RELATIVE CLAUSE DEVELOPMENT
IN JAPANESE ENGLISH[1]

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Abstract

Using data from a project involving 10 longitudinal studies of adult Japanese learning English in Australia, the development of the relative clause structure is analysed. Five stages of development are detected. Avoidance of specific types of relative clauses is postulated, and the significance of the developmental and interference explanations of learner difficulties is discussed.

Introduction

The focus of research into problems in second language learning has changed rapidly in recent years, moving from dependence on the tenet that interference from the native language is the source of learner difficulties (e.g. Lado, 1957) to acceptance of the possibility of a much wider range of social and psychological explanations for such difficulties. One of the approaches which developed as a result was the study of learner output (Corder, 1967) to determine the strategies and sequences in L2 development, and by comparing the results with the classic studies of development in L1 (e.g. Brown, 1973) some researchers have speculated on the existence of universals in language acquisition. Finding striking resemblances between L1 and L2 sequencing in a limited set of English morphemes, researchers such as Dulay and Burt

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(1974) concluded that there is a natural sequence of language acquisition applicable to L1 and child L2. On the other hand in a study of relative clauses produced by adult E.F.L. students with Japanese and Spanish as L1s, Bertkau (1974) found "little evidence of systematic learner language" which suggests that sequencing may not apply in adult L2, as sequencing implies systematic behaviour. Elsewhere the evidence supports the systematicity of L2 acquisition. Evidence of universals in types of relative clause use is found in Keenan and Comrie (1977) in the form of a hierarchy of accessibility. In addition, studies by Ioup and Kruse (1977), and Schumann (1980) found strong preferences for certain types of relative clauses within the acquisition process.

Further, the significance of interference has also been the subject of some controversy. Whereas Dulay, Burt and Krashen (1982) claim that there is little evidence to suggest that interference plays a significant role in second language acquisition, interference was found by Myhill (1982) using Japanese subjects in tests of grammaticality judgements on relative clauses to be of importance in explaining difficulties. Further, Schacter (1974), who examined the production of English relative clauses amongst Japanese and other subjects, found that avoidance strategies could be triggered by interference difficulties.

The present study re-examines the question of individual variation and sequencing within the relative clause structures produced by Japanese E.F.L. students and the validity of the interference hypothesis and the L1-L2 analogy as explanations of the source of learner difficulties.

Subjects and Data

The subjects (hereafter called the learners to avoid ambiguity with the grammatical subject) were 10 Japanese students aged 16 − 30 in intensive E.F.L. classes in an Aus-

tralian college. The five less able students, M, E, S, A and R, the standard group, were in a class where the purpose was to develop skills in speaking and writing for use on their return to their home country on completion of the course. The other five students, K, H, I, Y and C, the advanced group, were taking a pre-university programme of language and study skills. C had previously spent a year in Australia as an exchange student, and had acquired more colloquial language than the other learners. K produced no relative clauses[2], and is thus excluded from the analysis, except in so far as his sentences are included in the determination of the overall rate of use of relatives.

The data consist of transcriptions of recordings of 20 to 25-minute free conversations with native speakers of English, held at approximately monthly intervals for periods of 6 to 9 months. These conversations yielded an average of 95 sentences (sentences were determined on the basis of prosodic features – intonation and pause length) with a range of 43 to 221. Marginally more than 1% of these, 77 in all, contained relative clauses. Each of these sentences has been analysed for error, use and avoidance of the component part of the relative clause construction in English and a development pattern is suggested.

Relative Clause Construction and Predicted Difficulties

Relative clauses vary from language to language, not only in the formation of the rules, but also in their application (such as the distinction between optional and obligatory use, and the nature of the constraints on the rule). Two features of relative clauses are the focus (e.g., whether the pronoun is in the subject or object form) and the embeddedness (e.g., whether it is embedded on the subject or object in the matrix clause). For the purposes of this paper relative clauses may be considered to fit one of four types depending on the embeddedness and focus, characterised as SS (subject embedded, subject focus),

SO (subject embedded, object focus), OS (object embedded, subject focus), and OO (object embedded, object focus). The object is object of a verb or preposition. The following is a brief description of these rules in English and a comparison with the Japanese rules.

1. Relative clause position

In English the embedded clause follows the noun on which it is embedded while in Japanese it precedes the noun.

2. Relative Pronoun

The English relative pronoun appears in a variety of forms ("who", "which", etc.) the choice of which may be constrained by gender and/or case. In Japanese there is no relative pronoun and the entire phrase containing the relative pronoun is deleted.[3] Thus the relation of the antecedent (or "postcedent" in Japanese) to the embedded clause has to be inferred by the hearer, and may thus be quite ambiguous. This rule prevents the use in Japanese of a possessive embedding such as is found in the English "whose"[4], as it is not possible for the decoder to infer this relationship.

3. Relative positioning

The English relative phrase occurs at the front of its clause (pied piping), but in some cases the preposition may be retained at the end of its clause (preposition stranding). As the whole relative phrase is deleted in Japanese, fronting (or backing as Japanese is an SOV language) and preposition stranding are not applicable.

4. WH- deletion

In English the Wh- word is deletable in many instances when it is clause initial and in the objective case (object of a verb or stranded preposition.) In Japanese the deletion is obligatory in all situations.

On the assumption that the differences between English and Japanese structures would cause learning difficulties, and that similarities would result in ease of acquisition, a set of predicted difficulties for Japanese learning English

was drawn up as follows:
1. Locating the relative clause in the appropriate position.
2. Marking the relative clause using a relative pronoun.
3. Choosing an appropriate relative pronoun.
4. Retaining the preposition.
5. Stranding the preposition of the Wh- phrase.
6. Learning when not to delete the Wh- word.

It would be expected that this deletion would be over-generalised as an initial strategy as it is the case of learning the English limits to what is a general rule in Japanese.

Errors

Errors in the sentences containing relative clauses may be divided into two classes, errors in the relativisation rules, and secondary or trade-off errors (such as those involving verb forms or articles). Only the former are considered in this paper, as it is considered that trade-off errors induced by the complexity of the relativisation rules may only be interpreted in the light of findings for similar forms in non-trade-off situations. Further, information on the rate of error is included as the significance of an error lies as much in the frequency of occurrence as in the fact that it does occur. The following types of error were found:
1. Omission of an obligatory relative pronoun
Of the 70 situations requiring an obligatory relative pronoun 9 were omitted, as in:

S5: There are very beautiful flowers − isn't in bloom yet.
A1: I like the play − is black humour.

All cases were OS clauses and hence these sentences might be interpreted as either relative clauses with the relative pronoun omitted, or conjoined principal clauses with the "and" omitted, (the strategy of using "and" in lieu of the more complex relative clause construction was found in Bertkau's study). The sentences were judged as intended relatives on the basis of the suprasegmental features of pause and intonation. Japanese learners tend to mark sentence

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intonation, whereas in the sentences under consideration the pause was not present, and the intonation resembled that of a single sentence. This error is found in 5 learners, with one displaying it 3 times, and another twice.

2. Wrong relative pronoun

This type of error had an unexpectedly low rate of occurrence, the sole instance involving a substitution of "which" for "who":

S6: A professor which is Japanese, he will come to Australia.

As this appears to be a random use as this learner had used "who" previously (in conversations 3 and 5) and did so again later in conversation 6, it thus might be classed as a mistake rather than a developmental error and as such is beyond the scope of this paper.

3. Omission of the relative phrase preposition

This error occurred in both the preposed and postposed positions, as in:

A5: . . Australians – who . . it's easy to get a job in Japan.

Y6: . . the tape recorder which I record my lectures –.

There was only one obligatory situation with the preposed preposition (and it was in error), but five postposed preposition situations were evident, with three omissions. The two correct forms were produced by one learner, who nevertheless in each produced what may be considered trade-off errors as forms were produced correctly in simple sentences elsewhere in the same session.

4. Pronoun anaphora

In this situation a pronoun is inserted after the relative clause in SS clauses, as in:

A4: One of my friend who is studying how to speak Japanese, he attended to Japanese speech contest.

S1: . . one American woman who is a journalist writer, she is coming . . .

This anaphora occurs in six instances, and it is confined

to three learners, one of whom also produces one instance of a relative clause embedded on the subject without the copying. There are five further sentences without the anaphora in three other learners. Pronoun anaphora does not have its source in the transfer of Japanese rules (where pronominalisation is normally realised as 0). These sentences could be classified as topic-comment structures which occur quite naturally in Japanese (with the subject and relative clause as the topic, and the pronoun introducing the comment), but the inclusion of the pronoun would be highly unlikely in Japanese. It is unlikely that the learners were aware of the sociolinguistic rules for anaphoric pronouns in some varieties of colloquial English. It is however significant that all the subjects who produced the anaphoric pronoun did so only at a specific period of time and it is thus interpreted as a developmental phenomenon which assists some learners in the acquisition of a sentence structure where the subject is separated from its verb by a clause. It is interesting to note that all cases involved the third person singular, and the verbs were mostly in the present tense where the verb requires the /s/ morpheme attachment.

Use and Avoidance Strategies

1. General Use

The learners showed a reasonably even distribution of the relative clauses throughout the study, except in two instances. H produced his eleven relative clauses in two out of six conversations, and nine of these occurred in conversation 2. The reason for the high use in this particular conversation is not known. S produced six of her twelve relative cluases in conversation 6. This conversation is of particular interest in that it took place in a period of emotional turmoil a few days after she was involved in a car accident. She seemed to be using the conversation as counselling session, with the resultant emotional involvement leading to the produc-

tion of longer sentences with greater linguistic complexity than at any other time in the study. This supports LaForge's (1983) position that emotional involvement produces a higher level of linguistic output.

2. Relative Pronoun Selection

The use of relative pronouns is shown in Table 1:

Table 1

Use of Relative Pronouns

	Subject N	case Direct Object N	Object of a preposition N	Learners Displaying: N
Pronoun:				
who	30		1	8
whom		1		1
which	20	4	5	6
that	3			3
where			2	2
(0)	9	2		5
Total	62	7	8	9

From this table it can be seen that there was a marked preference for the gender-specific pronouns "who" and "which" to the near exclusion of "that", and that subject pronouns were much more preferred to object pronouns which involve location in front of the verb. There were no examples of the possessive relative pronouns "whose" or other remote levels of the Keenan and Comrie accessibility hierarchy indicating possible use of the strategy of avoidance. The pattern of pronoun selection shows marked differences from that found for L1 acquisition as reported in Bowerman (1979) and Romaine (1984). There is, for example, no use of the relative pronoun "what" common in L1 and the omission of the object relative pronoun common in L1 was used by only a few learners towards the end of the study. The subject

relative pronoun omission is not reported in the L1 studies perhaps because such sentences are interpreted as consisting of two separate sentences, or as co-ordinate clauses lacking a conjunction.It is used only in the early conversations before the use of object pronouns, suggesting that the learners used the strategy of transfer of their L1 rule at first, deleting the subject relative pronoun but that once the rule was acquired, it was applied in all stituations without the optional deletion which was rather late in developing.

3. Relative Pronoun Phrase

The preposition in the relative pronoun phrase was highly unstable whether postposed or not, and the avoidance of sentences with such structures is suspected in line with the prediction of difficulty. There were five instances of obligatory situations displayed by three subjects only, two with preposition error and the third with a preposition but with suspected trade-off errors elsewhere in the clause.

4. Complex Relatives

There were no examples of relatives embedded within embedded clauses, but there were two examples of conjoining, one of conjoined clauses and one of conjoined nouns, each with a relative clause. There was also an example of a conditional within a relative, but as this contained a trade-off structural break it is not possible to make inferences from it with confidence. The more advanced leaners did not attempt these structural complexities.

5. Position of Embedding

Table 2 shows the use of relative clause types (relative pronoun in the nominative or objective case) by the case of the antecedent:

Table 2
Types of Relative Clause by Position of Embedding

Antecedent:	Relative Pronoun	
	Subject	Object
Subject	15	0
Object	47	15

Of the 77 relative clauses, 62 (81%) were O embedded, revealing a similar preference for position of relative clauses as found in L1 studies (Bowerman, 1979; Romaine, 1984), but the OO clauses show less variety and lower proportions in the present study because the learners did not achieve competence in the relative pronoun deletion rule until late in the study, nor did they use the empty head noun type, such as "things I got" (Bowerman 1979). The total avoidance of subject-object type embeddings as in:

Sentences which we avoid are like this.

is interesting in that many of the learners had already demonstrated that they had mastered all the rules required, but failed to produce the structure.

Development

From the error analysis and the use and avoidance analysis a pattern of development was apparent, consisting of five recognisable stages of development. The pattern is set out below and followed by discussion of the progress of each of the learners through the stages and the frequency of use of the structure.

Table 3
Development Stages in Relative Clauses

Stage	Relative Pronoun	Antecedent
1	omission	object only
2a	subject only	subject and object
2b	subject	subject and object pronoun copying: subject (some learners)
3	subject and object	subject and object. object pronoun with object only
4	optional deletion	"
5	use of prepositions with object pronoun	"

Stage 1

S dispayed this condition up to the fifth conversation, but thereafter made no such error at all. Other learners displayed the error occasionally, but only A, where the error was found in the sole relative in conversation 1, could even hesitantly be classed in this stage for any conversation (the others are considered transition errors). Avoidance of relative clauses by some learners may have meant that they did not display any stage 1 errors at all.

Stage 2a

T, E and S used the relative pronoun in subject position only, and A, who attempted the next stage twice (both in error), is classified in this stage too. C and H displayed the subject pronoun only to conversations 3 and 4 respectively when correct use of the object pronoun signifies the achievement of stage 3. This type of structure appeared as object embedded before subject embedded in most learners. R, A, E, M, I and Y displayed this order. H and C displayed both from the same conversation (conversation 2). Only S displayed the reverse order.

Stage 2b

The inclusion of the anaphoric pronoun occurs only while the learner is in stage 2, or in transition to stage 3. S was the only subject to exhibit both states of the rule in a single conversation (significantly the one relating to the accident), the form without the anaphoric pronoun occuring in that part of the conversation relating to the accident with its high level of emotional involvement, and with the pronoun in the later part of the conversation where the involvement level had decreased. Four other subjects used the construction.

Stage 3

This stage includes verb object relative pronouns and the word "where" used as a relative pronoun. These relatives occured only as object embedded. This stage is evident for M, K, I, C and Y.

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Stage 4
This stage is shown in the sentences produced by R and
I. As C produced a sentence which could have used the
deletion but did not, she may not have achieved this stage.
Stage 5
This form was not used in correct relative clauses in the
data, but C did display the postposed preposition in correct
position in three sentences (albeit with possible trade-off
error), in contrast with Y who produced the structure with
preposition omission:

C5 .. tapes which (I) (have) listen(ed) to before.
Y6 .. tape recorder which I record my lectures (on).

It is possible that the order of stages 4 and 5 may be reversed
in the light of further evidence as C, the learner who was
most familiar with colloquial English and who achieved
this stage, did not display competence in stage 4. Y, however,
who attempted this structure though always with omission
of the preposition, did display competence in stage 4. R
and I displayed competence in stage 4, but R's attempt at
stage 5 was in error.

Beyond Stage 5
The learners in the present study did not show competence
in subject-object embeddings, nor in the use of "whose"
or the more colloquial "what" as relative pronouns. The
first two of these would be predicted from the accessibility
hierarchy predictions, but the latter is not covered by that
analysis.
Individual Development
The development of individual learners is shown in Table 4:

Table 4
Development in Individual Learners

Month / Learner	1	2	3	4	5	6	7	8	9	Rate	Rank Order
K	—	—	—	—	—	—	—	—		0.00	10
M	—	—	2a	2a	2a	—				0.54	8
E	2	1 2	2a	—	2a	2a	—			0.93	8
S	—	—	1 2b	1 2b	1	2 2b 3	—			1.71	6
H	—	1 2a 2b	—	—	2a 3	—				1.79	6
A	1	2a	—	2b	2a	—	2a	3 (5)		1.54	4
Y	—	—	3	2a	2a (5)	3 3	2a			1.67	4
I	2a	—	4	—	2a	2a	—	—		0.46	3
R	1	—	—	3	4	— (5)	4	—	—	0.53	2
C	—	2a 5	2a 3	2a 3 5	2a	2a				1.57	1

Numbers under month refer to stages of development displayed.
Parentheses indicate stage attempted but error occurs.
Rate is the number of occurrences per 100 sentences.

Of the learners in the standard group, M and E displayed competence only to Stage 2, while the remaining three showed progress from the ungrammatical forms of Stage 1 to the grammatical uses of Stage 2 and 3 (and Stage 4 in the case of R.) The rank order was determined by stage reached at the conclusion of the study, and, within each stage, unsucessful attempts at the next stage were counted as more advanced than no attempts. The rank order within this group is parallel to that found in the analysis of questions from the same

corpus (Saunders, 1983), except for E who performed at a lower rank in the present study. The advanced group learners similarly maintained the same rank order, but they did not display competence compared with the standard group, as they did in the question study, nor did they show a greater frequency of use of relatives even though their rate of question use was far superior. All of the subjects apart from M, E and Y showed progress through at least two stages, and Y's attempts at Stage 5 in the later part of the study, though unsucessful, indicate that development was proceeding. Only M and E revealed no formal progress.

The rate, the number of uses per 100 sentences produced, provides a means of comparison of the linguistic output of individual learners on a specified structure, on their use of different structures, and on their performance in relation to other groups of learners (e.g., with different L1s). As Table 4 shows, the learners in this study form two groups – the group which produced less than 1.00 relatives per 100 sentences, and the group which achieved a rate of more than 1.50 relatives per 100 sentences (the overall average, including K, was 1.17). Unlike the question study the rate of production did not increase with progress through the stages, and the advanced group did not show a significantly higher rate of production. Further, the learners with the lowest rate (apart from K) both showed competence to Stage 4, while the two learners with the lighest rate barely showed competence in Stage 3. Low use is not, therefore, necessarily indicative of avoidance or incompetence: other factors such as progress along the developmental sequence must be considered as well.

Developmental and Interference Predictions

Some factors emerged as similarities in the comparison of L1 and L2 acquisition of relatives, especially the late development of SO relatives, but there were also a number

of differences: the omission of the subject relative pronoun (though this may result from differences in interpreting some sentences), the late development of the object relative pronoun deletion, preposition dropping, and the error types in relative pronouns.

Some of the predictions of difficulty derived from the *a priori* contrastive analysis are substantiated by this analysis. The omission of the subject relative pronoun in the early stages of some of the learners is evidence for one of the predictions of difficulty. In addition the high rate of error in prepositions suggests that both in stranding and pied piping prepositions are difficult for Japanese. However, the low error rate in pronoun selection, the lack of error in positioning of relative clauses, the appearance of unpredicted forms such as pronoun anaphora, and the late development of object relative pronoun deletion reveal the limitations of interference based on a contrastive analysis as a complete explanation of learner difficulty.

What is interesting is that neither the developmental hypothesis nor contrastive analysis predicted the late development of the object pronoun development.

Conclusion

In contrast to Bertkau (1974) who found "no evidence of systematic learner language", this paper finds a development pattern of five (or more) stages through which Japanese learners progress towards competence in English relatives. Over the nine subjects variation from the pattern was minimal, and classifiable as transitional instability between stages or in one case regression.

In relation to the sources of difficulty, interference was shown to be of importance, supporting the findings of Schacter (1974) and Myhill (1982). Moreover, the development pattern of L2 relative clauses contains major differences from the L1 pattern, supporting the view that some different

stragegies may be employed. However, some of the structures − pronoun anaphora, and the late development of object pronoun deletion − suggest that interference and developmental theories together are not sufficient as an explanation of all L2 learner difficulties.

The results were also in keeping with the findings of Ioup and Kruse (1977) and Schumann (1980) that sentences embedded on object were preferred to those embedded on the subject, though it was found that subject focus was preferred to object focus embeddings, and that the zero relativiser was an unexpectedly late development.

Notes

[1] This project was funded by a research grant from the Australia-Japan Foundation.

[2] K did produce the sentence:
K3: I know where I am going.
Within the Quirk and Greenbaum (1973) description this would be considered a relative clause without antecedent, but for the purposes of the present study it is classified as an indirect question. This is the only such clause in the corpus.

[3] Schacter (1975) claims that the WH- phrase in Japanese may be retained in some instances in a relative clause, but gives no further explanation. My own experience is that no such retention occurs.

[4] If a form of resumptive pronoun were available in Japanese this structure might be possible. Keenan and Comrie (1977) claim that such pronouns do exist in Japanese but give no examples. Tarallo and Myhill (1983), however, claim that these Japanese sentences illustrate the use of resumptive pronouns:
(1) watakushi ga sono hito no hon wo totta sensei ga okotta.
    I SUBJ that person's book OBJ take PAST teacher SUBJ get angry PAST
    = The teacher whose book I took got angry.
(2) watakushi ga hon wo totta sensei ga okotta.
    I SUBJ book OBJ take PAST teacher SUBJ get angry PAST
    = The teacher whose book I took got angry.
Their survey of 4 native speakers of Japanese found two accepting both forms and one accepting each of (1) and (2) only. A random survey of 6 Japanese academics at Oxford resulted in a nil acceptance of either sentence in the meaning given, and all reported that the sentences were difficult to assign meaning to. In (2) it is not possible to determine the ownership of the book, and in (1) the owner has to be a third party, not "watakushi" or "sensei". This, therefore, cannot be an example of a resumptive pronoun in a relative clause as claimed

by Tarallo and Myhill, and raises the problem of interpretation of studies of acceptability in relation to intended meaning. The comments elicted from the 6 Japanese in this survey support the view that Japanese does not have a possessive relative pronoun structure.

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