	IV	V	VI
Article	71	62	90	100	87	96
Copula Singular	100 ^A	100	100	100	100	100
Copula Plural	50	100 ^A	93	100	100	100
*Combined Copula	81	100	97	100	100	100
Present Progressive	86	100	100	100	71	100
Future Progressive	64	80	86	100 ^A	100	100
*Combined Progressive	71	93	100	100	85	100
Auxiliary Singular	100	88	100	67	100	83
Auxiliary Plural	100 ^A	100	94	100	90	83
*Combined Auxiliary	100	93	97	75	100	88
*Short Plural	56	33	50	56	46	42
*Long Plural	0	--	--	0	--	--
Combined Plural	50	33	50	45	46	42
Possessive	50	50	67	69	90	75
3rd Singular	0	25	50	33	33	40
Past Regular	7	0	25	6	13	0
Past Irregular	17	13	14	25	14	29
Time (Minutes)	9	15	14	11	10	12
Repetitions	5	13	14	8	10	6
Prompts	15	16	12	4	6	8

*Dulay and Burt (1974b) and Rosansky (1976) categories.

^AAcquisition point.

APPENDIX F. (continued)

Table 31
 Functor Scores, F.S. (Tagalog)

Test	I	II	III	IV	V	VI
Article	100	97	99	88	93	88
Copula Singular	100 ^A	92	100	100	100	100
Copula Plural	75	100 ^A	100	90	100	100
*Combined Copula	100	100	100	95	100	100
Present Progressive	100	86	100	100	88	100
Future Progressive	100 ^A	100	100	100	100	100
*Combined Progressive	100	93	100	100	91	100
Auxiliary Singular	67	71	100	100	89	100
Auxiliary Plural	0	75	100 ^A	92	100	100
*Combined Auxiliary	55	77	100	96	93	100
*Short Plural	29	60	46	38	57	75
*Long Plural	0	100	--	50	100	--
Combined Plural	25	71	46	40	65	75
Possessive	79	80	57	100 ^A	100	100
3rd Singular	13	17	50	14	57	56
Past Regular	0	13	0	20	29	8
Past Irregular	17	28	6	36	36	42
Time (minutes)	12	12	10	10	10	8
Repetitions	9	11	7	10	4	3
Prompts	22	8	3	1	0	1

*Dulay and Burt (1974b) and Rosansky (1976) categories.

^AAcquisition Point.

APPENDIX F. (continued)

Table 32
 Functor Scores, L.P. (Tagalog)

Test	I	II	III	IV	V	VI
Article	82	82	89	100 ^A	96	95
Copula Singular	100 ^A	100	100	100	100	100
Copula Plural	50	100 ^A	95	92	92	94
*Combined Copula	100	100	97	100	100	100
Present Progressive	100	83	100	100	83	100
Future Progressive	60	100 ^A	100	100	100	100
*Combined Progressive	93	92	100	100	91	100
Auxiliary Singular	80	100	100	100	86	100
Auxiliary Plural	100 ^A	100	100	100	100	100
*Combined Auxiliary	85	100	100	100	92	100
*Short Plural	67	50	62	100	78	82
*Long Plural	0	33	--	0	100	--
Combined Plural	57	42	62	83	83	82
Possessive	60	72	42	100	93	88
3rd Singular	0	0	30	43	0	63
Past Regular	0	0	0	64	13	0
Past Irregular	33	50	0	56	75	6
Time (minutes)	9	10	10	7	8	10
Repetitions	8	6	12	6	5	12
Prompts	6	9	9	1	2	5

*Dulay and Burt (1974b) and Rosansky (1976) categories.

^AAcquisition Point.

APPENDIX F. (continued)

Table 33
 Functor Scores, A.C. (Cantonese)

Test	I	II	III	IV	V	VI
Article	100	90	81	100	100	82
Copula Singular	100 ^A	100	100	100	100	100
Copula Plural	100	83	100	100	100	86
*Combined Copula	100	100	100	100	100	94
Present Progressive	30	43	67	50	50	83
Future Progressive	83	71	100	83	92	100
*Combined Progressive	55	56	85	67	71	91
Auxiliary Singular	25	78	83	50	100	67
Auxiliary Plural	100 ^A	100	100	92	100	100
*Combined Auxiliary	45	86	92	73	100	83
*Short Plural	67	83	56	93	100	78
*Long Plural	100	100	--	50	100	--
Combined Plural	71	88	56	88	100	78
Possessive	100	86	58	100	88	100
3rd Singular	0	0	0	0	0	6
Past Regular	0	0	0	0	0	0
Past Irregular	17	38	0	69	13	0
Time (minutes)	10	10	10	9	8	8
Repetitions	3	6	11	7	9	2
Prompts	15	9	19	9	0	6

*Dulay and Burt (1974b) and Rosansky (1976) categories.

^AAcquisition Point.

APPENDIX F. (continued)

Table 34
 Functor Scores, B.H. (Korean)

Test	I	II	III	IV	V	VI
Article	77	38	82	100	79	72
Copula Singular	100 ^A	95	100	100	100	100
Copula Plural	75	50	94	79	57	92
*Combined Copula	100	81	100	94	100	100
Present Progressive	86	57	100	70	60	89
Future Progressive	8	50	29	8	75	100
*Combined Progressive	57	64	76	53	67	94
Auxiliary Singular	91	71	86	25	44	100
Auxiliary Plural	75	43	90	56	50	83
*Combined Auxiliary	88	57	88	41	50	100
*Short Plural	57	60	77	80	0	50
*Long Plural	0	100	0	0	0	--
Combined Plural	50	80	71	67	0	50
Possessive	50	41	70	88	67	63
3rd Singular	0	0	0	33	0	17
Past Regular	0	0	0	10	0	0
Past Irregular	0	14	0	19	13	13
Time (minutes)	14	21	16	10	11	11
Repetitions	18	20	23	8	9	5
Prompts	18	17	23	7	10	6

*Dulay and Burt (1974b) and Rosansky (1976) categories.

^AAcquisition Point.

APPENDIX F. (continued)

Table 35
 Functor Scores, J.A. (Tagalog)

Test	I	II	III	IV	V	VI
Article	100 ^A	100	95	100	100	94
Copula Singular	100 ^A	100	100	100	100	100
Copula Plural	50	81	100 ^A	93	100	100
*Combined Copula	81	100	100	95	100	100
Present Progressive	100	100	71	100 ^A	100	100
Future Progressive	100 ^A	100	100	100	100	100
*Combined Progressive	100	100	85	100	100	100
Auxiliary Singular	100	100	71	100 ^A	100	100
Auxiliary Plural	100 ^A	100	100	92	100	100
*Combined Auxiliary	100	100	85	100	100	100
*Short Plural	75	50	67	100	71	90
*Long Plural	100	86	--	0	100	--
Combined Plural	82	62	67	87	83	90
Possessive	100	86	94 ^A	100	94	100
3rd Singular	25	29	50	22	20	55
Past Regular	14	0	25	7	0	0
Past Irregular	14	40	25	14	44	43
Time (minutes)	8	9	8	7	8	7
Repetitions	9	4	6	2	3	1
Prompts	9	7	15	4	5	3

*Dulay and Burt (1974b) and Rosansky (1976) categories.

^AAcquisition point.