論　文

Evaluation of Process-oriented Communication Strategies

Chiaki IWAI

I. Introduction

In the field of Applied Linguistics, researchers directed their attention to errors by second language (L2) learners in the sixties and the seventies in order to look into potential sources of L2 learners' knowledge. As the research in this area progressed, they recognized that many errors by L2 learners did not simply come from their first language (L1) or any other possible language sources, but rather they stemmed from the target language (TL); that is, the language they attempted to acquire. Unremitting endeavors by those researchers gave rise to such well-known terms as Error Analysis (EA) (Corder 1967), Interlanguage (Selinker 1972), and Approximative System Analysis (ASA) (Nemser 1971).

One of the studies where the fundamental concepts of these L2 theories were taken into account was conducted by Varadi (1973). In his classic paper about the speech behavior of foreign language learners, he theoretically attempted to account for L2 learners' message adjustment phenomena and pointed out that there was a domain which had not been investigated in the L2 acquisition research. According to him, grammatical and semantic well-formedness was the main concern of EA and ASA scholars and "the question of how close the learner comes to communicating what he wanted to say" (80) was disregarded. His innovative insight revealed the necessity of research in this untouched domain of L2 acquisition, and many scholars have concentrated on products and processes of what are now known as *communication strategies* (CS) in the last two decades.

Although it is an indisputable fact that L2 learners often encounter communication difficulties due to their linguistic deficit and need to rely on certain strategies to overcome such problems, scholars of L2 acquisition have reached little agreement on the definition of CS and their taxonomies. The primary reason for the theoretical disagreement is concerned with the theoretical development of CS studies. At the beginning stage of CS studies from the mid seventies to the early eighties, CS researchers undertook various kinds of empirical studies to find different kinds of CS. Thus, CS studies at this stage were carried out in *a posteriori* manner and they are now called product-oriented studies. Contrary to them, many researchers started investigating psychological processes involved with the use of CS from the mid eighties. Such CS studies are called process-oriented studies.

The present study has twofold objectives; one is a brief review of preceding representative CS taxonomies (product-oriented taxonomy vs. process-oriented taxonomy), and another is, on the basis of an empirical data collection by the author, to propose a modification of process-oriented taxonomy of the Nijmegen project. The result of this modification will be presented in a diagram at the end of this paper.

II. Review of Product-oriented Taxonomy and Process-oriented Taxonomy

Varadi's proposal of new research requisite was realized by such scholars as Tarone and her colleagues (Tarone, Cohen, & Dumas 1976, Tarone 1981), Corder (1978), Faerch & Kasper (1983) and Paribakht (1985). These pioneering studies are now referred to as product-oriented CS studies since the main objectives of these studies were to clarify definitional criteria of CS and to list all plausible CS which were observed in orally collected data. Recent studies of CS, however, criticize the traditional approach of these CS studies since ad hoc CS were added by different researchers whenever new types of strategies were observed and, more importantly, these studies were of no help to clarify cognitive mechanisms of processing in language use. The researchers who take this position include Bialystok (1990) and a group of the Nijmegen project (e.g., Bongaerts, Kellerman, & Bentlage 1987; Bongaerts & Poulisse 1989; Kellerman 1991; Kellerman, Bongaerts, & Poulisse 1987; Kellerman, Ammerlaan, Bongaerts, & Poulisse 1990; Poulisse 1987, 1990; Poulisse & Schils 1989).

To clarify the differences of these two different approaches of CS studies, the following two typical taxonomies representing the product-oriented CS studies and the process-oriented studies are quoted below. (See Iwai 1995 and 1996 (in press) for further discussion of their theoretical differences.)

Figure 1: Product-oriented Taxonomy by Tarone

Main CS category	Subcategory
1 Paraphrase	a) approximation (e.g. pipe for waterpipe)
	b) word coinage (e.g. airball for balloon)
	c) circumlocution (e.g. She is, uh, smoking something. I don't know what's its name. That's, uh, Persian, and use use in Turkey, a lot of.)
2 Borrowing	a) literal translation (e.g. He invites him to drink, for they toast one another.)
	b) language switch (e.g. balon for balloon)
	c) appeal for assistance (e.g. What is this? What called?)
	d) mime (e.g. clapping one's hands to illustrate applause)
3 Avoidance	a) topic avoidance (The learner simply tries not to talk about concepts for which the TL item or structure is not known.)
	b) Message abandonment (The learner begins to talk about a concept

but is unable to continue and stops in mid-utterance.)

(Tarone 1981, pp. 62-63, her examples)

Figure 2: Process-oriented Taxonomy of the Nijmegen project

Main CS category	Subcategory
1 Conceptual strategies	HOCO (HOlistic COnceptual)
	ANCO (ANalytic COnceptual)
2 Linguistic strategies	LIMO (LInguistic MOrphological creativity)
	LITRA (LInguisti TRAnsfer)

(Poulisse and Schils 1989, pp. 20-22, and also Poulisse 1990, p. 109)

The process-oriented taxonomy is not just parsimonious, but it compensates for the weakness of the product-oriented taxonomy. As Poulisse (1987) points out, the complicated nature of the product-oriented taxonomy allows for different interpretations of the same strategy use and, for this reason, it may eventually lead us to underinterpretation of the learners' language behaviors. Poulisse (*ibid.*) gives the examples of 'haircutters' and 'ones, who who, erm, could cut people's hair' produced by a Dutch learner of English who tried to convey 'hairdressers' in English (143). In Tarone's taxonomy, the former is the case of *word coinage* and the latter *circumlocution*. Both of them, however, share the same analytic process to refer to "'the cutting of hair' as the criterial attribute of a 'hairdresser'" (*ibid.*); therefore, they can be regarded as ANCO in the process-oriented taxonomy.

Another feature of the process-oriented Nijmegen taxonomy is that it excludes L2 learners' avoidance behavior, and, for this reason, CS of the Nijmegen project are called *Compensatory Strategies* (CpS). The reason why the Nijmegen researchers disregarded avoidance strategies is presumably because they thought that pedagogical implications would be obtained by clarifying the involved processes to achieve L2 learners' communicative goals.

The author of this study, nevertheless, considers that the mechanisms of avoidance behavior need to be clarified because, for practical pedagogical purposes, the best way to know why some L2 learners avoid trying to achieve their communication goals is simply by knowing the reasons for their avoidance behavior. This will be discussed further, following the illustration of an empirical study in the next section.

III. The Empirical Study

To evaluate the validity of the process-oriented taxonomy of the Nijmegen project, the following experiment was conducted by the author.

1. Method

The participants in this experiment are 46 freshman students (14 males and 32 females) majoring in International Studies at the university where the author is affiliated.

A writing task of a picture description was given in a regular English class in the Fall Semester of 1995. Two pictures of cartoon (Appendix) which contained ten differences were used to elicit students' strategy use. First, the students were requested to write the differences between the two cartoon pictures item by item in Japanese, and then they were asked to do the same thing in English. Following these writing sessions in two languages, they had a retrospective writing (in Japanese) about the difficulties they experienced to express their concepts in English and about the solutions for their difficulties. The entire experiment lasted approximately 40 minutes.

In this experiment, a writing task was selected rather than an oral task which is most common for the studies of CS. This is because the purpose of the present study is not to observe the L2 learners' authentic speaking performances, but to analyze how they plan their speech and how they solve their encoding problems if they encounter any. Furthermore, because the task was carried out both in Japanese and in English, it can be assured whether the subjects needed to use certain strategies to encode their concept in English by comparing with the same concept which was produced in Japanese. If the students failed in encoding their concept in their predominant language, it is rare that L2 learners would be able to encode it in their less predominant language.

2. Results and Discussion

The different spots of the cartoons were mostly described in complete sentences as shown in the following example:

(e.g. 1) (J) hidarishita-ni iru, booshi-o kabutta hito-no booshi-ni tsuita *himo*-no iro-ga chigau.

(E) The color of the *belt* of the policeman's hat is different from that of picture 2.

Retrospective Comment: I don't know how to express "himo" (strap) in English, so I used the word "belt". (Translated.)

Some students, however, preferred to use phrases as the next example illustrates:

(e.g. 2) (J) kooto hashi-ni tatteiru hata-no *muki*.

(E) *Direction* of the flag standing at the corner of the court.

RC: I wondered if "direction" is appropriate for "muki". (Translated.)

These sentence-phrase differences were ignored for the analysis of this study since the primary interest was to determine how these L2 learners encoded the target words in English, and not the well-formedness of their descriptions. Due to lack of space, the results of the students' descriptions in only four spots out of the ten are shown in Tables 1 to 4. The investigated words are: *direction* of the flag, color of the chin *strap*, width of the *cuff*, and the *slit* in the shorts (italicized words).

These tables show three main categories that were identified according to the students' descriptions and retrospective comments: 1) the cases where certain strategies (Compensatory Strategies) were used for the target words, 2) the cases where no strategies were used for them, and 3) the cases of avoidance.

Table 1: direction of the flag

CS		Retrospective comment	Used Expressons	N	Total (%)
CpS		A	4 direction 2 way 2 direct 1 discourse 1 diredior 1 hookoo (J)	11	13 (28)
		B	1 direction 1 hookoo (J)	2	
	Without using the word "direction"	A	4 different 9 blowing... right/left	13	15 (33)
		B	1 different 1 reverse	2	
No CS		Unrelated comment	1 different 1 muku (J) different 1 diretion 1 blowing 1 direct 1 pointing another side	6	10 (22)
		No comment	1 opposite 1 different 1 way 1 dialog	4	
Avoid-ance		B		7	8 (17)
		No comment		1	

Retrospective Comment (Translated)
A: I don't know how to say "hookoo or muki" (direction) in Enlgish, but anyway I expressed it in this way.
B: I don't know how to say "hookoo or muki" in English.
Abbreviations: CS=Communication Strategies CpS=Compensatory Strategies (J)=Expressed in Japanese

Table 2: color of the chin strap

CS		Retrospective comment	Used Expressons	N	Total (%)
CpS		A	3 band 4 belt 2 rope 1 himo 1 code 1 ribbon 1 thread 1 chain	14	19 (41)
		B	2 loup 1 band 1 ribbon 1 string	5	
	Without using the word "strap"	A	3 hat different 1 hat ... black/white	4	4 (9)
No CS		Unrelated comment	2 band 1 rope 3 belt 1 ribbon 2 different	9	13 (28)
		No comment	1 string 1 band 1 himo (J) 1 strap	4	
Avoid-ance		B		6	10 (22)
		Unrelated comment		1	
		No comment		3	

Retrospective Comment (Translated)
A: I don't know how to say "(ago) himo" ((chin) strap) in Enlgish, but anyway I expressed it in this way.
B: I don't know how to say "(ago) himo" in English.

Table 3: width of the cuff

CS		Retrospective comment	Used Expressons	N	Total (%)
CpS		A	4 cuffs 1 sode 1 sleeve's design 1 judgeman's collar 1 slive 1 kafse	9	15 (33)
		B	3 cuffs 3 sleeve	6	
	Without using the word "cuff"	A	2 white part 1 clothe's right arm 1 clothes 2 right hand 2 shirt 1 uniform	9	10 (22)
		B	1 clothes with the main umpire puts on	1	
No CS		Unrelated comment	3 cuff(s) 1 sleeves 2 right hand 1 uniform	7	7 (15)
		No comment		0	
Avoid-ance		B		6	14 (30)
		Unrelated comment		2	
		No comment		6	

Retrospective Comment (Translated)
A: I don't know how to say "sode" (cuff) in Enlgish, but anyway I expressed it in this way.
B: I don't know how to say "sode" in English.

Table 4: slit in shorts

CS		Retrospective comment	Used Expressons	N	Total (%)
CpS		A	4 slit 2 cutting	6	8 (17)
		B	2 slit	2	
	Without using the word "slit"	A	4 different 1 cutted 1 pants of man 1 straight	7	10 (22)
		B	1 different 1 cut off 1 not same	3	
No CS		Unrelated comment	5 slit 1 cutting 6 different 1 not same 1 type of pants	14	19 (41)
		No comment	1 slit 1 separated 2 different 1 right side man's pants	5	
Avoid-ance		B		6	9 (20)
		Unrelated comment		1	
		No comment		2	

Retrospective Comment (Translated)
A: I don't know how to say "kireme" (slit) in Enlgish, but anyway I expressed it in this way.
B: I don't know how to say "kireme" in English.

Two patterns were identified in the category of CpS. One was the case in which the students attempted to encode the target words, in both Japanese and in English, in certain words or phrases that are directly matched to the observed items (e.g. 3). Another is the case where they did not express them directly; instead, they used other means of expression to describe the target items (e.g. 4). In both cases, they wrote either one of the two retrospective comments (abbreviated A and B in the tables).

(e.g. 3) The man down at the middle wears a shirt which has shorter *sleeves*.

(e.g. 4) *The white parts* of the reflee's (referee's) clothes is *different*.

Although some students successfully used appropriate words for the target words, they were regarded as cases of strategy use because they commented that they were uncertain about the ways to express themselves (retrospective comment A).

When the students wrote any retrospective comments that were unrelated to the target items (e.g. 5) or when they did not write any comment at all (e.g. 6), they were taken as cases of no CS use as far as the observed words were concerned.

(e.g. 5) There is a slit in short pants of the man in picture 2.

RC: I was not sure if the word "slit" requires the indefinite article or not.

(e.g. 6) The man's pants who is standing with his arms crossed are different. Picture 1, the pants has a slit, but another one doesn't have it.

No Retrospective Comment

When the learners avoided encoding the target words (the category of Avoidance), there were three types of retrospective comments. The lack of knowledge about the target words was the main reason for their avoidance of encoding. Some students, however, did not complete the task due to their lack of lexical or grammatical knowledge of the items other than the observed ones. Moreover, there were students who did not write any retrospective comments. This might have been due to the fact that they could not process all requisite information to encode their concepts in English or that they did

not attempt to do so at all.

The obtained data of the present study was reanalyzed according to the categories of the process-oriented Nijmegen taxonomy, and the results are presented in Table 5.

Table 5: Reanalysis of data based on the process-oriented taxonomy

Strategies / Target words	CpS					No CS	Avoid
	HOCO	ANCO	LITRA	LIMO	others		
direction of the flag	10	0	2	1	15	10	8
color of the chin *strap*	18	0	1	0	4	13	10
width of the *cuff*	13	1	0	1	10	7	14
slit in shorts	8	0	0	0	10	19	9

The most prominent use of CpS is, in fact, HOCO (Holistic Conceptual strategy). Such examples as "band", "belt", "rope" and "code" in Table 2 are obvious cases resulting from the use of this strategy. If the learners are uncertain about what these target items are called in English, they tend to take a holistic perspective to refer to them and use single words (or sometimes short phrases) which come to their minds as the best alternative means within their limited lexical knowledge. Sometimes this strategy brings successful results as in the case of "direction", but they have to take risks to use this strategy.

The second most popular CpS with our subjects was none of the other subcategories of CpS in the Nijmegen taxonomy. This is shown in Table 5 as the category of "others". These were the cases where the subjects did not directly refer to the target items because, as indicated in their retrospective comments, their linguistic deficiency (of the target items mentioned already) did not allow them to take an extreme risk to describe them directly. Instead, the strategy they selected was to make use of available information to refer to the target items indirectly. Thus, even if they did not know how to say "direction (of the flag)", they could achieve their intended goal by saying "the flag is blowing left/right." They could also refer to the "slit" in shorts by saying "shorts are different." Again, notice that the students who used this strategy recognized that they had a problem of encoding what they actually wanted to say. This strategy is tentatively called *Detouring Strategy* here. None of the studies of CS in the past reported this detouring phenomenon as far as the author knows, but he considers that this strategy is used quite frequently and, therefore, should not be overlooked for the analyses of CS use.

As for avoidance behavior, there seems to be two reasons for this. When the learners' lexical knowledge (and probably grammatical knowledge as well) is extremely limited in order to achieve their communication goal, they do not make any attempts at all to encode their concepts because the amount of information which needs to be encoded in linguistic forms exceeds the learners' capacity. Some students did not write anything for some of the observed items in this experiment, nor did they give any retrospective

comments on them. The fact that they described the target items in Japanese indicates that the reason for their avoidance behavior in English is not due to their laziness but mainly due to the overloaded state at the processing stage.

Another reason of their avoidance behavior is that the learners input their concepts in the processing stage and try to encode them using different strategies. When the learners cannot find any solutions to their problems, they eventually end up with avoidance of their communication goal. The difference between these two types of avoidance behavior is, then, whether they convey their concepts into their processing mechanism or not.

In summary, the findings and discussion in this section is presented in the following diagram:

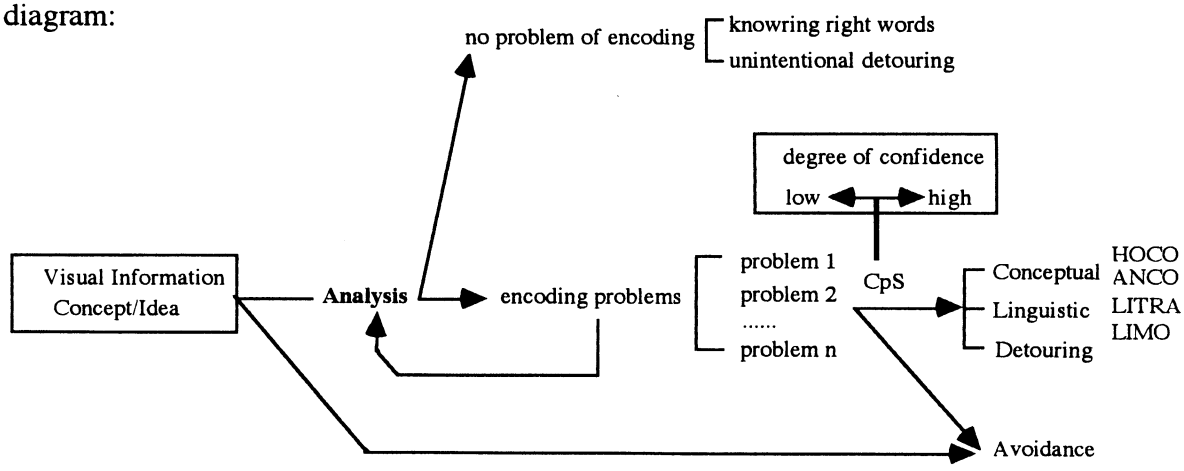

Figure 3: Summary of Revised Process-Oriented Taxonomy

This diagram shows that when the learners have certain concepts or ideas they want to convey, they either put them into their processing stage of analysis or do not try to do anything. In the latter case, it results in avoidance behavior. In the former case, the learners first judge whether they have any encoding problems or not. If there is no problem, they encode the concepts or ideas without using any strategies. However, if there are any problems, they need to rely on certain strategies. They may try to perceive the concepts in a holistic manner or in an analytic manner, or they may make use of their available linguistic knowledge, including their predominant language. Or, as discussed above, they may refrain from referring to the target items directly and use the detouring strategy. If it is judged from the processing of analysis that none of these strategies can be successfully applied, they are considered to give up conveying what they want to say.

IV. Conclusion

In the present study, the empirically collected data were analyzed according to the process-oriented taxonomy of the Nijmegen project. Most instances of strategy use of

these data correspond with the categories of this taxonomy. However, there were cases where the learners used neither conceptual strategies nor linguistic strategies; that is, instead of direct reference to the target items, they encoded them indirectly. This was named as *Detouring Strategy*. Furthermore, two rationales of avoidance behavior were discussed in this study. Since avoidance behavior brings about the least ideal result in an authentic communication situation, the mechanisms of these behaviors need to be clarified further.

These findings have been based on the L2 learners' writing performance. Thus, it is necessary to examine them empirically on the basis of speech products in future studies.

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[Appendix]

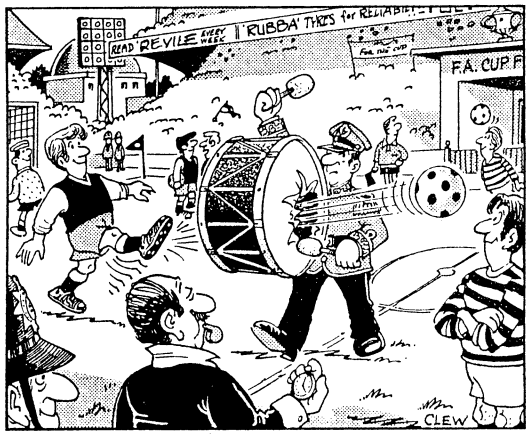
The different spots are:

1) flood *lights* (lights, night lights, light board)
2) The *way* (*direction*) the person (face) is looking (facing)
3) *hair length* (hair style)
4)* *direction* of the flag (pennant)
5) size of the *drumstick* (head of the drumstick)
6)* color of the chin *strap* (tie strap)
7) *chain* on the whistle (whistle chain)
8)* width of the *cuff* (shirt cuff)
9) number of *dots* on the ball (black circles)
10)* the *slit* in the shorts (shorts slit, V-shaped section, notch)

The alternative expressions were given by a native English speaker. The asterisk indicates the items that are used for the analysis in the present study.

Written permission to use these cartoons was obtained from Kenkyusha. They are from "Jiji Eigo Kenkyu (The Study of Current English)", p. 97, July, 1995.

Picture 1



Picture 2