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SYSTEMATICITY/VARIABILITY AND
STABILITY/INSTABILITY IN INTERLANGUAGE SYSTEMS

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One of the most promising settings for the collection of data for second-language acquisition research is that of the "immersion" classroom. In the Canadian French-immersion programs, children are apparently achieving great fluency in French as a second language outside of the traditional formal language classroom. Their acquisition of French in an immersion environment has provided a wealth of exciting data for research.

The Toronto French immersion program has been evaluated since its beginning by the Bilingual Education Project of the Ontario Institute for Studies in Education (see, for example, Bacik, Swain & McTavish 1974 and Barlik and Swain, in press). Specific consideration of the acquisition of French as a second language in the Toronto French immersion program begins with the work of Swain, Naiman and Dumas (1972). Other related studies include Naiman (1973), Swain, Dumas and Naiman (1974), Swain (1975), Selinker, Swain and Dumas (1975), and Swain (in press). For a review of the research literature related to French immersion programs in Canada, see Swain (1974).

Selinker, Swain and Dumas (1975)—henceforth, SSD—attempted to show that the Interlanguage (IL) Hypothesis, which was originally based on the study of second-language learning data
from adults, should be extended to at least one other language-acquisition setting. They attempted to show that Toronto French-immersion children, even when they seemingly communicate quite fluently in French, produce language forms that are very similar to those produced by adult learners. It is predicted in that paper that children in non-simultaneous bilingual settings will produce such forms under the sociolinguistic condition of absence of native-speaking peers of the target language. What is not discussed in that paper is the amazing amount of variability on the part of each learner, as well as between learners. For example, SSD found in their data that a particular child had, within a two-minute segment on the tape, produced three variations in his French of the semantic content, "I like...". He said, first of all, (1) J'ai aime... then the correct: (2) J'aime... and, finally, a different incorrect form: (3) Je aime...

How are we to account for such variability? And is it possible to maintain the notion "system", so central to the II. hypothesis, given such variability? At present there appear to be no easy answers to these questions. In this paper on "variability" and "instability", we present what we have discovered to date. We believe that we have been able to sharpen these questions somewhat, and that the new data that we have collected helps us to understand a little better the principles of the organization of second-language (L2) speech in immersion programs. However, what we say in this paper has to be regarded as very tentative since it is only one step in a very long process.

GENERAL ISSUES

Our goal, in the most general terms, is to understand something about the processes and strategies of second-language acqui-

2 The following definition appears in SSD (1975:16): "Non-simultaneous child-language acquisition settings are opposed to simultaneous child-language acquisition settings (see Swain 1972; Swain & Wesche 1973). Simultaneous child-language acquisition refers to the learning of two native languages, i.e., the learner is exposed to two languages from birth and learns them concurrently as two first languages. Non-simultaneous child-language acquisition refers to the learning of a first language followed by the learning of a second language in childhood once the first language is established."
formed by a variety of learning and production strategies, language transfer (both positive and negative) clearly being a major strategy.

From these facts emerge the following hypothesis: there exists a separate linguistic or psycholinguistic system (interlanguage) which forms in the mind of the learner and which may take the form of a pidgin and which may develop into a separate dialect in its own right. This system draws on both the NL and TL, as well as other sources, for its surface forms. (An assumption held by some researchers working in the area of the organization of second-language speech—but not by the authors of this paper—is that the learner's language is (a) "directional" in that it evolves in stages which are closer and closer "approximate" the norm of the TL, and (b) that these stages are necessarily discrete (cf. Némusor 1971). Note that (a) and (b) are separable claims. These are the crucial assumptions which separate the "interlanguage hypothesis" from the "approximative systems hypothesis", as we understand it.)

Since the proposal of the IL hypothesis in the period 1967-69, many questions have been raised. The following have proven particularly troublesome:

1) What does "systematic" mean? It cannot mean that you predict second-language speech by rule; it might mean that second-language speech is the result of recognizable strategies. Are there other possibilities?

2) What does the "system" consist of?

3) Does the IL hypothesis provide a framework for ongoing research and, if so, what is that framework?

4) Does the IL exist in the mind of the individual learner or is it what groups have in common? Or are both simultaneously possible?

5) Exactly what gets fossilized over time? Forms? Strategies? Or both? And are some types of fossilization permanent?

6) How can there be a "system" when in many researchers' data there appears so much variability among learners? That is, is there a cutoff point where the notion "system" no longer makes sense?

As a result of our research on the L2 speech of the Toronto French-immersion children we find the following studyable facts to hold true:

1) The Toronto children in June of their third year of French immersion were able to communicate adequately in French. Yet their French is noticeably not the French of their teachers. From the second year to the third year, some things remain in their learner speech over time and some things change.

2) It is impossible to account for all of the surface forms in their second-language speech as the result of translation from their NL, though language transfer (both positive and negative) is clearly a major strategy.

From these facts emerge the following hypothesis: when these children attempt to express meaning in French, they are operating with a separate linguistic or psycholinguistic system, namely a type of French II, which shares certain features with pidgin languages and which is developing into a separate dialect in its own right. We are convinced that this hypothesis is reasonable, but we must agree with Hattie (1975) that we have to be open to alternative explanations.

As was pointed out in SSD, there are four sets of observable facts upon which the IL hypothesis is based, and which may be used to evaluate that hypothesis. Each of these observable facts is studyable: first, the stability over time of certain errors and other surface forms in learner-language systems (i.e., "fossilization"); second, the mutual intelligibility that appears to exist among the speakers of an IL; third, the phenomenon of backsliding, or the regular reappearance in bilingual speech of fossilized errors that were thought to be eradicated; and fourth, the systematicity of the IL at one particular point in time. In the present study, we chose to look at a developing IL for systematicity at two separate points in time, and to look at its stability over time. Accordingly, in this paper we report on a longitudinal study. In addition, as a byproduct of our study, we are able to comment on some instances of backsliding.

SOME THEORETICAL PROBLEMS

Before we discuss the data, we feel we must consider some central theoretical problems, and clarify some terminological distinctions in the process.

First of all, in this paper we call learner speech "systematic" when it evidences an internal consistency in the use of forms at a single point in time; we call such speech "stable" when it evidences such a consistency in the use of forms over time. (Generally, in longitudinal language-learning studies, the precise definition of "over time" has been determined by the length of time between..."
successive sampling sessions; in some studies, the intervening period has been two weeks, while in others, it has been up to one year.) Correspondingly, speech which is not systematic at a single point in time evidences "variability," while speech which is not stable over time evidences "instability." Where the learner's language lacks internal consistency, it is the task of the researcher to isolate and identify those psychological, social or stylistic factors which cause variability and instability.

Second, in our own thinking about L2 acquisition, we have found it useful to distinguish two types of individuals. A Type I individual is one whose L2 is characterized by stability. Such an individual has stopped learning, where "learning" is defined as instability or change in the L2 system over time. A Type I individual has been variously described in the literature as having a "fossilized competence" (Coullet 1968), a "functional competence" (Jain 1969, see also Jain 1971:208) or a "stable approximative system" (Nemser 1971). A Type II individual is one who continues to "learn" in the sense of learning described above. That is, this individual has an L2 system characterized by its instability; it is in a constant process of change over time. Studies by Cancino, Rosansky and Schumann (1974) and Hakuta (1975) have described Type II learners, and note the difficulty involved in attempting to make empirical or theoretical statements about such learners, due to their characteristic lack of stability over time as well as their frequent lack of systematicity at a particular point in time. Adjemian (1975) describes the competence of the Type II learner as "permeable," where "permeability" is defined as "the property of L1s which allows," on the one hand, "penetration into an L2 system of rules foreign to its internal systematicity," and which allows, on the other, "the overgeneralization of an L1 rule."(21)

We feel it is important to note that the individuals in the ongoing Toronto study reported here, in SSD, in Swain, Naiman and Dumas (1972), and in Swain (1975) are Type II individuals, and we hypothesize that with the passage of time, they will become Type I individuals with stabilized competences and perhaps with their own dialect of French. We feel that this process will be gradual and not necessarily linear.

The third issue we discuss centers upon the fact that in attempting to characterize the nature of the competence which underlies the surface forms in an L2, both the term "rule" and the term "strategy" have been used very loosely, as Cancino, Rosansky and Schumann (1974) point out. Here, we specifically ask the following questions:

1) Are L2 surface forms shaped by the use of morphological and syntactic rules of the sort described by theoretical linguists?

2) Or, are they shaped by strategies such as simplification, transfer of NL rules, or prefabrication?

3) Or, are they simultaneously shaped by both (1) and (2)?

Past attempts to incorporate both grammatical rules and strategies into a model of second-language acquisition have led to serious theoretical impasses, as Adjemian (1975) points out. Perhaps most central to the dilemma is the fact that L2 acquisition research so far has centered upon productive performance in L2 speech and writing. It is important to note that syntactic rules as they have traditionally existed in linguistic grammars are not descriptive of actual speech performance, but of the intuitions of native speakers of a language. Since we do not know very much about the intuitions of second-language learners, or how to gain access to those intuitions, it is, perhaps, unwise to formulate sets of syntactic rules to describe the L2, at least at this point. (This decision is, perhaps, reinforced by the fact that in discussions among theoretical linguists one begins to hear the suggestion that grammars may be most efficiently characterized, not as sets of underlying rules, but as collections of productive and perceptual strategies (cf. Lakoff and Thompson 1975).)

In this paper, we primarily reserve the term "rule" to describe those systematic grammatical structures which have been called "surface" (cf. Kegl 1975), since we feel that only these types of grammatical rules can be safely inferred from the data at our disposal. As regards "rules" in this sense, we have been able to infer from the Toronto French-immersion data we have looked at, that these Type II individuals are using in their L2 grammatical structures such as word order, inflection and function words to convey meanings and relationships. (Thus, these grammatical structures are, to some degree, similar to the "rules" described by Lado (1967:51-56).) In this paper, we discuss inflection in detail, and begin to explore the grammatical relations of different rules.

Similarly, the term "strategy" needs clarification. In the past, the term seems to have been used ambiguously to refer to either a "learning strategy" or a "production strategy," neither of which has been clearly defined. In this paper, we use the term "learning strategy" to refer to a process of rule-formation. A learning
strategy is a tentative hypothesis which the learner forms about the nature of the L2, which is tested and subsequently modified. So, for example, a learner might begin by using a learning strategy of language transfer, using L1 rules in the IL. The rules which are produced by learning strategies are, by definition, unstable—changing over time. Thus, learning strategies are a part of the general process of hypothesis-formation and hypothesis-testing in language learning.

A “production strategy”, on the other hand, is a more general process. A production strategy is a systematic attempt by the learner to express meaning in the TL, in situations where the appropriate systematic TL rules have not been formed. A “production strategy” does not necessarily result in a rule, since it may be an “avoidance strategy” or an “appeal to authority”. And, unlike the learning strategy just discussed, a “production strategy” may be either stable or unstable.

Clearly, in the Type II individual both types of strategies are used. The IL is still changing over time—hypotheses are formed, tested, rejected and reformed; learning strategies are in operation. Similarly, the individual is attempting to express meanings for which he has no appropriate TL rules, so that production strategies are also in operation.

However, for the Type I individual, who by definition seems to have a stabilized IL, learning strategies are for the most part no longer operative. Stable production strategies are of course used by the Type I learner, who has not achieved native-like proficiency.

In light of the discussion above, therefore, in this paper we attempt to avoid the term “strategy” as used in an undifferentiated sense, but speak either of learning strategies or production strategies whenever those strategies can be clearly distinguished.

A final point to remember is that one cannot study either rules or strategies directly; one can only study spoken and written IL production. The types of rules and strategies discussed above are only inferable from speech and writing.

MORE DATA FROM TORONTO FRENCH IMMERSION

Methodology

Corder (1975), whose methodological suggestions we followed here, states that researchers need to make longitudinal studies of language learning, correlating the linguistic development of learners with the data which is put before them, carefully distinguishing between “input” and “intake”. He further states that, in a longitudinal study, there are three types of data upon which one should base descriptions of successive stages of IL speech:

1) A body of utterances by the learner is referred to as the “textual” data. Although “textual” data is usually too small in quantity and may not be a representative sample of the learner’s language, it nevertheless provides useful hypotheses about the learner’s language.

2) Hypotheses which were formed on the basis of the textual data require “explanatory refinement” by several types of contrastive analysis, and this provides a second and important auxiliary source of data about the learner’s language.

3) These hypotheses are validated or invalidated by “elicitation procedures”, whose object is to gain access to the learner’s intuition about particular aspects of his IL.

In investigating the issue of stability and systematicity in second language speech, we claim that it is very important to quantify one’s observations whenever possible, since the use of anecdotal data can be extremely misleading in this type of investigation. Labov (1972) in his work on dialectal variation, has pointed out repeatedly that speech is perceived “categorically”, that is, socially marked forms tend to be more salient to the observer than they are in fact. Specifically, researchers, when working with speech data, will often tend to perceive speech even more categorically than most, because they are attempting to find invariant, homogeneous speech patterns. In order to avoid the resultant bias of the data, Labov has proposed a principle of accountability:

...any variable form (a member of a set of alternative ways of “saying the same thing”) should be reported with the proportion of cases in which the form did occur in the relevant environment, compared to the total number of cases in which it might have occurred. (Labov 1972:94)

That is, the data should be reported in ratio or percentage form if possible. This means that we should ask: What percent of the time did the variable form appear in the relevant environment? In our investigation of variability in interlanguage systems, we have found this principle to be extremely important, and refer to it below in our discussion of “morphological data”.

In quantitative studies, the crucial problem of what to count is by no means easily solved. Here again, some guidelines set out by Labov are helpful. A three-step process is used:
1) identify the total sample of utterances in which the feature varies;
2) decide on the number of variants which can reasonably be identified, and set aside the environments in which the distinctions are neutralized;
3) identify those factors which might cause the frequency with which the form occurs. (Labov 1972:82-83)

In this paper we report on one of a series of studies; we look at the development of TL speech in terms of "textual" data in Corder's (1973) sense, analyzed within the guidelines proposed by Labov. We look at three areas in the speech of the immersion children described below: morphological, syntactic and semantic. In the morphological data, we look at the choice of allomorphic form; in the syntactic data, we look at the choice of alternate surface structures and discuss possible cases of syntactic rule transfer; in the semantic data, we look at the choice of lexical items and certain semantic processes.

Importantly, we note that at both Time I and Time II, variability occurs within each of these three areas. In morphology, ordinarily, any variability necessarily results in incorrect forms or errors, since there usually exists only one possible correct form in the target language. However, a great deal of variability may be permitted in syntax and semantics, since several correct forms may be possible in the target language. Therefore, assessment of morphology takes the form of a strict error analysis. On the other hand, because investigation of syntactic and semantic structures and forms presents problems beyond the scope of a strict error analysis, we supplement the error analysis with other techniques, among them the techniques which we discussed above.

Procedure and subjects

Time I Data. In our study, data at Time I were collected from ten boys and ten girls, each about seven and a half years old and each a native speaker of English. With the exception of one boy who occasionally used German at home, for each child it was the first attempt at learning a second language. At Time I data collection, the children were completing their second year of a French immersion program in an English-language elementary school in Toronto. During the last month of their second year of French immersion, Guy Dumas (himself a native speaker of French) tape-recorded a conversation in French of about 10 to 15 minutes in length with each of the children. The conversations centered around the students' personal interests, their vacation plans, descriptions of pictures and story-telling from a series of pictures. The atmosphere was relaxed, as Dumas had spent several hours a month with the children over a two-year period. The children were at ease when they responded to his questions and spoke of their activities.

Time II Data. During the last month of the children's third year of French immersion, Uli Frauenfelder collected data in the same Toronto French immersion class, with ten of the same children, (now 8 1/2 yrs. old), using the same techniques (and even the same pictures) as were described above.

I.I Base-Line Data. In order to establish a TL base-line for comparative and contrastive purposes, four monolingual English-speaking children in Seattle (ages 7 & 8) were given the picture task in the same way.

(There are many potentially relevant variables that have to be taken into account if one is to understand the organization of second-language speech. One area of great difficulty in this case is the lack of comparative data on the acquisition of the two native languages involved, French and English. Importantly for the future, Guy Dumas has begun to collect native language (NL) data on monolingual French-speaking children in Toronto, so that TL base-line as well as the NL base-line we began to establish in Seattle may be achieved for comparative purposes (see section on "semantic data"). The serious reader should realize that the lack of such crucial information is not only frustrating, but also, might vitiate experimental findings.)

Morphological Data

We examined two areas of morphology in the transcribed speech of these children. We looked at the third person pronouns for gender agreement and at verbs for number agreement with first and third person subjects. Our decision to study these items was influenced by our desire to deal with areas that were easily quantifiable (see Labov's guidelines, above). The criteria that we used for the selection of these items include frequency of occurrence and number of variants. The high frequency of occurrence of the pronouns and verbs in our data permits a reliable statistical study.

We believe that these forms will also occur frequently in the data of other researchers studying the acquisition of French as a second language, and therefore it should be possible to compare
and verify findings across studies. The binary nature of the grammatical categories of number and gender (singular/plural and masculine/feminine) further facilitates an analysis since there are only two variants to deal with for each grammatical category. Consequently, the assessment of gender and number can take the form of a strict error analysis, with a form being either correct or incorrect in a given obligatory context. One further advantage of studying gender is the possibility of avoiding semantic ambiguity, since the gender of the referent is clear from the context in this study.

Procedure for analysis of morphology. Our procedure, following Labov, was to first count the total number of samples in which the variants occurred. The cases in which the variants could not be unambiguously identified were deleted. So, for example, the variants which were phonologically similar or neutralized were not counted. In some cases, for example, il could not be distinguished from elle, because the form je/ was produced rather than either il/ or je/. Similarly, in some contexts it was impossible to determine whether a verb was singular or plural since in French, endings are often not pronounced. Ratios were then set up to give the percentage correct forms for each obligatory context. We then attempted to identify patterns of systematicity and stability, and finally we attempted possible explanations of these patterns in terms of underlying strategies as well as the various social and linguistic factors we suspect were involved.

Some theoretical considerations. The binary grammatical categories of gender and number each consist of two components—masculine/feminine, and singular/plural, respectively. Within a grammatical category, the realization of either of the two components is determined by the obligatory context (arbitrarily, obligatory context X or Y) in which it occurs. For the data which we will be considering, there are variants (arbitrarily, variant x or y) like il or elle that are required in the respective obligatory contexts. The ratio that will be used can be easily described in terms of this notation:

\[
\frac{\text{total number of variant } x \text{ produced in obligatory context } X}{\text{total number of obligatory context } X}
\]

So, for example, this ratio for the masculine context would take the form:

\[
\frac{\text{total number of masculine variants } (il) \text{ produced in obligatory context (masculine)}}{\text{total number of obligatory contexts for masculine}}
\]

The decision as to which patterns in the learner speech should be considered “systematic” at one particular point in time, or “stable” over time is not simple. We have found it necessary to develop a new taxonomy to handle this question for binary grammatical categories like number and gender. We have tried to define some statistical parameters for the terms “systematic” and “stable” as used in the area of morphology. In Table 1 we list the possible distributions (both systematic and variable) of variant x for the single obligatory context X at a single point in time. In Case 1, systematicity (C) is arbitrarily defined as a correct usage of ≥ 90% of variant x for the obligatory context X. In Case 2, another type of systematicity (C) is shown, in which there is less than 10% correct usage of variant x in the obligatory context X. (We follow Brown 1973, and Håkala 1975, in choosing a 90% criterion. Note that since we are dealing with a binary system, where variant x is used less than 10% in obligatory context X, it is true by definition that variant y is used more than 90% in that context.) Finally, it should be noted that we have assumed that any distribution in a sample that is not systematic is variable; that is, a result of between 10% and 90% correct in a given obligatory context is considered a variable occurrence of the variant, as in Case 3. This definition of variability is too broad to be meaningful in terms of its internal structure, but for the purposes of this paper, it serves to delineate the parameters of systematicity at one particular point in time.

Whereas Table 1 shows the logically possible distributions for one variant, Table 2 shows the logically possible distributions (systematic and variable) for both variants x and y in their respective obligatory contexts at a single point in time. It is at this point, where both obligatory contexts of a binary grammatical category are being considered, that inferences about underlying

### Table 1

<table>
<thead>
<tr>
<th>Case</th>
<th>Pattern</th>
<th>Symbol</th>
<th>Definition</th>
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<tbody>
<tr>
<td>1</td>
<td>Systematic</td>
<td>C</td>
<td>usage of ≥ 90% of variant x in obligatory context X</td>
</tr>
<tr>
<td>2</td>
<td>Systematic</td>
<td>C</td>
<td>usage of &lt; 10% of variant x in obligatory context X</td>
</tr>
<tr>
<td>3</td>
<td>Variable</td>
<td>V</td>
<td>usage of between 10% and 90% of variant x for obligatory context X</td>
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</tbody>
</table>
production strategies can be made. When we consider the occurrence of both variants in both obligatory contexts, three types of systematicity are possible in that 3 different underlying strategies are used: correct application, incorrect application, and overgeneralization. In Table 2, the systematicity shown in Case 1 represents the correct distribution of each variant in its obligatory context. That is, variant \( x \) (for example, if) is used more than 90% of the time in obligatory context \( X \) (for example, in a masculine context which demands \( i \)), and variant \( y \) is used more than 90% of the time in obligatory context \( Y \). This type of systematicity is of course expected of native speakers (i.e., we would expect native speakers to mark correctly for gender). The type of systematicity shown in Case 2 is the exact reverse of the correct distribution just mentioned—each variant occurs at less than 10% in its obligatory context. It should be noted that the type of systematicity illustrated in Case 2 is highly unusual. The systematicity shown in Cases 3 and 4 is much more likely. Here, in Case 3, variant \( x \) is used more than 90% of the time in both obligatory context \( X \) and \( Y \); by definition, then, in this case variant \( y \) is used less than 10% of the time in obligatory context \( Y \). So, for example, in Case 3, the masculine form \( i f \) would be used not only in the obligatory masculine context \( X \), but also in the obligatory feminine context \( Y \), at a frequency of \( \geq 90% \). Case 4 illustrates the exact opposite situation, where variant \( y \) is used predominantly for both obligatory contexts. Cases 3 and 4 illustrate a type of overgeneralization. Although this definition of overgeneralization is very restrictive and will have to be revised, it seems particularly important at this time to try to begin to establish a quantitative definition of overgeneralization, since, as is well-known, the term has been used too loosely in the past in this field to have much usefulness.

The five additional possibilities listed in Table 2 (Cases 5-9) represent variable distributions more complex in nature. An understanding of these variable distributions requires an analysis of the phonological, social, semantic and other environments that favor \( i f \) and \( y \). We were unfortunately not able to complete such an analysis in the course of this study. More focused work in this area will obviously allow us to redefine and better understand that variable production which lies between the 10% and 90% range (Cases 1 through 5) in Table 2.

Turning now to a consideration of “stability” and “instability” over time in the occurrence of a single variant \( x \) in obligatory context \( X \), we postulate nine logical possibilities into which a learner's production must fall between Time 1 and Time 2. These are illustrated in Table 3. Three of those possibilities (Cases 1-3) illustrate stability (possible fossilization); three (Cases 4-6) illustrate “improvement,” a type of instability; and three (Cases 7-9) illustrate “backsliding,” another type of instability.

The learners' production shows stability when there is no change in the distribution of the variants over time. Specifically we find that there are three types of stability (Cases 1-3) that are possible when considering one variant in its obligatory context (see Figure 4). In Case 1, stability is characterized by the variant being used \( \geq 90\% \) correctly at both Time 1 and Time 2. (In terms of the personal pronouns, this would, for example, imply correct usage of \( \geq 90\% \) of \( i f \) in its obligatory context (masculine) at both times.) In

<table>
<thead>
<tr>
<th>Case</th>
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<th>Obligatory Context X</th>
<th>Obligatory Context Y</th>
<th>Production Strategy</th>
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<td>C</td>
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<td>Incorrect Application</td>
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<td>Systematic</td>
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<td>Overgeneralization</td>
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<td>8</td>
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<th>Improvement</th>
<th>Backsliding</th>
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<td>T1 T2</td>
<td>T1 T2</td>
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<td>C → C</td>
<td>C → C</td>
</tr>
<tr>
<td>3</td>
<td>V → V</td>
<td>V → V</td>
<td>V → V</td>
</tr>
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</table>

*Indicates “fossilization”.

TABLE 3
The Logically Possible Distributions of Stability and Instability Across Time in Occurrence of Variant \( x \) in Obligatory Context \( X \).
Case 2, we show stability where at both Time I and Time II there is Systematicity C; that is, the variant is produced correctly less than 10% at both Time I and Time II. In Case 3, we find that there is instability in the sense that at Time I and Time II, there is variability of production. (Dickerson (1975) shows the existence of a similar “stability of variability” in the phonological domain.)

Turning next to the six types of instability, we see two broad categories—“improvement” (Cases 4-6), and “backsliding” (Cases 7-9). Improvement over time is shown in three ways. First, Case 4 shows the learner moving from Systematicity C to Systematicity C. In other words, the learner has improved from a production of ≤ 10% on the masculine pronoun il in the masculine obligatory context, to a production of ≥ 90% of il in that context at Time II. Case 5 shows the learner moving from a variable production (between 10% and 90% in obligatory context) to Systematicity C (≥ 90%). Case 6 shows the learner improving from Systematicity C (≤ 10%) at Time I to variable production at Time II.

Backsliding over time is also shown in three ways. Case 7 (in the right-hand column of Table 3) shows the learner moving from Systematicity C (≥ 90%) at Time I to variability (between 10% and 90%) at Time II. Case 8 shows a movement away from Systematicity C at Time I to Systematicity C at Time II. Finally, Case 9 shows the learner moving from variable production at Time I to Systematicity C at Time II.

It is important to note that these permutations are only logical possibilities: not all of them occurred in our data. It would be interesting to separate out those that did not occur and attempt an explanation for these results.

We have now considered all nine possible patterns of stability and instability over time of the occurrence of a single variant x in its obligatory context X. If we now examine the distribution of both variants x and y in their respective obligatory contexts X and Y, in terms of stability and instability over time, we find that there are 81 possible combinations. In other words, each of the nine cases listed in Table 2 for a variant x in its obligatory context X, can be combined with any of the nine cases for the second variant y in its obligatory context Y, giving 81 possibilities.

Results of Gender Analysis. We will first consider the children’s performance on their marking for gender on third person pronouns. In order to avoid ambiguity, we considered only those pronouns with human referents.

Some striking results are revealed in the following data:

<table>
<thead>
<tr>
<th>Obligatory Context</th>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Correct</td>
<td>% Correct</td>
<td></td>
</tr>
<tr>
<td>Time I</td>
<td>100 (C)</td>
<td>33 (V)</td>
</tr>
<tr>
<td>Time II</td>
<td>100 (C)</td>
<td>86 (V)</td>
</tr>
</tbody>
</table>

It is immediately apparent that the learners as a group do not perform equally well in supplying each correct variant (il or elle) in its obligatory context. For some reason, the masculine pronoun il is the preferred or unmarked form which is overgeneralized to other contexts. In its obligatory context, the masculine pronoun is used correctly at both Time I and Time II by all learners. However, the feminine pronoun is used correctly in its obligatory context only 33% of the time at Time I (implying that the incorrect masculine pronoun is used at 67% of the time at Time I). There is considerable improvement by Time II, when the feminine form is used correctly 86% of the time.

Table 4 lists the results in terms of individual performance on personal pronoun gender over time, and reveals more accurately some of the trends we mentioned above. First, for the masculine obligatory context, we find systematicity and stability in all the learners in their use of the masculine pronoun il. The results for the obligatory context for feminine, however, are much more complicated. The learners exhibit complex patterns of systematicity and variability at Time I and Time II, as illustrated in the far-right column of Table 4. It is most important to note that, at Time I, four learners (Child 1, 3, 4 and 5) have overgeneralized the masculine variant to feminine obligatory contexts, where overgeneralization is defined in the strict terms illustrated in Table 2. At Time II, however, none of these learners are any longer overgeneralizing the masculine variant, in the strict sense of the term. There is still some variability evidenced at Time II in the use of the feminine variant in its obligatory context, but improvement is clearly shown in the performance of five children (1-5). Children 6-10 show stability in performance over time, though Child 9 shows some backsliding, which is not significant in terms of our analysis.

Discussion of Results of Gender Analysis. A researcher with the task of predicting the performance of these learners on the production of pronoun gender would not have anticipated the varied results obtained. Predictive statements based on a contrastive analysis of NL and TI, for example, would have suggested few errors within the obligatory contexts provided by the human referents used in this study, since the pronouns “he” and “she” in
English correspond exactly to the French *il* and *elle* in those contexts. Predictions based on the cognitive development of the children would also have anticipated few errors, since the linguistic and cognitive notions of gender should be well developed by the age of seven years. As shown in Table 4, the results indicate, however, that at Time I, some of the children completely overgeneralized the masculine variant to the feminine obligatory context.

Since a good explanation for these results is not readily apparent, we can only speculate about what is going on in the children’s heads.

The observation has been made elsewhere (Couler 1968) that some learners seem to make a decision that they do not want to make the extra effort to be correct. As it stands, those learners feel they can communicate "adequately" with errors intact. It is at this point that Corder's (1972) suggested elicitation procedures might prove insightful to begin to identify types of learning strategies.

### Table 4

<table>
<thead>
<tr>
<th>Percent Correct in Obligatory Context Masculine</th>
<th>Percent Correct in Obligatory Context Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>Time</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>I</td>
</tr>
<tr>
<td>2</td>
<td>II</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

*Some learners did not supply sufficient (i.e., ≥ 5) obligatory contexts for masculine, so their scores were not included here.*

Subject-Verb Agreement: Analysis and Results. We next consider the learners' performance on subject-verb agreement. The nature of the experimental task elicited primarily third person verb forms in the narration of the stories, and first person singular verb forms in answering questions. Consequently, the sample of utterances examined for subject-verb agreement was limited to third person and first person verb forms, in the present tense.

In French, the pronunciation of the third person singular and plural verb forms is often identical (e.g., la fille donne and les filles donnent). Thus, in spoken French, the singular-plural distinction is not made for all third person verbs. Following Labor's guidelines, those cases were set aside in which the singular-plural verb conjugation was neutralized. Such “ambiguous” verb forms made up about 60% of all the third person verbs produced by the subjects, both at Time I and at Time II. Where verb forms were used which did make a singular-plural distinction in the third person, it was possible to obtain some measure of the learners' patterns of verb agreement.

The following data shows the patterns of singular-plural verb agreement with third person verbs at Time I and Time II:

<table>
<thead>
<tr>
<th>Subject Type</th>
<th>(n=119)</th>
<th>(n=40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% correct</td>
<td>% correct</td>
<td></td>
</tr>
<tr>
<td>Time I</td>
<td>100% (C)</td>
<td>100% (C)</td>
</tr>
<tr>
<td>Time II</td>
<td>100% (C)</td>
<td>100% (C)</td>
</tr>
</tbody>
</table>

The data we have on singular/plural verb agreement for the third person suggests that the learner is using the singular form of the verb in plural contexts. With singular subjects, the learners never use a plural verb; they use only singular verbs with singular subjects, and, by the qualitative definition above, they are systematic (C) in that usage. However, with plural subjects, the learners use predominantly singular verbs instead of plural verbs. Note that their usage of singular verbs with plural subjects is not systematic, by the criterion of “less than 10% correct” set above.

It is variable (V), at 14% correct at Time I, and 28% correct at Time II. At Time II, there is some improvement in the correct use of the plural verb, but the learners still show variability.

This failure to use the singular verb form correctly cannot be the result of transfer, since English consistently marks the singular and plural verb forms of the third person present tense differently. A possible factor which might contribute to the frequency of the singular verb form is the previously-mentioned fact that in French, the third person singular/plural distinction is very often neutralized in speech. It may be that learners become the very thing that they are trying to reproduce.
between the singular and plural forms for verbs like donner and tomber, they fail to systematically distinguish the singular and plural forms for other verbs like être and faire. And, in most cases the spoken form of the “ambiguous” verbs most closely resembles the singular verb form, e.g., donn(ent), tomb(ent). It may be that, by analogy, the learners prefer the singular verb form of être or faire.

We next examine the first person singular forms of two verbs, avoir and aller, for subject-verb agreement. The nature of the experimental task appeared to elicit these two verbs in the first person singular form very frequently. In addition, because the first person singular forms of avoir and aller are easily distinguished from the other present tense forms of those verbs, almost no ambiguous contexts arise.

In using the first person singular of the verb avoir, the learners maintain correct subject-verb agreement 100% of the time at both Time I and Time II. (C \rightarrow C) That is, at Time I, where there were 17 utterances containing the first person singular subject and the verb avoir, the learners use the correct verb form 17 times; at Time II, out of 7 utterances containing a first person singular subject, the learners are correct 7 times in verb use.

It must then be assumed that the learners had acquired the correct verb form for the first person singular of avoir before this study began. There is some evidence, further, that the j'ai form is not a “prefabricated pattern” in the sense of Hakuta (1975) because, even at Time I, the learners vary their production between j'ai pas and je n'ai pas.

On the other hand, in the use of the first person singular form of the verb aller, the learners exhibit quite a bit of variation, both at Time I and Time II. In using aller, the learners maintain correct subject-verb agreement 50% of the time at Time I, and 54% of the time at Time II. (V \rightarrow V) Where the learners do not use the correct form, je vais, they almost always use the form je va.

One possible cause for this variation which we investigated was the occurrence of immediately preceding forms in the discourse, especially in the question of the interviewers. For example, we found question (4):

(4) Qu'est-ce que tu vas faire?

immediately preceding (5):

(5) Je va lire.

Upon initial examination, there appeared to be a definite correlation between the preceding “tu vas” forms and the incorrect “je va” forms. However, as pointed out above, there is always a danger of selective “categorical perception” on the part of the investigator, since certain forms and patterns may be more perceptually salient than others. In fact, the apparent correlation between tu vas je va is an excellent case in point; the actual correlation when measured quantitatively, was not any more common than the tu vas je vais correlation. Thus, use of je va or je vais for these contexts turned out to be a 50/50 chance situation.

Another possible cause of the prevalence of the je va construction is related to that just discussed above. That is, because of the fact that the singular/plural distinction in the third person is often neutralized in French speech, it may be that the learners tend to use the third person singular verb form, not only in third person plural obligatory contexts, but possibly also in the first person singular obligatory contexts. However, as of yet we have no verb frequency data for native French-speaking children of this age to help clarify this point.

Cohen (personal communication) suggests that the students are better at avoir than aller because it is likely that there exists a greater frequency of teacher input, and a possible greater student intake, of the former. Cohen relates this speculation to Boyd's (1975) attribution of imperfect mastery of object pronouns to their low frequency in teacher data.

In any case, at present, we can offer no convincing explanation as to why the learners seem to have acquired the correct verb form for the first person singular of avoir, but not for aller.

Syntactic Data

We wish we could be as quantitatively precise about the acquisition of syntactic variables in child French-immersion speech as we have been about those variables related to morphology. One reason for not being able to do so is inherent in the data itself and has already been given above: syntactic variables, unlike morphological ones, are less likely to be open to binary analysis since in syntax, there is more likely to be more than one correct way of saying the same thing. Another reason will become apparent as the discussion progresses: in an important sense, our analysis has been “ex post facto”.
Some theoretical considerations. We agree with Schumann (1975) that before one can seriously claim that a particular surface syntactic form is part of the learner's TL, it should be demonstrated that it was observed on more than one occasion; i.e., at least some statistical information must be provided. At the same time, we are also thoroughly convinced by Inkuta's (1975) arguments that an over-reliance on statistical procedures can be dangerous. The ever-elusive 'happy medium' between quantitative and qualitative analysis is something the field will have to come to grips with.

In considering the data presented in the SSD study (which is the same data as that considered for Time I here), Schumann (personal communication) has asked us to provide answers for questions such as: How often was a particular form produced by each subject? How many of the subjects produced that particular form? And, how often did the subject get a particular grammatical item right? We did go over the data, and report some results below.

In addition to statistical information, Schumann (1975) has also suggested that the investigator provide other types of information. If the particular form is claimed to be an "error" in terms of the TL, the investigator should report whether it coexisted with other related "incorrect" forms in learner speech at a particular time, and whether it coexisted with the "correct" form as well. Also, we should wish to know whether, over time, it preceded in development or superseded other related forms. Then, if possible, a breakdown of distribution according to other potentially relevant variables such as age, sex, education, etc., should be provided. Given the way error analyses have been done in the past, such information is usually just not available, and it becomes very unclear, in these cases, what is being claimed about the learner's interlanguage.

Note that statistical information on the frequency of occurrence of a form relates to questions raised about the interlanguage hypothesis in Section 1. Suppose we wish, for example, to claim that the transfer of a particular rule has occurred. (This was done, for instance, in SSD, with regard to the much-discussed rule of "subject-raising".) Is a single occurrence of that particular rule in the data enough to show its existence? Or, is it the case that a single occurrence of the rule is not enough to show its existence? If the latter is the case, then it is clear that more sophisticated means of analysis are necessary than have been used to date.

Another important theoretical consideration concerns what SSD called "deep structure grammatical transfer". Much discussion has occurred among people in several fields since this idea was first proposed orally in an earlier version of SSD at the Linguistic Society of America Annual Meeting in Amherst, July 1974. The heart of the issue is exemplified by footnote 2 of SSD:

There is disagreement among the authors as to the level at which the transfer occurs. Schindler considers that the transfer takes place in the syntactic derivation of the sentence. Swain and Dumais are not convinced that the transfer occurs at the deep structure level as far as these examples are concerned.

It seems that the issue is two-fold: (1) what exactly is meant by "deep structure grammatical transfer" and (2) how can one show unambiguously that it occurs? Since the present study was not designed to deal with this issue, we just do not have the appropriate data to relate seriously to Question (2). What we hope to be able to do here is to sharpen these questions somewhat. That is, we wish to follow Swain (personal communication) who points out that most, if not all, second-language acquisition studies done to date (including SSD, and this one) have been ex-post-facto, in that investigators have decided what to look at after the data have been collected. She points out, furthermore, that theoretical discussions of the present type will help to point the way toward data that should be elicited relevant to particular theoretical questions. It is in this spirit that we continue.

Addressing Question (1) above, we have decided to eliminate from our discussion terms such as "deep structure" and "underlying structure". Our reason for this is quite simple; in using these terms, we have invariably had to answer what for us has turned out to be a series of irrelevant questions, questions typified by the following: "Which linguist's deep structure?". In looking at second-language speech data, it makes no sense to tie ourselves to any particular syntactic theory, since the data that we find in interlanguage speech are just not accounted for by any syntactic theory known to us. If this is true, then in looking at this type of phenomenon, what exactly were SSD interested in showing? We digress slightly here in order to answer this question: most scholars would agree that in order to describe human language, surface structure is not enough. If this is true, then it is inconceivable that only surface structure knowledge could be used in attempting to express meaning in a second language. Then, it would seem to us that we here wish to ask questions of the following type: What besides surface structure knowledge is used in
the production of second-language speech? How do we find evidence for it? And how do we best analyze it? One type of phenomenon that we feel that we should explore in this regard is that of "syntactic rule transfer", i.e., the potential existence of the transfer of well-recognized syntactic rules, especially the transfer of particular transformational rules. This is what SSD were interested in showing.

Even though particular syntactic rules are often theory-specific, they are useful in describing some of the data we find in immersion speech, and furthermore, in linguistics discussions, the independent existence of many of such rules is often presupposed. Thus, in future work, we will take as one goal the providing of unambiguous evidence of specific examples of syntactic rule transfer.

We have searched the literature in vain for discussions of syntactic rule transfer, a question which seems to us central to any theory of second-language acquisition. The only discussion we know of concerning this type of transfer is presented by Kegl (1975). In her study of Slovene-English bilinguals, Kegl provides impressive evidence for the borrowing of the rule called "there-insertion" from American English into American Slovene. The theoretical question she then asks is: Is this rule borrowed as a "surfacy rule" or is it borrowed in terms of the entire spectrum of derivational possibilities? If it is borrowed in the latter sense, then it is borrowed productively and can interact with other rules in the grammar. Evidence for "there-insertion" borrowed as a surfacy rule would be the existence in American Slovene data of only relevant equivalent sentences of the type:

(6) There is a man on the roof.

that is, sentences in which there-insertion does not interact with any other rules which change grammatical relations. Evidence for the rule of there-insertion interacting in derivational structure with other rules, such as "extraposition" and "subject raising" would be sentences like:

(7) It is believed that there is a man on the roof.

(8) There is likely to be a man on the roof.

Note that use of the term "borrowed" as opposed to "transferred" seems appropriate in Kegl's case since she is dealing with Type I individuals in the sense of Section 3 above. On the other hand, since in this paper we are dealing with Type II learners (who we hypothesize will become Type I learners) we have to extrapolate with caution. Kegl's concerns could serve as a point of departure for the study of syntactic rule transfer, but in our study we are dealing with a more complex situation involving paraphrase relations between "there-insertion" and other types of sentences.

Results of syntactic study. In discussing possible examples of syntactic rule transfer with theoretical linguists, the most intriguing learner-produced example discussed in SSD seems to be sentence (9):

(9) un jour qui chaud,

literally "a day which hot", for the intended meaning "a hot day". Can this example be accounted for on the basis of syntactic rule transfer, or are there more surface explanations that are equally possible? First of all, we would like the reader to entertain the possibility that this example provides evidence for the learner using rules of English which do not appear on the surface. Our logic is as follows: what the learner appears to be doing is transferring from English part of the syntactic process of adjective formation, the process which is sometimes called "whiz-deletion" because in English it involves deletion of the wh-morpheme as well as the is form (in this case) of the verb to be. What is so intriguing about sentence (9) is that the learner appears to be taking the English process only part way in his production of French, deleting the is (est) but not the wh-, or que morpheme. What is most intriguing to the theoretical linguists we have discussed this topic with is that this type of second-language data may play a role in the arguments concerning the reality of deriving adjectives from underlying relative clauses, a discussion beyond the scope of this paper. We are not here saying that we believe in the existence of this rule; that is, we are not claiming that any one particular linguistic analysis is necessarily correct on the basis of this discussion.

At least one other explanation that appears more surface is possible, and in the spirit of Hatch (1975) we shall explore it here. It involves the deletion of surface elements, perhaps through a performance slip. The English-speaking learner obviously knows the phrase:

(10) a day that is hot.

It is possible that the learner may have directly translated this surface sequence into his French, dropping the is (est) through a performance error. In any case, one has to admit that in terms of the statistical criteria mentioned in the previous section, since this is the only case of its kind that occurs in our data, it is impossible to decide this issue at present; much more relevant data would have to be elicited.

A second possible example of syntactic rule transfer brought up in SSD is the learner-produced sentence:
with the intended meaning: "He wants me to speak French to him." It is claimed in SSD that this sentence is the product of a misapplication in underlying structure of the rule of subject-raising to a class of verbs which cannot take it in the TL. SSD state that this appears to be a case of language transfer occurring in the syntactic derivation of a sentence, since the verb *wants* in English can take subject raising in object position, thus producing the string: *Someone wants someone else to do something*. The facts for the TL, French, are quite different: the verb *vouloir* must take a that-complement if the subjects differ in the two clauses.

The reasons for the ambiguity of the analysis should be immediately transparent to the reader: it may be that sentence (11) is a direct surface translation of the English sentence:

(12) He wants me to speak French to him.

This example is treated extensively in Adjemian (1975). We quote:

There are several problems... [with the analysis proposed by SSD]. First, it is not clear that there is a rule of Raising to Object Position, even in English. To my knowledge there are at least three different proposals in current linguistic literature concerning these types of complement structures. To a large extent, the choice of one over the others depends on a personal preference for one theoretical position over the others. But even assuming the existence of such a rule, the analysis proposed by [SSD] may be completely correct. Sentence (11) is the only example they give of this type of structure. Before one could hypothesize the existence of such a rule in the learner's [italics, his] speech, one would need to find a broader sample base in the data. Specifically, it is imperative to show whether the learner uses such complement forms for the verbs of French that require this type of structure: *Il me demande de parler français, Il me conseille de parler français, Il me commande de parler français*, etc. I would even be willing to admit as evidence in favor of their analysis sentences where the processes of clitic movement had not applied, i.e. such "incorrect" structures as: *Il conseille moi de parler français*, etc. Data should also be collected to establish whether the learner has generalized this "raised" complement structure beyond vouloir [italics, his]. Does the learner also produce sentences such as *Il espère moi de parler français*? (*He hopes me to speak French*) where the verb in the matrix sentence, both in French and English requires a sentential complement? (Adjemian 1975:16-17)

He then goes on to propose another possible analysis:

An equally reasonable hypothesis is that the learner correctly [italics, his] applied a rule in his TL, but that he incorrectly subcategorized the verb *vouloir* in his learner's lexicon. Such an analysis would predict that the learner will apply this particular rule each time he uses the verb *vouloir* in a complex sentence, or at least often enough to make it statistically valid. The reason for the frequent occurrence might be the ease with which the sentence can be produced. SSD state that the learner transferred a subcategorization feature from English into his TL, [the analysis by SSD] claims that the learner transferred a subcategorization feature from English into his TL. The first may result in describing a one-time occurrence, the second claims a regularity. The first claims grammatical transfer, the second claims transfer in lexical features. These are two quite different positions. The one thing that these two competing analyses do have in common is their appeal to a learning strategy of transfer (Adjemian 1975:17-19)

Without necessarily granting the logic of Adjemian's statistical point, we decided to go over both sets of data (Time 1 and Time 2) to try to answer some of these questions, as well as to try to find more unequivocal examples of subject raised in object position. Unfortunately, we found our data in this domain to be strikingly lacking, finding only three examples of verb complementation sentences, two like the sample sentence (11) and one, more or less correct French. We feel that this lack of examples must be in the nature of the task, e.g., no appropriate elicitation situations in the cases. Again, this would be an ideal place to bring Corder's suggested elicitation procedures into play, in this case, perhaps, having the children describe situations which elicit causative verbs.

A third example discussed in SSD was the learner-produced sentence:

(13) Le sac a un trou dans le,

with the intended meaning: "The bag has a hole in it." This sentence seemed not only to involve incorrect pronoun placement, but also a syntactic rule, the rule of there-insertion, since it was argued that the learner not only had at his disposal the English base-type sentence:

(14) The bag has a hole in it,

but also a paraphrase sentence produced by the rule of there-insertion:

(15) There's a hole in the bag.

Significantly, it was predicted by SSD that if a learner chooses the "there-insertion" paraphrase to express the intended meaning in French, he will avoid this type of ungrammatical preposition-pronoun sentence at the end of a French sentence since French has
an existential construction similar to the English one with "there"; i.e., sentence (15) can be happily translated as *Il y a un trou dans le sac.*

Many complications have come into play with that analysis. First of all, one possible English paraphrase was ignored by SSD:

(16) A hole is in the bag.

According to Kegl and Hankamer (personal communication), there is good syntactic evidence to connect (16) with (15), the *there-insertion* sentence. As for (14), within this theory, there is not good syntactic evidence to relate (14) to (15), though all three are paraphrases.

Another complication with any analysis which contributes syntactic rule transfer to the learner, and one which both SSD and Kegl (1975) fail to recognize, is the need to distinguish between the labeling process, on the one hand, and the claim of the use of the rule as a production strategy, on the other. In this case, calling sentence (15) a "there-insertion" is referring to it by a well-known label, though, unfortunately in this case, the label implies the form of the claimed rule. Linde and Lahov (in press) in another domain run across a similar problem, and recognizing it, state explicitly: "We are not suggesting that sentences are formed in this way..."

Finally, the very important area of pragmatic conditions and their effect on choice of syntactic form is not considered in SSD. If we look at paraphrases (14), (15), and (16), for example, and try to relate them to the meaning as shown to the children in picture form, it is not immediately clear that in English all three would be equally probable in that context. In addition, in the appropriate discourse situation where the existence of "the bag" is presupposed, the English sentence *There’s a hole in it,* is a contextual paraphrase. These are empirical questions and it is clear that we have not even begun to scratch the surface with regard to semantic and pragmatic questions relating to second-language speech data.

Following Schumann's suggestion, we attempted to gather statistical data related to the learner-produced sentence (13), *La sac a un trou dans le.* We decided to look at all the French data, both at Time I and Time II relating to the picture which elicited this sample error (see Figure 1) in order to see whether syntactic rule transfer occurs, if so, how many times in the data, and whenever it does occur, if the error in question is still produced.

Initially, in order to have a base-line so that we might be able to predict intended meaning, we obtained descriptions of this picture frame in English from four monolingual native-English

![Figure 1. Picture Frame from the "Sandwich Story".](image)

**Table 5**

<table>
<thead>
<tr>
<th>Child</th>
<th>Linguistic Content</th>
<th>Semantic Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Her sandwich falls out of the bag... (and later) she tries to put out her sandwiches but they're not there</td>
<td>Semantic content not necessarily presupposed</td>
</tr>
<tr>
<td>2</td>
<td>And the bag went (noise)... (and later) and she opened it... and put her hand through and was wondering where her sandwiches had dropped.</td>
<td>Semantic content presupposed</td>
</tr>
<tr>
<td>3</td>
<td>The bag got a hole in the bottom.</td>
<td>Semantic content directly stated</td>
</tr>
<tr>
<td>4</td>
<td>And then it falls out... (and later) she looks in her bag, and then she feels through, and then she... felt that there wasn't any, and then she... remembered... they fell out.</td>
<td>Semantic content presupposed</td>
</tr>
</tbody>
</table>
speaking children in Seattle of the same age as the immersion children. We found that only one of the monolingual English-speaking children expressed this semantic content directly; he produced sentence (17):

(17) The bag got a hole in the bottom.

Most of the Seattle children avoided expressing this meaning directly, although, interestingly, it is presupposed by two of the remaining responses, but not by one. With child 1 in Table 5, the semantic content The bag has a hole in it, is not necessarily presupposed since the sandwich in question could have fallen out of the top of the bag. With child 2 and 4 in Table 5, on the other hand, it is clear that the bag in question indeed has a hole in it.

Three of the eight Toronto immersion children for whom we have both Time 1 and Time 2 French data for this picture frame, avoided expressing this information directly (see Table 6), through the presuppositional content of their responses remains to be investigated. Of the three children (i.e., Child 4, 5, and 6 in Table 6) who tried to produce this semantic content at both Times 1 and 11, child 4 at Time 1 produced the syntactic error (13) Le sac a un trou dans le, while at Time 2 he produced an acceptable French there-insertion sentence, i.e., a possible case of syntactic rule transfer. Child 5 at Time 1 produced a there-insertion type sentence, but, surprisingly, with the sample ungrammatical sequence preposition-pronoun at the end of the sentence. This is a specific counterexample to the hypothesis of SSD mentioned above, where it was predicted that this particular type of syntactic rule transfer would result in a “non-error”; that is, even with production of the there-insertion sentence, an error was in fact produced. Sentence (18) exemplifies this error:

(18) Il y a un trou dans le. (“There’s a hole in it.”)

At Time 11, child 5 produced an acceptable there-insertion type sentence in French.

Child 6 at Time 1 produced a possible case of syntactic rule transfer, but with a slightly different content:

(19) Il y a un trou en bas.

This is, in essence, a “content” error in French, since (19) is a grammatical sentence though has a different meaning. The learner intended to say, it seems, “There’s a hole in the bottom”, but came out with a sentence whose meaning in the TL is: “There’s a hole downstairs”. This example shows the importance of taking intended meaning into account. At Time 11, this same child, Child 6, produced a variant semantic content:

(20) Elle voit un trou dans le sac. (“She sees a hole inside”.)

one which is grammatical in French and, importantly, could have been produced as a semantic variant by a native speaker of French. The other two children (Child 7 and 8 in Table 6) avoided this semantic content at Time 1, but tried to express it at Time 11. Child 7 produced a grammatical there-insertion type sentence, while Child 8 produced an even different, but also grammatical variant:

(21) Elle trouve le trou dans le sac. (“She finds the hole in the bag.”)

In ending what we hope has been a useful discussion as to some of the issues involved in looking at syntactic data in second-language acquisition, we note that we have again followed a suggestion proposed by Schumann (personal communication). In doing this we noted several things. First of all, one specific prediction was falsified: in this case, an error was in fact produced, even though the proper syntactic rule was seemingly transferred (cf. child 5 at Time 1 in Table 6). In addition, we have shown that the learners as a group have shown improvement over time, moving from avoidance and specific errors at Time 1 to avoidance and a lack of errors in this domain at Time 11. That is, three of the children in Figure 8 showed stability over time by using avoidance strategies at both Time 1 and Time 11, while five of the children showed definite improvement over time. No backsliding was evident in the data we looked at.

<table>
<thead>
<tr>
<th>Child</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avoidance</td>
<td>Avoidance</td>
<td>Stability</td>
</tr>
<tr>
<td>2</td>
<td>Avoidance</td>
<td>Avoidance</td>
<td>Stability</td>
</tr>
<tr>
<td>3</td>
<td>Avoidance</td>
<td>Avoidance</td>
<td>Stability</td>
</tr>
<tr>
<td>4</td>
<td>Error (Syntactic)</td>
<td>Correct French*</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>5</td>
<td>Error (Syntactic)</td>
<td>Correct French*</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>6</td>
<td>Error (Content)</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(different content)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Avoidance</td>
<td>Correct French*</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>8</td>
<td>Avoidance</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(different content)</td>
<td></td>
</tr>
</tbody>
</table>

*These sentences involve possible syntactic rule transfer of the rule labelled “there-insertion”.
Most importantly, perhaps, we have shown the great amount of variability in the attempt to express one semantic content; out of 16 obligatory contexts (eight learners both at Time I and Time II), there were only eight attempts to directly produce the semantic content: “The bag has a hole in it.” In those eight attempts, the learners used seven different variants, five of those involving possible syntactic rule transfer. It seems to us that this is perhaps the quintessential example of how misleading a traditional error analysis can be.

Semantic Data

Some theoretical considerations. While statistical analysis of the data can, and often does, reveal patterns which might otherwise be hidden, over-reliance upon numerical analysis can also obscure important patterns. It is sometimes the case that in statistical studies, certain kinds of data are “thrown out”, or not included in the analysis, under the term “performance clutter”. Performance clutter does not fit easily into the framework of statistical analysis being used, and so is eliminated from consideration. We feel that great care should be taken not to eliminate valuable data from consideration simply because it does not fit the numerical analysis being used.

In particular, when the investigator is able to isolate fairly specifically the meaning which the second-language learner is attempting to communicate, it is possible to begin making judgments about the speech production strategies used. Such strategies may be easily lost by statistical analyses which attempt to capture significant trends which hold among large numbers of learners. Speech production strategies appear to vary with the individual and the situation, and can be best studied at the level of the individual, where elements of the situation are known—elements such as the learner’s knowledge of concepts which would probably be communicated in the situation given sufficient facility in the second language, and elements such as the learner’s mastery of the required TL vocabulary.

In the examination of the semantic aspects of the interlanguage, then, we found statistical analysis to be less revealing than a more detailed examination of the individual’s attempt to convey meaning within fairly limited contexts. Such a limited context is illustrated in Figure 2, where one of the picture frames used in this study is shown. In Table 7 we show the utterances which that frame elicited from 6 children at Time I and II. The children are here describing a picture in which a girl is standing in front of a slightly open cupboard, with her hand raised and touching the knob on the cupboard door. The learners show quite a bit of variability in their responses to this picture: variability which appears quite unusual in view of the relative uniformity of

### Table 7

<table>
<thead>
<tr>
<th>Child</th>
<th>Utterance</th>
</tr>
</thead>
</table>
| 1     | Time I: ..., ouvre l'armoire*  
       | Time II: ..., ouvre l'armoire  |
| 2     | Time I: ..., regarde et il veut boire  
       | Time II: ..., ouvre l'armoire  |
| 3     | Time I: ..., ouvre la porte  
       | Time II: ..., ouvre l'armoire*  |
| 4     | Time I: ..., leva la main  
       | Time II: ..., ouvre l'armoire  |
| 5     | Time I: ..., ouvre un  
       | Time II: ..., ouvre la, la porte |
| 6     | Time I: ..., ouvre l'armoire  
       | Time II: ..., ouvre l'armoire  |

*Italicized words were supplied by the interviewer.
their descriptions of the other pictures in this story. However, this variability is at least partially explained by the fact that some of the learners do not yet know the vocabulary items needed to describe the picture. If we examine the learners' responses to the picture frame from the point of view of their attempt to convey meaning, we believe it is possible to distinguish some of the speech production strategies which are being used.

Procedure and results of semantic study. We looked at the Toronto children's responses to each picture frame in three "stories", or picture sequences, comparing each child's response at Time I and Time II. Data were available from only 6 Toronto children at both times. In addition, in order to isolate as clearly as possible the meaning which the L2 learner is attempting to communicate, we felt that it was important to establish also an English baseline of responses to the same picture frame.

We obtained several descriptions of the picture frames in English from 4 Seattle monolingual English-speaking children of about the same age as the Toronto children. We did this in order to obtain a baseline which we assumed would tell us which concepts the Toronto children would have communicated about this picture if they had had adequate linguistic skills in French.

The monolingual English descriptions of Figure 2 are remarkably uniform, varying only in verb tense: Three concepts were communicated in English: female, open and cupboard. If we take the English responses as a baseline to provide us with some idea of the concepts which would have been communicated in French, given mastery of the language, we may be able to analyze the production strategies used by the learners in their attempt to communicate concepts for which they do not have the correct French vocabulary; none of the learners seems to know the French word for the concept cupboard at Time I, and some do not seem to know the word for open at Time I. What speech production strategies, then, do the learners use to attempt to communicate meaning in this situation?

Child 1 in Table 7 asks the interviewer to supply her with the word for cupboard ("comment se dit "cupboard?"). This strategy which we might call the appeal to authority. Similarly, in other situations, this production strategy might result in looking up the word in the dictionary, asking the teacher for the required word, and so on.

Child 3 uses another production strategy at Time I. Since he doesn't know the word for cupboard in French, he uses the word porte, or door; presumably it seems to be close enough to the

concept he is aiming for, so he uses it instead. We might call this production strategy lexical substitution—using a word in the target language which does not communicate exactly the concept which the learner desires, but which shares enough semantic elements in common with the desired concept to satisfy the learner.

Child 2 on the other hand, does not even attempt to communicate the concepts cupboard or open at Time I. Rather, he elects to describe other concepts related to the picture—concepts which he does have the vocabulary for. He says:

(22) Il regarde et il veut boire,
meaning "He looks and he wants to drink." This production strategy we might call semantic avoidance—not talking about concepts for which the vocabulary is not available, but rather, talking about related concepts and presupposing the desired concept.

Finally, Child 5 and Child 6 at Time I seem to deal with the problem by totally ignoring this picture frame in the narration of the story. The incident depicted in the picture is not crucial to the story-line, and can be left out. Child 5 and 6, therefore, both ignore the picture; they do not attempt to communicate concepts for which they have no vocabulary, nor do they attempt to communicate related concepts. It appears to be easier to just ignore a part of the situation which they are asked to describe. We might call this production strategy topic avoidance—totally avoiding communication about topics for which the vocabulary is not known.

If we examine the entire sequence of pictures of the stories we analyzed, what sorts of speech production strategies for the communication of meaning emerge in situations where the learner has not yet mastered the correct L2 form? As was pointed out above, we have already isolated four production strategies from the analysis of the picture frame in Figure 9: (1) appeal to authority, (2) lexical substitution, (3) semantic avoidance, and (4) topic avoidance. We hypothesize that all four of these production strategies are more or less conscious efforts on the part of the learner to communicate meaning in areas where he knows his French to be weak. That is, if the learner is questioned about his use of a particular form (or forms) which result from one of these four production strategies, we predict that he is most likely to admit that he does not know the correct L2 item to use for the desired concept.

In addition to these four production strategies, two other production strategies—transfer and overgeneralization—seem to be
used by these L2 learners in the attempted communication of meaning in other picture frames we examined. These strategies seem to be much less conscious than the other four. As regards the term “transfer”, it is here being used in a rather specialized sense to mean an unconscious use of NL lexical forms translated literally into the TL structure, in the course of the attempt to communicate meaning in the TL. Transfer in this sense is shown in picture frame I of the cup story where marcher dans is used as an equivalent of “walk into”, rather than the French entrer dans (literally “enter into”). Here a production strategy of transfer seems to be used, in that the verb marcher has been taken to be a direct equivalent of “walk”, and the equivalent of the English phrase “walk into” is used, rather than the French expression entrer dans. We hypothesize that the learners are not aware at this stage that a different French expression exists. If this is true, then they are likely to be more or less unconscious that they have made an error. We hypothesize that if the learners are questioned about their use of marcher dans, they will show that they are unaware that it is incorrect French.

The use of the production strategy of overgeneralization may be similarly unconscious. The term “overgeneralization” is being used here to mean the use of French forms in inappropriate contexts. An interesting example of this type of overgeneralization is produced at Time II by Child 5:

(23) Les quatre tasses se tombent. (The four cups fall down.)

In producing this form, he uses the reflexive “se” incorrectly, presumably by overgeneralizing from other French verbs. In cases like this, we hypothesize that the learner may not be aware that this is an incorrect French form; he is likely to believe that his production is correct by analogy with other French forms.

In making this division between production strategies which are more “conscious” (appeal to authority, lexical substitution, semantic avoidance and topic avoidance), and production strategies which may be more “unconscious” (transfer and overgeneralization), we are hypothesizing that two very different types of cognitive processes may be used in the expression of meaning in the L2. When the learner uses the more conscious strategies, s/he is hypothesized to be more aware of a lack of ability in the TL. The use of the more unconscious strategies does not imply the same necessary awareness of lack of ability. In fact, it is quite possible for the production strategies of transfer and overgeneralization to result in correct TL forms which communicate the desired concepts, while this is not possible for the more “conscious” strategies of substitution and avoidance.

Note: the speech production strategies isolated in this study appear to coincide with results independently obtained by Váradi (1973). Váradi describes four kinds of avoidance:

1) formal replacement
   a. word coinage—“airball” instead of “balloon”
   b. circumlocution and description—“special toys for children”, or “they were filled by gas”, also instead of “balloon”

2) message reduction
   c. generalization which results in loss of detail—“go” instead of “dash off”
   d. approximation—“rope” instead of “clothesline”

Váradi also describes cases of message abandonment, where the speaker doesn’t say anything rather than make a mistake.

There is clearly some overlap in the two typologies, as illustrated by the data below:

<table>
<thead>
<tr>
<th>Tarone, Frauenfelder, Selinker</th>
<th>Váradi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appeal to Authority</td>
<td>not reported</td>
</tr>
<tr>
<td>Lexical Substitution</td>
<td>Formal Replacement</td>
</tr>
<tr>
<td>Semantic Substitution</td>
<td>Message Reduction</td>
</tr>
<tr>
<td>Topic Avoidance</td>
<td>not reported</td>
</tr>
<tr>
<td>Transfer</td>
<td>Message Abandonment</td>
</tr>
<tr>
<td>Overgeneralization</td>
<td>not reported</td>
</tr>
</tbody>
</table>

Using our own typology, it is possible, within the context of the Cup Story, to obtain an overall picture of the degree of stability and instability over time in the learners’ use of these six production strategies. We analyzed the semantic content of the verbs and the direct objects used in the description of the Cup Story at Time I and Time II for each individual in response to identical stimulus frames. Thus, in describing the picture in Figure 2, we see that Child 1 uses a strategy of semantic avoidance in choosing a verb at Time I, but uses the correct TL form at Time II; thus, from Time I to Time II, she shifts from semantic avoidance to correct French in her choice of verbs for this picture frame. Child 2 shows the same shift in his use of the verb from Time I to Time II, from semantic avoidance to correct French. We attempted to tabulate the number of shifts of this type, from semantic
### TABLE 8
Production Strategies Used in Communicating Meaning in the Cup Story*

<table>
<thead>
<tr>
<th>Strategy Combination</th>
<th>Number of Occurrences</th>
<th>Production Strategy Used at Time I for Concept X</th>
<th>Production Strategy Used at Time II for Concept X</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>8</td>
<td>Semantic avoidance</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>II</td>
<td>3</td>
<td>Lexical substitution</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>III</td>
<td>2</td>
<td>Transfer</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>IV</td>
<td>3</td>
<td>Topic Avoidance</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>V</td>
<td>2</td>
<td>Appeal to Authority</td>
<td>Correct French</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>VI</td>
<td>1</td>
<td>Lexical substitution</td>
<td>Transfer</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>VII</td>
<td>1</td>
<td>Topic Avoidance</td>
<td>Lexical substitution</td>
<td>Instability (Improvement)</td>
</tr>
<tr>
<td>VIII</td>
<td>26</td>
<td>Correct French</td>
<td>Correct French</td>
<td>Stability</td>
</tr>
<tr>
<td>IX</td>
<td>1</td>
<td>Topic Avoidance</td>
<td>Topic Avoidance</td>
<td>Stability</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>Lexical substitution</td>
<td>Appeal to Authority</td>
<td>Instability (Backsliding)</td>
</tr>
<tr>
<td>XI</td>
<td>1</td>
<td>Correct French</td>
<td>Overgeneralization</td>
<td>Instability (Backsliding)</td>
</tr>
<tr>
<td>XII</td>
<td>1</td>
<td>Correct French</td>
<td>Semantic Avoidance</td>
<td>Instability (Backsliding)</td>
</tr>
</tbody>
</table>

*Italicized production strategies refer to forms which have led to incorrect French.

Avoidance to correct French, for each individual in response to identical stimuli, and found a total of 8 shifts of this type.

Table 8 shows the overall patterning of stability or instability in the use of production strategies from Time I and Time II. We see that there are 8 shifts from the use of semantic avoidance to correct French in communicating a given concept, 3 shifts from lexical substitution to correct French, and so on.

From Table 8, it is clear that at Time II, the learners overall are using correct French much more often than at Time I. Strategy Combinations I through V show a definite instability between Time I and Time II—an instability which can clearly be called improvement, i.e. a movement towards correct French in the learner’s attempt to communicate about an (inferred) desired concept. Strategy Combinations VI and VII might also subjectively be considered to be a movement toward correct French. Note example (24):

(24) Time I: la fille est dans la cuisine.  
("A girl is in the kitchen")

Time II: Une petite fille marche dans la maison.  
("A little girl walks into the house")

which is representative of Strategy Combination VI, a shift from lexical substitution ("be" for "enter") to transfer (discussed above).

Note example (25):

(25) Time I: 

Time II: ouvre la porte ("open the door")

which is representative of Strategy Combination VII, a shift from topic avoidance to lexical substitution ("door" for "cupboard").

Strategy Combinations VIII and IX indicate stability in the learners’ II. system, though different effects are achieved in each case. In the case of VIII, correct French is used by the learners both at Time I and Time II. In IX, however, the learners avoid the topic in both time periods. Concerning Strategy Combination X, we believe that it indicates another type of instability, specifically a type of backsliding, since to ask for the answer may show less proficiency on the part of the learner than lexical substitution. Strategy Combinations XI and XII evidence another type of instability, clearly a type of backsliding away from the TL norm. These latter two combinations may be taken to be evidence of a classical type of backsliding, a reappearance or reemergence in II. speech of errors which one might have thought were already eradicated. Such reemergence at Time II might be due to a variety of personal or emotional factors which we cannot even begin to speculate about at this point.

### SUMMARY

Our purpose in this paper has been to refine the theoretical terms “systematicity/variability” and “stability/instability” as they relate to specific “lexical” data collected from children in a Toronto French-immersion program. We accepted as points of departure, some guidelines proposed by Corder (1972) and Labov (1972) and the study by Seltzer, Swain and Dumais (1975), which relates the IL hypothesis to the second-language speech production of children in non-simultaneous bilingual settings.

In attempting to make the IL hypothesis more precise, we set up a series of studyable facts and hypotheses, and related these to the Toronto French-immersion setting. We next dealt with a series of theoretical issues: definitions of the terms in the title of this
paper; distinctions between second-language individuals who have stopped learning, and second-language individuals who continue to learn; and considerations of the role of “rules” and “strategies” in second-language acquisition.

We next described our methodology for gathering and analyzing the Toronto French-immersion data used in the study. We presented theoretical discussions and results of data related to morphological, syntactic, and semantic variables, finding variability and instability in all three areas. In the section on morphology, we were able to apply a strict, quantitative error analysis to the data, whereas the nature of the data in syntax and semantics appeared to preclude this type of analysis, and called for more subtle techniques. In our analysis of all three areas, we attempted to form hypotheses about possible underlying learning and production strategies.

In studying the reported results, the reader will notice that we were able to show definite patterns of stability and instability in the children’s II over time. In addition, in the areas of syntax and semantics, we were able to distinguish several different types of errors.

In terms of methodology, we feel we have developed a workable series of techniques for analysis. What we need now is a more extensive and reliable data-base to use them on.

REFERENCES


It was a mere four years ago that Selinker (1972) published his now well known article on interlanguage (IL) and in so doing set the tone for a significant body of research on second language (L2) acquisition which has followed since then. The time, of course, was ripe for a new wave of research. For several years scholars had been discussing the explanatory inadequacy of the contrastive analysis hypothesis, with the conclusion by some that the hypothesis was due for "a period of quiescence" (Wardhaugh 1970:129). Accompanying that note of negativism was a considerable degree of pessimism about the potential of linguistic theory or even psychological theory for providing any kind of constructive input to solving the mysteries of L2 acquisition. Some of that negativism and despair has now turned into cautious optimism as researchers like Tarone, Frauenfelder and Selinker (henceforth TFS) are getting their fingers dirty with empirical studies of L2 acquisition based on the IL hypothesis. The strength of the IL hypothesis is in its recognition of a multiplicity of factors underlying the acquisition of language. It is a hypothesis that cuts across several linguistic and psychological "camps" and has succeeded in generating some fruitful research. It does not, for example, deny the universality of interference as a psychological phenomenon which affects every conceivable kind of learning, while at the same time the IL hypothesis places equal importance upon the creative ability of humans to act upon our learning environment analytically and logically.

But it is precisely this unabashed recognition of the need to get a "global" (see Schumann, this volume) look at the L2 learner that has led to apparent impasses: the variability of learner speech seems to be impossible to account for in a meaningful way. As TFS ask, "...is it possible to maintain the notion of 'system' so central to the IL hypothesis? ... At present there appear to be no easy answers to these questions" (94). Nevertheless TFS make a significant attempt to grapple with that very question by proposing...
The hypothesis which is stated subsequently does not follow logically. The term used is a "separate psycholinguistic system" (emphasis mine), implying that the system is something other than the system of either the target language or the native language. Of course, one of the basic tenets of the hypothesis is that learners do not merely "approximate" (Nemser 1971) the target language system, but develop systems in their own right. While this is a plausible hypothesis, the studyable "facts" do not necessarily lead to such a conclusion; they could just as easily lead to Nemser's conclusion. In fact, the whole argument for the separateness of L2 systems is fraught with logical problems. At the very outset of learning a second language, does the learner suddenly adopt a separate system? Certainly, as Taylor (1975) and others have shown, initial systems are characterized more by transfer from the native language while later systems manifest more overgeneralization, an indication that the actual system of the target language is being internalized. Certainly pidgins, in the same manner, can not be considered entirely "separate". So, it should be understood that while TFS may claim the separateness of L2 systems, it does not follow from their listed facts. Nor does it appear to follow from the data presented in the rest of the paper. It would thus have been helpful for TFS to elaborate on the issue of separateness and on the very important point made in parentheses on page 106 (referring to the differences between the L2 hypothesis and the approximative systems hypothesis), as it is crucial to their claim.

Under the heading "Some Theoretical Problems" the authors define some pivotal terms in L2 theory. Future researchers would do well to refer to such definitions lest the field of L2 acquisition find itself buried in a mass of vague, undefined terms. We find on pages (97-98) the following definitions (paraphrased):

**Systematicity**: learner speech which evidences an internal consistency in the use of forms at a single point in time

**Stability**: evidence of internal consistency in such speech over time

**Variability**: not systematic

**Instability**: not stable

There is perhaps little argument over the definition of stability except that the notion of "over time" is vague and must be operationally defined by each researcher. It would seem ridiculous to define "over time" as anything less than the two weeks that TFS note; however, it is equally ridiculous to try to define absolutely,
in quantitative terms, such an abstract concept. So we must operate somewhere between total flexibility and absoluteness, as is the case with almost every abstract term in scientific research.

It is worth noting a considerable change in the present definition of systematicity as compared with the definition in Selinker, Swain and Dumas (1975:141); the present definition is much more explicit and precise. Adjemian’s (1975) paper offers an interesting discussion and analysis of TFS’s notion of systematicity. It is a particularly unique definition in that it contrasts systematicity and variability. A sociolinguist’s reaction to such a definition may be justifiedly negative, since his definition of variation might well incorporate the notion of internal consistency. But I think the contrast is acceptable in second language research as long as one does not too hastily conclude that a set of utterances shows variability simply because one can not “find” systematicity. The example of variability cited on page 94 (J’ai aime; j’aime; je aime) could be a systematic set of utterances if one looked at the broadest possible context of the utterances. The nagging question that perplexes language researchers is: at what point do we simply throw up our hands in despair and conclude that the learner’s speech is unsystematic? Can we ever justifiably make such a conclusion since it is virtually impossible to examine all contexts and to consider all the possible strategies being employed?

A second set of definitions concerns the terms Type I and Type II individuals. While these are plausible distinctions that are commonly made among researchers in L2 acquisition, a note of caution is in order. First, it is virtually impossible to conclude that any person—in any sense of the term—has “stopped” learning. Even adult native speakers evidence some instability in production strategies. Second, as Schumann and Hatch & Gough (this volume) point out, it is extremely unrealistic to conclude that all learners can be so simply classified merely into two “types”; TFS would be the first to agree, no doubt, that there are thousands of “types” of learners (see Yorio’s discussion, this volume).

The third set of definitions involves the terms rules and strategies. These terms have also been used rather loosely in the past, and TFS’s attempt to define them more precisely merits careful note. TFS refer to Adjemian’s (1975) paper which discusses some of the problems of incorporating both rules and strategies into second language acquisition models. Adjemian sums up the argument quite concisely: “...learning strategies are cognitive activities of a different kind than linguistic rules. Learning strategies are crucially concerned in the acquisition of a language system. Linguistic rules are crucially concerned in the actual form of a linguistic system” (20). TFS define rule and strategy as follows (99-100):

**rule:**

“surfacy” systematic grammatical structures

**learning strategy:** a process of rule formation; a tentative hypothesis which the learner forms about the nature of the L2, which is tested and subsequently modified

**production strategy:** a more general process; a systematic attempt by the learner to express meaning in the target language, in situations where the appropriate systematic target language rules have not been formed.

I tend to quibble with the use of the term process in the above definitions for reasons already explained above; we must avoid the conclusion from these definitions that strategy and process are synonymous. The definitions are helpful particularly in differentiating between learning and production strategies. Implicit in the definitions is the notion that the production strategy is based for the most part, upon the learner’s II, system, a system composed of rules which have been acquired by means of learning strategies. They are careful to point out, however, that production strategies may not necessarily be linguistically based.

It is not apparent what is meant by the notion that a production strategy is a more “general” process. It seems quite clear that learning strategies relate to acquisition and storage in memory, and that production strategies relate to the productive use of these acquired bits and chunks—along with such items as “appeal to authority” and “avoidance”—in the generation of linguistic output. If “general” means that other than purely linguistic considerations are operating, surely learning strategies are equally general since the learner, for various linguistic and extralinguistic reasons, sifts the data from his linguistic environment, choosing to block out some data and to include other data.

Once having defined these crucial concepts, TFS begin their very detailed report of data gathered from the Toronto French Immersion Programs. For a fuller understanding of the present data, the reader ought to read carefully the first installment of the study as reported in Selinker, Swain and Dumas (1975). I will make no attempt in these brief comments to offer a critique of the reported data. Suffice it to say that the data show rather clear
cases of all four of the notions addressed by the study. What
remains at this point is a good deal of further analysis of the data
and a number of replications or similar types of studies to see if
TFS's definitions of systematicity, variability, stability, and
instability can be supported in other data.

A slightly nagging question might persist as one reads through
TFS's paper. At the outset they stated the hypothesis that the
children are operating with a linguistic system which "may take
the form of a pidgin and which may develop into a separate dialect
in its own right" (87). Little, if anything was said on this point as
the data were reported and analyzed. It would be interesting and
profitable to discover if indeed such a hypothesis is supportable.
Schumann (1974) made quite a strong case for the relationship
between pidginization and creolization and L2 acquisition. If TFS
could now re-examine their data with reference to the possible
evidence of pidginization or a separate dialect, some interesting
implications might emerge. Until then, the latter part of their main
working hypothesis leaves us with a rather tantalizing question
mark.

The main contributions made by TFS's very detailed and
painstaking study are: (1) the attempted operational definitions of
some confusing and bothersome terms in L2 research; (2) backing
up such definitions with solid empirical data; and (3) the use of
innovative methodological techniques which now need close
scrutiny and replication. There is grist for the researcher's mill in
this paper that should last several years.

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