

Operationalizing Focus of Attention : The Effect of Task on the Ability to Selectively Focus Attention

Jacqueline D. Beebe

ABSTRACT

This article focuses on attempts by researchers to induce the use of either a "careful" or "vernacular style" of interlanguage by selecting a task which will call for or permit a greater or lesser degree of attention to formal accuracy. Hulstijn and Hulstijn (1984) found evidence that Dutch learners, given coaching, could focus their attention on either informational or grammatical accuracy, as instructed to by the experimenter. This study attempted to replicate Hulstijn and Hulstijn's results, which were obtained on a verbal story retelling task, by measuring the accuracy of production of the definite, indefinite and zero articles and of third person -s, and of informational units, on an English story retranscription task. The data produced by 20 Japanese girls' high school students in a quasi-experimental counter-balanced design were analyzed. Possible reasons for the study's failure to obtain evidence for a selective focus of attention are discussed.

Why do learners seem to have native-like control of a form at one moment and then seem to have lost it again? The frustrated learner or teacher may experience this fluctuation as a haphazard or even perverse phenomena, but many second language acquisition (SLA) theorists would assure them that there is a method to this madness, that much of this variation is systematic. Researchers have found evidence for many factors that effect variation, such as linguistic context (all the way from phonemes to discourse requirements), sociolinguistic situation, planning, and attention to form. With each additional relevant factor that can be identified, the harder it becomes to predict which will override which for a given individual in a given situation at a given point in his or her development of an interlanguage. But the task of developing a theory capable of prediction is certainly worth tackling. Theorists want to

know if patterns of variation can suggest that child and adult learners, or naturalistic and classroom learners, are attending to different aspects of input or output or processing information differently. Researchers also ask if learners can be said to have a number of different competencies, interlanguage grammars, capabilities, methods of learning (e.g., learning vs. acquiring), etc. Language teachers look at variation for what it will suggest as to what materials should be presented to learners in what sort of tasks. Test designers wonder how much variation in test format must be included before they can say they have an adequate picture of a learner's interlanguage performance.

Tarone and Ellis both considered degree of focus on form as one of the more vital factors affecting interlanguage variation. They built theories of SLA around variation in the systematicity or accuracy of interlanguage accord-

ing to attention to form. They claim that it is possible to roughly place different occasions of language use along a continuum based on how much attention is paid to language form, a continuum ranging from grammaticality judgments which engage the careful style, to unselfconscious spontaneous speech, which draws on the vernacular style. But results of a number of studies were not those predicted by this theory in its simplest form.

As recently as 1987 Ellis was still placing considerable emphasis on those styles "which arise as a product of the degree to which the learner is focused on form.... New linguistic forms can enter the learner's interlanguage in any style, but the careful style is especially prone to invasion. In contrast the vernacular style is relatively stable. One of the principal ways in which change takes place in interlanguage is through the spread of selected variants from the careful style towards the vernacular style.... Changes in interlanguage are reflected in the incremental progress towards categoricity across styles and across linguistic environments." In this discussion Ellis mentions linguistic environment and planning as additional determiners of variation and also says that his recent research revealed that "whereas an easily learnt structure such as regular past tense style shifted in a highly regular fashion, a structure such as irregular past tense, which is not easily learnt, did not style shift at all." (Ellis, 1987)

Tarone has gone so far as to retreat from her 1983 identification of "attention to language form which is related to task... as the primary causal factor in second language production," and in 1987 wrote that "attention to form can at best be only an intermediary, not an explanatory, factor." (Tarone, 1987) Tarone and Parrish (1988) found that to explain the accuracy scores on articles in Tarone's 1985 study they had to look to the communicative function the articles play in different tasks, as "when these tasks place different degrees of communicative pressure

upon the speaker, or elicit discourse which varies in its cohesiveness." As additions, refinements, exceptions, and disqualifiers are added to the simplicity of the earlier theories one can say as Swan does (1987) that a significant number of features have not been shown to co-vary systematically in groups, and so it is premature to speak of something called a style. Skehan (1987) warns that the major disadvantage of re-analyzing attention to form so as to accommodate discrepant results is that the theory becomes "more intuitively satisfactory than it is experimentally testable... since a post-hoc account of the priorities for attentional resources can always be found."

Discussions on information processing and SLA arising from work in cognitive psychology by no means have reached a consensus on how attention is allocated or to what extent it can be viewed as a limited resource. (Crookes, 1989, Schmidt, 1990, Skehan, 1987) Yet Ellis (1986) says when discussing a case of "free variability" in which a subject produces "No look my card," and "Don't look my card,": "In both cases the boy was focused on meaning and was not, therefore, audio-monitoring his speech." More research on attention is required before such either/or statements on meaning vs. monitoring can be made with much authority.

In a 1984 study Hulstijn and Hulstijn, (henceforth H & H) did attempt a rigorous test of the variable of attention by specifically instructing their subjects (Ss) to focus on form. H & H elicited Dutch interlanguage with a verbal story retelling task and found that attention to grammatical accuracy increased the percentage of correct realizations of two word-order rules. They could claim that their Ss were paying attention to grammar because they also manipulated a second independent variable, attention to information, under the same conditions, and found that performance on each was indeed more accurate when Ss were instructed to pay attention to that variable.

This successful attempt to isolate and operationalize the factor of attention to form was but one part of H & H's more wide-ranging study, but it's one worth trying to replicate with differences in task and procedures. This present study was an (unsuccessful) attempt to do so by testing whether inducing a focus on form would lead to greater accuracy (by target language standards) in the English interlanguage production of the definite, indefinite and zero articles and of third person -s on a story retranscription task. These two morpheme categories have both been examined in earlier studies of style-shifting. They are easily elicited items that ESL teachers might agree vary greatly by situation. The two morpheme types also contrast in several respects; articles are free morphemes, third person -s is bound, and articles are typically said to be governed by complex rules while third person -s is thought to have form-function transparency, or as Pienemann & Johnston said, "the principles underlying it are conceptually simple," (although third person -s is by no means one of the earlier items in the typical morpheme orders nor in Pienemann and Johnston's system, where it's at $x + 3$). (P & J, 1987) Finally, Tarone (1985) found that on the task she thought would require the most attention to language form, third person -s was produced more accurately but the opposite pattern held for articles, which were produced far more accurately on the tasks she assumed required less attention to form.

Can attention to form be induced in a listening and written summarization task by giving Ss group instruction and coaching on concentrating only on writing either a grammatically accurate product or an informationally accurate product? This study tested the hypothesis that attention to form will be demonstrated by A) Ss scoring higher on their target-like use of types of third person -s and tokens of the articles *a/an*, *the*, and *zero* when instructed to attend to form, and B) by Ss scoring higher on suppliance of informational

units when instructed to attend to information.

Method

Subjects and setting. 33 Ss participated in the study and the data from 10 Ss from each group were randomly selected for analysis. Ss were divided in half according to the order of their names in the Japanese syllabary. The Ss were 16- and 17-year-old girls at the end of their second year at a private girls' high school in Tokyo. They had all studied English for about three hours a week for five years. In preparation for majoring in English at the university, these students were required to take extra English classes during their vacation. The experiment was run by the experimenter (E) with each half of the Ss while the other half were being taught an unrelated lesson on listening comprehension by their regular English teacher. Ss were told that the results of this session wouldn't effect their grades, and as the normal semester had already finished Ss weren't receiving any grades for their work at this time anyway. All of the Ss had in earlier years been taught English Conversation by the American female E, although she had not been their teacher during the most recent school year. All of the Ss had received formal instruction in the use of both articles and third person -s and had been receiving exposure to them in classroom input for five years.

Materials and procedures. H & H had Ss verbally retell taped elicitation texts, but in this study Ss were asked to retranscribe taped texts. The elicitation materials used the voices of two American English teachers all the Ss were acquainted with; the E and a male teacher. The subjects listened to passages of English speech ranging in length from 25 to 33 words and had a minute and a half "to write down what the story was about." The stimulus texts contained simple vocabulary and dealt with topics from everyday life. As the listening comprehension component was judged to

be challenging for these students each text was immediately repeated a second time. The stimulus texts were all in the first person, and to induce the Ss to approach the task as a rewriting task and not the usual dictation, and to induce the use of the third person -s, they were told in the written directions, (all directions in both English and Japanese) "You don't have to use exactly the same words, but try to retell the whole story," and they were given a written example of two possible versions of retranscription:

ON TAPE: "I'm going to the library tonight. I have to find some books for a report I'm writing for my English class. I'll get home about 9:00."

YOU CAN WRITE: The woman is going to the library tonight. She needs some books for a report for her English class. She'll be home by 9:00 p.m.

OR YOU CAN WRITE: The woman will go to the library this evening. She'll get home about nine. She has to find a few books for her English class. She's writing a report.

Ss were told to do the retranscription in two different ways; half the time being careful not to make grammatical errors as they would be scored only on grammar, and half the time paying attention to information as they would be scored only on how much correct information they could remember and write down. In both cases they were told, "Spelling and punctuation mistakes are O.K." The tape and the sheets for the Ss to write their responses on were prepared with three practice items each for the two conditions of grammar and information, with each set of practice items followed by 8 experimental items which would be scored. In fact, on the day the experiment was run the E was informed that less time would be available with each group than had been promised, so only 5 experimental responses under each treatment were obtained. After Ss finished each practice item under the grammar treatment the E pointed out four possible grammatical errors and the correct forms, in-

cluding forms of third person -s and articles, without mentioning any grammatical rules as such. When practicing items under the information treatment the E pointed out four points of information which that text could have been scored on. As H & H said of their study, "instruction and feedback were aimed at shaping the response behavior, and this was done not only in an abstract, verbal way but, more importantly, by having Ss practice according to the instructions before the actual experimental items were presented." But in this study, as Ss performed the task simultaneously, the feedback on the practice items was generalized, not a response to each individual's errors.

As the experiment was run in the two groups, the timing couldn't be paced to the individual, so it was run with a speeded format: a minute and a half to write each retranscription after the taped reading of each elicitation item. By the impressionistic estimate of the E, about half the Ss would no longer be writing at the end of the allotted time and about half would still be writing, often erasing and adding something to that item. The order of the 16 stimulus texts was the same for both groups of Ss, but the order in which the treatments were administered was counterbalanced in a repeated measures design.

Scoring and analysis. The 20 Ss whose data were analysed produced 111 contexts for third person -s during the five responses under the grammar condition and 112 during the five responses under the information condition. These figures include cases of inappropriate suppliance in non-obligatory contexts since third person -s was analysed for target-like use (TLU), using Pica's 1983 formula:

$$\frac{n \text{ correct suppliance in obligatory contexts}}{(n \text{ obligatory contexts}) + (n \text{ suppliance in non-obligatory contexts})}$$

As there was considerable recurrence of the same lexical items in both the elicitation items and the Ss' responses, analysis of third person -s was done by types, not tokens, with only

one occurrence of each type throughout the 10 response items being recorded per S, except in cases where tokens of the same type occurred as both obligatory contexts and inappropriate suppliance, in which case both were represented proportionately. The order in which the responses were scored was varied to counter-balance which condition a type would first occur in. A total of 27 different types were produced by the 20 subjects in their 20 responses each. The irregular forms *is*, *does*, and *has* were disregarded.

The scoring and analysis of the articles *a/an* (either allomorph considered acceptable), *the*, and *zero* was done as follows. All noun phrases not preceded by possessives or demonstratives were scored, with these exceptions: proper nouns, second and subsequent noun phrases in a series, (e.g., two boys and a girl) and idioms and commonly-used expressions (come home, 3 nights a week, etc.) which seem to be learned as formulae. Articles were also scored for TLU, but unlike third person -s, all tokens were counted, since subsequent occurrences of the token often required a different article (e.g., I work in a restaurant 3 nights a week. The restaurant's near my university,). 425 contexts for articles were scored under the grammar treatment and 402 under the information treatment.

To score the responses for the amount of information correctly reproduced four pieces of information were pre-chosen for each text, as in this example:

I have a nice bedroom. It's on the second floor. The room's small but it's sunny. I like

it. The walls are light blue and the carpet and curtains are purple.

Information units: (1) has a nice bedroom/likes her bedroom, (2) on the second floor, (3) walls blue, (4) carpet purple.

Each S could thus score up to 4 points on each of 10 responses, so a maximum total score of 800 was possible for all 20 Ss combined.

Three separate dependent variable scores for third person -s, articles, and information were tallied for each S under the two experimental treatments of focus of attention. For each S it was noted whether a higher (more accurate) score for each of the two morpheme categories and for informational accuracy was obtained during the attention to grammar treatment or during the attention to information treatment. The number of Ss with a higher, lower, or equal score was then totaled. Secondly, the scores for the two morpheme categories and informational accuracy for all Ss under each treatment were totaled and mean scores were calculated. All scores were recorded as both raw scores and percentage scores.

Results

Findings. A S by S analysis reveals that when Ss were told to direct their attention toward grammatical accuracy 11 Ss produced third person -s more accurately, 6 produced the morpheme less accurately and 3 had equal scores (all 3 had 100% accuracy under both treatments). Under the grammar treatment 8 Ss produced articles more accurately and 12 produced them less accurately. When told to

TABLE ONE

N of Ss with Higher Score on Grammar Treatment

-s : 11 Articles : 8

N of Ss with Lower Score on Grammar Treatment

-s : 6 Articles : 12

N of Ss with Equal Scores on Both Treatments

-s : 3 Articles : 0

N of Ss with Higher Info. Score on Info. Treatment : 8

N of Ss with Higher Info. Score on Grammar Treatment : 7

N of Ss with Equal Info. Scores on Both Treatments : 5

TABLE TWO

GROUP ONE (Grammar Treatment First)

S#	Grammar Treatment Scores			Information Treatment Scores		
	-s	Art.	Info.	-s	Art.	Info.
1	4/5, 80%	7/12, 58%	12, 60%	4/4, 100%	13/18, 72%	13, 65%
2	6/6, 100	12/16, 75	15, 75	4/4, 10	24/26, 92	15, 75
3	6/7, 86	17/19, 89	20, 100	3/4, 75	27/29, 93	16, 80
4	4/4, 100	12/15, 80	19, 95	4/4, 100	22/28, 79	19, 95
5	5/7, 71	12/14, 86	15, 75	3/4, 75	18/23, 78	14, 70
6	4/4, 100	11/16, 69	15, 75	3/5, 60	22/29, 76	18, 90
7	4/4, 100	14/19, 74	17, 85	4/5, 80	25/29, 86	17, 85
8	5/5, 100	5/11, 45	15, 75	5/6, 83	15/18, 83	14, 70
9	4/6, 67	11/12, 92	18, 90	5/5, 100	24/24, 100	13, 65
10	3/5, 60	6/10, 60	14, 70	0/2, 0	15/20, 75	15, 75

GROUP TWO (Information Treatment First)

S#	Grammar Treatment Scores			Information Treatment Scores		
	-s	Art.	Info.	-s	Art.	Info.
A	5/5, 100	20/27, 74%	14, 70%	5/6, 83%	9/14, 64%	19, 95%
B	5/5, 100	24/30, 80	17, 85	3/7, 43	12/17, 71	14, 70
C	3/3, 100	23/26, 88	16, 80	6/6, 100	15/15, 100	20, 100
D	4/4, 100	24/26, 92	16, 80	8/9, 89	13/19, 68	16, 80
E	5/13, 38	27/32, 84	15, 75	4/5, 80	9/14, 64	10, 50
F	2/3, 67	24/28, 86	16, 80	6/7, 86	16/17, 94	18, 90
G	5/6, 83	25/28, 89	14, 70	4/8, 50	8/14, 57	15, 75
H	5/7, 71	23/32, 72	15, 75	4/7, 57	9/13, 69	15, 75
I	5/6, 83	20/28, 71	14, 70	4/7, 57	15/20, 75	17, 85
J	5/6, 83	21/24, 88	12, 60	6/7, 86	9/15, 60	10, 50

Total Raw and % Scores, Grammar Treatment

	Group One	Group Two	All Ss
-s:	45/53, 85%	44/58, 76%	89/111, 80%
Art:	107/144, 74%	231/218, 82%	338/425, 80%
Info:	160, 80%	149, 75%	309, 77%

Total Raw and % Scores, Information Treatment

	Group One	Group Two	All Ss
-s:	34/43, 81%	50/69, 72%	85/112, 76%
Art:	205/244, 84%	115/158, 73%	320/402, 80%
Info:	154, 77%	154, 77%	308, 77%

focus on information 8 Ss had a higher information score, 7 had a lower score, and 5 had equal scores under both treatments. (Table 1.)

The mean score across all Ss for third person -s was 80% when attention was focused on grammar and 76% when attention was focused on information. The mean for articles was 80% under both conditions. The mean score for informational accuracy was also equal under both treatments; 77%. (Table 2.)

Discussion. No evidence was found to support either part of the hypothesis; neither formal accuracy nor informational accuracy were shown to have risen under the treatment meant to induce attention which would result in more accurate production. Had an analysis of statistical significance been conducted, the negligible rise of 4 percentage points in the mean for third person -s would probably not have proven significant. And even had this

variance been greater there would be no clear basis for attributing it to focus of attention since the failure of informational accuracy to vary under the two treatments suggests that in fact the Ss were either unable to redirect their attention at will or didn't care to exercise the option.

In debriefing the Ss on the purpose of the experiment after it was finished, the E asked (in English and Japanese) for a show of hands of which Ss felt that they had in fact been able to selectively focus their attention. Less than half the Ss raised their hands. One possibility is that paying attention to what they were paying attention to became in itself another task demand that over-loaded the demands on the Ss, and so the directive was not followed. In discussing Wicken's 1984 work Schmidt (1990) says "Tasks that rely on automatic processes do not require attention and can operate in parallel. Controlled processing, associated with novice behavior, cannot be carried out concurrently with other demanding tasks." But these grammatical accuracy scores of 80% and 76% are close to the means of 79.3% (focus of information) and 86.8% (focus on grammar) that H & H found for an inversion rule, and higher than the 36.8% and 57.4% means they found for a verb final rule. At a comparable level of difficulty H & H's Ss were still able to selectively focus their attention as they were instructed to.

A more likely explanation for the lack of a different response behavior in the two treatments lies in the fact that this study used a retranscription task. A writing task (especially one where Ss often finished before the time limit was reached) allows time for monitoring and offers the salience of the written record of errors to allow Ss to correct themselves. If their informational or grammatical errors were obvious enough, they would be apt to correct them, (either as they mentally composed or after they were written) even if the Ss knew they didn't have to according to

their instructions. The chance to hear each elicitation text twice also may have inadvertently allowed the Ss the time under both treatments to engage in planning, which could have improved their performance on grammar. (Crookes, 1989)

It may not be enough to simply tell Ss that they don't have to pay attention to grammar if they've had it drummed into them for 5 years that nothing matters more than grammatical accuracy. The question of attention cannot be divorced from the question of intention. Rampton (1987) said, "What really motivates intra-individual/stylistic variability is the speaker's relationship with the hearer, the meanings he wants to express and the impressions he wants to create...in teacherly settings you try and talk like the teacher if you are keen to make a good impression." Pienemann & Johnston (1987) spoke of learners weighing the advantages of the efficiency of simplified forms against the stigmatizing effects of non-standard language and said, "a learner's place on the variational dimension is a consequence of how he *decides* to distribute his limited speech processing resources." (emphasis theirs.) Just to avoid mixing up the several pages written on by each S, Ss were asked to write their names on each page. Since the Ss know the E this may have made them reluctant to turn in anything less than their best overall performance on both treatments. Both researchers attempting to manipulate the strategies of Ss and process-oriented writing teachers despairing when students pull out dictionaries to check their spelling in the middle of a free-writing or first-draft assignment would do well to remember that individuals can't be expected to deposit their ingrained values at a hat check at the door of laboratory or classroom.

For whatever reason, this study failed to isolate evidence of attention to either form or information. Whether or not Ss subjectively experienced themselves as selectively directing their focus of attention, their behavior failed

to reflect their attempt. Because there is no evidence that S's focus actually shifted between grammar and information, one cannot conclude from this study that a focus on grammar definitely will not result in any increase in the grammatical accuracy of the forms of third person -s and articles in a retranscription task, but neither is there any evidence to suggest that accuracy *will* improve.

My acknowledgements to Michael Long for his valuable comments on an earlier version of this article.

REFERENCES

- Abraham, R. 1983. Relationships between use of the strategy of monitoring and the cognitive style. *Studies in Second Language Acquisition*. 6/1: 69-78.
- Crookes, G. 1989. Planning and interlanguage variation. *Studies in Second Language Acquisition*. 11/4: 367-383.
- Ellis, R. 1986. *Understanding Second Language Acquisition*. Oxford: Oxford University Press.
- Ellis, R. (ed.) 1987. *Second Language Acquisition in Context*. Englewood Cliffs, NJ: Prentice Hall International.
- Ellis, R. 1987. Contextual variability in second language acquisition and the relevancy of language teaching, in Ellis, R. (ed.), 179-194.
- Ellis, R. 1988. The effects of linguistic environment on the second language acquisition of grammatical rules. *Applied Linguistics*. 9/3: 257-274.
- Gregg, K. 1990. The variable competence model of second language acquisition, and why it isn't. *Applied Linguistics*. 11/4: 364-383.
- Hulstijn, J. and Hulstijn, W. 1984. Grammatical errors as a function of processing constraints and explicit knowledge. *Language Learning*. 34/1: 23-43.
- Larsen-Freeman, D. and Long, M. 1989. *An Introduction to Second Language Acquisition Research*. London: Longman.
- Nunan, D. (ed.) 1987. *Applying Second Language Acquisition Research*. Adelaide: National Curriculum Resource Centre, Adult Migrant Education Program, Australia.
- Pica, T. 1983. Methods of morpheme quantification: their effect on the interpretation of second language data. *Studies in Second Language Acquisition*. 6/1: 69-78.
- Pienemann, M. and Johnston, M. 1987. Factors influencing the development of language proficiency, in Nunan, D. (ed.), 45-141.
- Rampton, B. 1987. Stylistic variability and not speaking 'normal' English: some post-Labovian approaches and their implications for the study of interlanguage, in Ellis, R. (ed.), 47-58.
- Schmidt, R. W. 1990. The role of consciousness in second language learning. *Applied Linguistics*. 11/2: 129-158.
- Skehan, P. 1987. Variability and language testing, in Ellis, R. (ed.), 195-206.
- Swan, M. 1987. Non-systematic variability: a self-inflicted conundrum?, in Ellis, R. (ed.), 59-66.
- Tarone, E. 1983. On the variability of interlanguage systems. *Applied Linguistics*. 4/2: 142-163.
- Tarone, E. 1985. Variability in interlanguage use: a study of style-shifting in morphology and syntax. *Language Learning*. 35/3: 373-404.
- Tarone, E. 1987. Methodologies for studying variability in second language acquisition, in Ellis, R. (ed.), 35-46.
- Tarone, E. 1988. *Variation in Interlanguage*. London: Edward Arnold.
- Tarone, E. and Parrish, B. 1988. Task-related variation in interlanguage: the case of articles. *Language Learning*. 38/1: 21-45.
- Young, R. 1988. Variation and the interlanguage hypothesis. *Studies in Second Language Acquisition*. 10/3: 281-302.