

## **Signaling Plurality in Learner English**

JILLIAN MCILWAIN & PETER PETERSON  
University of Newcastle  
Peter.Peterson@newcastle.edu.au

### **1. Introduction**

This paper reports the results of a study of the acquisition of plural marking by adult learners of English as a second language. This is an area in which there appears to be very little data. Our research therefore will contribute to the study of second language acquisition by increasing the available data pool. In the process we in part confirm the findings of earlier research, but also raise further questions about the process of language acquisition.

The acquisition of the plural morpheme in English features prominently in the “morpheme studies” of the 1970s. These studies consistently placed the regular plural morpheme very early in the acquisition hierarchy, in both first and second language acquisition, and for both adult and child learners. On the basis of these studies, Krashen (1977) proposed a ‘natural order’ for the L2 acquisition of some grammatical morphemes, in which the acquisition of the plural morpheme is in the earliest group.

Morpheme studies have been criticized by a number of researchers. For example, Wode et al (1983: 116) suggest that by focusing on the relative order of mastery, the morpheme studies approach “necessarily misses all the developments leading towards and preceding the final state of achievement”. The “mastery” criterion also faces difficulties with the frequently observed plateau effect with adult L2 learners. As we will see, one of our more proficient adult learners (Learner H) did not achieve Cazden’s (1968) 90% ‘mastery’ benchmark; yet his use of plural marking is too well advanced to ignore.

Alternative approaches to the study of the acquisition of morphology have been more process-oriented rather than product-oriented. The functional approach (used for example by Miller 1996) and the conceptual approach advocated by von Stutterheim & Klein (1987) both attempt to move beyond a simple categorization of errors, to focus on the concepts that the L2 learner wishes to express.

### **2. Current study**

#### **2.1 Data**

The data for the present study was taken from the Newcastle Corpus of Learner English, a large corpus of conversation-based English from French and Polish adult learners. This corpus consists of transcripts of audio recordings of informal and unstructured conversations of approximately 45 minutes each between the informant and a native speaker of English.<sup>1</sup> The conversations were taped at approximately two- to three-monthly intervals over a period of 12 to 15 months.

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<sup>1</sup> Learners E and W are husband and wife and were taped together to facilitate E’s participation.

For this paper, we analysed the conversations of three French and three Polish speakers. Learners C and M are French women who had some formal tuition in English in early schooling in France and had attended weekly adult English classes for approximately three months after arriving in Newcastle. They speak a ‘post-basic’ variety of learner English, ‘Stage C’ in the classification proposed by Deitrich et al (1995). Learner H, a French male, has an advanced command of English, with a particularly impressive range of vocabulary. He is a fluent conversationalist, often taking the lead in conversational interaction.

None of the Polish learners, I, E and W, had any formal tuition in English in Poland. On arrival in Australia, they attended an intensive six-week English course. Learner W later attended weekly adult English classes for approximately three months. Learner E is in command of a basic variety of learner English, ‘Stage B’ in the classification proposed by Deitrich et al (1995); learners W and I are at ‘Stage C’.

## 2.2 Methodology

The general methodology followed is that of an individual case study. This methodology enables in-depth analysis of the language-learners’ development and is able to show differences between individual learners. It also enables comparisons between the French and Polish learners. The time frame provided by the current data is rather limited, but it is possible to observe some development over the period.

All examples of nouns with plural number, whether appropriate or inappropriate, and nouns where plural number would be expected in the English of native speakers, were included in the database<sup>2</sup>, and categorized as shown in Table 1.

**Table 1:** Categorisation of plural nouns

CATEGORY	EXAMPLE	TARGET
<b>Nouns with regular plural<sup>3</sup></b>		
Appropriate use of regular plural	years	years
Omission of regular plural	problem	problems
Extraneous use of regular plural	hours	hour
Over-regularisation (regular instead of irregular)	womans	woman
<b>Nouns with irregular plural<sup>4</sup></b>		
Appropriate use of irregular plural	women	women
Omission of irregular plural	woman	women
Extraneous use of irregular plural	children	child

Examples of the subcategories in Table 1 are shown in (1) and (2):

<sup>2</sup> Examples where the target is unclear, where there is an immediate repetition or self-correction, or where the learner is imitating a model provided by the interviewer (or in the case of Learner E a model provided by Learner W) have been excluded from the database.

<sup>3</sup> This category does not distinguish between the various phonological manifestations of the –s morpheme.

<sup>4</sup> For the purposes of this paper we have not distinguished between the various forms of irregular plural formation.

(1) **Nouns with regular plural**

- |    |   |           |                            |
|----|---|-----------|----------------------------|
| a. | they steal er some er some <b>books</b> | [H2.1379] | <i>appropriate</i>         |
| b. | very plenty er of <b>problem</b>        | [M4.434]  | <i>omission</i>            |
| c. | Every <b>hours</b> he                   | [E4.773]  | <i>extraneous</i>          |
| d. | And two, three <b>womans</b> ?          | [C1.598]  | <i>over-regularisation</i> |

(2) **Nouns with irregular plural**

- |    |  |           |                    |
|----|--|-----------|--------------------|
| a. | one class has thirty to forty <b>children</b>  | [W3.95]   | <i>appropriate</i> |
| b. | French <b>woman</b> or Australian <b>woman</b> | [M3.1353] | <i>omission</i>    |
| c. | this every <b>people</b> coming in the wedding | [I7.392]  | <i>extraneous</i>  |

**2.3 Calculations**

Frequencies for appropriate and inappropriate uses were calculated in a straightforward way as follows:

- (3) Percentage of appropriate uses of regular plural =  $A/B \times 100$ , where:

A = number of appropriate uses of regular plural

B = number of appropriate uses of regular plural + number of omissions of regular plural

- (4) Percentage of extraneous uses of regular plural =  $A/B \times 100$ , where:

A = number of extraneous uses of regular plural

B = number of extraneous + appropriate uses of regular plural

(For the purposes of this paper, we have noted the percentages for appropriate uses only.)

There is one potential problem with such calculations. As Rice & Oetting (1993:1253) warn, “percentage of appropriate uses of regular plural” calculations are at risk of being inflated by a heavy reliance by the learner on a few words that may be memorized. In order to assess this, a measure of lexical productivity was calculated, involving a count of the number of different lexemes that appear with the regular plural morpheme across the interviews with each learner.

**2.4 Effect of linguistic context**

In order to assess whether the immediate linguistic context affected the production of plural morphemes, the noun phrases were grouped according to determiner type, based on classifications in Crystal (1988), as in Table 2:

**Table 2:** classification of determiners

NO DETERMINER	
CENTRAL DETERMINERS	<i>the, a(n); this, that, these, those</i> possessives <i>some, any, no</i> <i>each, every</i>
PREDETERMINERS	<i>all, both, half</i>
POSTDETERMINERS	cardinal numbers; ordinal numbers; quantifiers

### 3. Results and analysis

**Table 3:** Use of plural nouns

Learner	Interview	Regular						Irregular		
		✓	Ø	Extr	O/g	% ✓	lexemes	✓	Ø	Extr
<b>C</b>	1	27	40	3	1	40		9	4	
	2	20	39	8	0	34		12	0	
	3	27	40	5	0	40		19	1	
	4	20	41	5	1	33		17	2	
	5	8	19	0	0	30		13	1	
	Total	102	179	21	2	36	42	70	8	0
<b>M</b>	1	24	13	0		65		17		
	2	19	14	1		58		5		1
	3	33	10	0		77		15	3	
	4	24	20	0		55		9	1	
	5	31	21	1		60		4		
	Total	131	78	2	0	63	33	50	3	1
<b>H</b>	1	16	7			70		3		
	2	30	3			91		10		
	3	30	5			86		5		
	4	58	19			75		5		
	Total	180	46	0	0	80	49	27	0	0
<b>E</b>	1	7	24	2		23		22		4
	2	1	4	0		20		2		
	3	0	4	0		0		1		
	4	17	25	4		40		10		3
	5	4	6	0		40		12		
	6	5	8	0		38		15		1
	7	9	9	2		50		7		
	8	3	3	0		50		5		2
	Total	46	83	8	0	36	19	74	0	9
<b>W</b>	1	49	23	1		68		13	1	1
	2	26	5	1		84		4		1
	3	12	3	2		80		14		2
	4	29	18	1		62		8		
	5	29	5	3	2	85		7	1	1
	6	19	5	6	2	79		3	3	
	7	69	3	2	1	96		6		1
	8	59	2	2	0	97		16		1
	Total	292	64	18	5	82	101	71	5	7
<b>I</b>	1	10	7	1		59		4		
	2	12	7	0		63		0		
	3	42	6	4		86		7	1	
	4	47	7	1		87		3		
	5	33	9	2		79		0		
	6	42	10	12		81		5	1	1
	Total	186	46	20	0	80	30	19	2	1

#### 3.1 Nouns with regular plural

Over the course of the interviews the “percentage of appropriate uses of regular plural” remained relatively stable for the French learners. (See shaded column, Table 3.) The values for Learner C ranged between 30% (fifth interview) and 40% (first and third interviews); for Learner M, the range was 55% (fourth interview) to 77% (third interview); and for Learner H, the lowest value was 70% (first interview) with the highest at 91%

(second interview). For the Polish learners, the “percentage of appropriate uses of regular plural” showed a general trend of development from first to last interview with values ‘improving’ from 20% to 50% for Learner E, from 68% to 97% for Learner W, and from 59% to 81% for Learner I. We can say then that Learners W, E, and I increase their proficiency in the use of the regular plural in obligatory contexts.<sup>5</sup>

Learner W was the only informant to ‘master’ the plural morpheme according to Cazden’s (1968) 90% criterion, which she achieved in the final two interviews of the series. Learner W also achieved the highest score for lexical productivity, using 101 different nouns with the regular plural morpheme in appropriate contexts. Learner C used 42 different nouns, Learner M 33, Learner H 49, Learner I 30, and Learner E only 19. This suggests that even though the percentage scores show Learner E to be more proficient than Learner C, this is because he is using fewer forms more consistently, especially in his later interviews.

In terms of the possible influence of linguistic context on the appropriate production of the plural morpheme, a number of correspondences were found with the **type of determiner**. (Refer to Table 4.)

**Table 4:** influence of determiner

	No Determiner			Num + Noun		
	✓	∅	%✓	✓	∅	%✓
<b>C</b>	23	56	29%	48	24	67%
<b>M</b>	17	23	43%	56	11	84%
<b>H</b>	19	6	76%	52	8	87%
<b>E</b>	21	35	38%	19	24	44%
<b>W</b>	87	34	72%	103	5	95%
<b>I</b>	75	30	71%	73	12	86%

In contexts where there was **no determiner**, it was expected that the learner would be more likely to mark the plural in obligatory contexts. This expectation was based on the finding by Brown (1973:374) that the performance of the children in his study was significantly better in simple linguistic contexts. However, our findings did not fully bear out this expectation. Only Learners H and W, the more proficient speakers, showed the expected pattern of usage. Learner W had more appropriate uses than omissions of the regular plural in the context of no determiner, except for the fourth interview where the usage was equal. In her seventh and eighth interviews there is only one omission in this context, a definite sign of increased consistency. Learner H also showed very small numbers of omissions in this context, although his use of zero determiner was too infrequent to allow for any conclusions about development.

In their early interviews, Learners M and I omitted the plural in the context of no determiner more often than they used it, but by their third interviews appropriate uses consistently outnumbered omissions. For Learners C and W, there is little evidence of

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<sup>5</sup> Apart from the developmental progress shown by the Polish learners, there appears to be no significant difference between French and Polish learners in their use of regular plural marking that could be attributed to their different L1 experience. This supports the many previous studies that have shown that there is little evidence of L1 transfer effects in the acquisition of L2 morphology. (See especially Odlin 1989.)

development in this context. In all their interviews, omissions outnumbered appropriate uses. A summary of the patterns of usage is shown in Table 5, which suggests that there is a correlation between proficiency and use of plural in the no determiner context.

**Table 5:** stages of development in no determiner context

STAGE	DESCRIPTION	LEARNER
1	omissions outnumber appropriate uses	C, E
2	appropriate uses start to outnumber omissions	M, I
3	appropriate uses outnumber omissions; omissions become infrequent.	W, H

At first glance the **postdeterminer** category seems to confirm the findings of Young (1988) that the context of cardinal numbers strongly supports the use of the plural morpheme. However a closer look shows that it is the nature of the noun itself which is more significant, in particular the use of ‘measure expressions’ such as *month* and *year*. Contexts in which a cardinal number preceded a ‘measure expression’ were quite consistently marked appropriately with the plural morpheme by all learners except Learner E. Contexts in which a cardinal number preceded a ‘non-measure expression’, on the other hand, did not positively support the use of the plural morpheme and omissions were frequent, especially with Learner C.

Learner E seems to be a stage behind the other learners with his usage in this context. From his earliest interviews, Learner E uses the plural quite consistently in the expression **cardinal number + years**, but he does not generalize the plural use to other measure expressions. It would appear from this and from the patterns of use of the other learners that where there is a cardinal number preceding a noun, the regular plural will be used first with measure expressions and then eventually generalizes to other noun types.

Among the **central and predeterminers**, the most interesting results emerged with *all* and *every*. All of the learners (except Learner H who used neither of these determiners) used *all* with a singular noun. Only Learner W used the appropriate plural in her first interview, with *all Communist countries* (W1.103) but this is followed in her second interview with *all country* (W2.67). *All* is the only determiner that shows such a strong resistance to the plural marking. We could speculate that there is a semantic force at work here, that *all* is understood to represent a totality and therefore equivalent to “one”, which would make plural marking unnecessary. In stark contrast to *all* is the usage with *every*. All NPs from Learners C, E, I and W that involved *every* had a plural head noun<sup>6</sup>. As Vendler (1967:74) points out, *every* implies distributivity; in other words it implies *one* many times over. It seems that our learners had mapped the meaning ‘more than one’ to *every* but not to *all*. Table 6 presents one way of describing the contrasts in marking plurality in the contexts of *every*, *all*, and quantifiers such as *some*, *many* and *few*.

<sup>6</sup> Learner H did not use *every*. Learner M used *every* on one occasion only, *every three years* (M4.312); in this context the plural marking is appropriate because of the preceding cardinal number.

**Table 6:** native speaker vs learner use of quantifier + noun

	EXAMPLE	MEANING
LEARNER	many toys (C1.1098) some parents (H4.107) few things (W1.810)	more than one
	all the thing (M2.905) every boys (E1.516)	collective meaning = one distributive meaning = more than one
NATIVE SPEAKER	many toys some words few things all the things every boy	more than one  collective meaning = more than one distributive meaning = one

We have found that regular plurals are used by second language learners more in some linguistic contexts than in others. i.e. particular linguistic contexts influence the use of plural markers. What we haven't yet done is find out why. Possible factors that could be involved include functional load and semantic concepts.

If functional load is a factor, this would suggest that the plural marker would be used where there was no other indication of plurality, where the plural morpheme would be carrying the full functional load of signaling "more than one". But this is exactly **not** what we find. One of the contexts most conducive to the use of the regular plural morpheme among all our learners is with 'measure' count nouns preceded by a cardinal numeral, where the numeral is already signaling the plural concept and the plural morpheme is therefore most clearly semantically redundant. This supports Young (1988) who found that redundant plural marking contexts highly favoured the use of the *-s* plural. Miller (1996) suggests that her learner regarded the unmarked noun as unmarked for number, and added the plural morpheme only when number was focused, as in measure expressions and with cardinal numbers. So current evidence seems to indicate that at least a simple view of functional load will not suffice.

A more fruitful line of enquiry may lie in the direction of semantics. We have seen the effect of semantic concepts in the distribution of plurals with *all* and *every*. In the no determiner context it may well prove worthwhile to explore concepts of generic vs specific. Preliminary investigation suggests that for some of the learners, the lack of plural marking correlates at least in part with the concept of genericness. What we need to do in future research is to look more closely at the possible correlation between linguistic contexts and underlying semantic concepts.

### 3.2 Nouns with irregular plural

The regular plural shows a pattern of emergence, where it is used more consistently in some contexts than in others. This pattern is not observed with the use of irregular plurals. It appears that the learners either know a particular irregular form or they do not know it. If they know it they use it in all contexts. Most of the appropriate uses of the irregular plural for all learners are accounted for by the nouns *children* and *people*. Here, as with

the regular plurals, the quantifier *every* produces extraneous plurals, as in *every children*, *every people*. Interestingly, Learner M produces two examples of *all children*, in contrast to the general pattern noted above of *all* followed by a singular noun. This suggests the possibility that for learners of English, irregular plurals are not decomposed into a stem + irregular plural morpheme.

Our findings in relation to the use of irregular plurals, and in particular how this differs from the use of regular plurals, is relevant to the debate between connectionist and symbolic models of morphology. In the connectionist model, as proposed by Rumelhart and McClelland (1987), “regular, semi-regular and irregular morphology is handled in a single associative network” (Clahsen 1995:123). There are no rules for the generation of regular plurals; all plural forms are learned in exactly the same manner, as forms arbitrarily paired with their singular counterpart.

The symbolist model, on the other hand, makes a clear distinction between regular and irregular plural formation. Regular inflected forms are the product of a process (rule) of combining a stem with an affix. As rules cannot generate irregular forms, irregular forms must be learned by rote and are stored individually as unanalyzed wholes in the internalized linguistic system as exceptions to the general rules.

The most important difference between the connectionist and symbolist models, according to Clahsen (1995:123), lies in the way in which each model represents regular morphology. In the connectionist model, regular inflectional affixes are simply members of the same network as irregular forms. In the symbolist model, on the other hand, regular forms are generated through a rule based process which combines an affix with a stem.

Previous criticisms of the connectionist model have pointed out the difficulties that the connectionist model has in accounting for overgeneralization, which in symbolist terms is the application of a general rule where the target language has an irregular form. Another line of argument is to show that learners pattern quite differently in their use and acquisition of regular and irregular forms. It is this kind of evidence that this paper shows. We have found that particular linguistic contexts influence the use of plural markers, for regular forms only. Regular plurals are used more in some contexts than in others (part of the pattern of emergence). Irregular plurals, on the other hand, are either used or not, on an individual lexical basis; there is no pattern of development, simply lexical expansion (addition of a new lexical item). These findings strongly support Clahsen’s (1995) conclusion that the acquisition of irregular plurals is qualitatively different from that of regular plurals.

## References

- Cazden, C 1968 ‘The acquisition of noun and verb inflections’ *Child Development* 39:433-448.
- Clahsen, H 1995 ‘German plurals in adult second language development’ In Eubank, L, L Selinker & M Sharwood Smith (eds) *The current state of interlanguage: studies in honour of William E. Rutherford* Amsterdam John Benjamins.
- Crystal, D 1988 *Rediscover Grammar* London Longman.
- Dietrich, R, W Klein & C Noyau 1995 *The acquisition of temporality in a second language* Amsterdam John Benjamins.



- Krashen, S 1977 'Some issues relating to the monitor model' In Brown, H, C Yorio & R Crymes (eds) *On TESOL '77* Washington TESOL.
- Miller, L 1996 'Their name are Juan and Rosa: understanding and responding to noun number errors in ESL writing' *TESOL Journal* Winter, 20-23.
- Odlin, T 1989 *Language transfer* Cambridge CUP.
- Rice, M & J Oetting, J 1993 'Morphological deficits of children with SLI: evaluation of number marking and agreement' *Journal of Speech and Hearing Research* 36:1249-1257.
- Rumelhart, D & J McClelland, J 1987 'Learning past tenses of English verbs: implicit rules or parallel distributed processing' In B MacWhinney (ed.) *Mechanisms of language acquisition* New Jersey Erlbaum.
- von Stutterheim, C & W Klein, W 1987 'A concept-orientated approach to second language studies' In C Pfaff (ed.) *First and second language acquisition processes* Cambridge Newbury House.
- Wode, H, J Bahns, H Bedey & W Frank 1983 'Developmental sequence: an alternative approach to morpheme order' In H Wode (ed.) *Papers of language acquisition, language learning and language teaching* Heidelberg Julius Groos Verlag.
- Young, R 1988 'Variation and the interlanguage hypothesis' *Studies in second language acquisition* 10:281-302.