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Developmental Sequences in Learning Japanese: A Look at Negation

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Previous research has established that language learners follow developmental sequences in acquiring such features as tense, negation, and question formation in a second language (L2), and that these patterns are similar to those characteristic of children acquiring their first language (L1). These findings have been based almost exclusively on acquisition patterns in learners of English and other Indo-European languages; until recently, almost no L2 acquisition research existed on typologically dissimilar (i.e., non-Indo-European) languages. Thus, the question arises: Do learners of non-Indo-European languages also follow common routes in acquiring certain L2 features? To address this issue, the development of negation in L2 learners of Japanese was selected as the focus for the present study. Twelve subjects beginning their study of Japanese at the university level in the U.S. were recruited to determine how propositional negation emerged in their interlanguage. Subjects were interviewed bi-monthly over an academic year and oral production data examined to determine types of negation patterns used and predicate contexts in which they emerged. Analysis of data revealed several developmental patterns common to the learners: 1) from fewer to more negation patterns were used over time, and 2) an ordering effect was observed in terms of the predicate environment in which negation is acquired first (nominal and verb negation before adjective negation). Results expand our understanding of developmental sequences in L2 learning by establishing its occurrence in a non-Indo-European language. It also documents that L2 Japanese learners' negative constructions are remarkably similar to those of L1 children. The present study, by providing insight into the acquisition of one feature in a non-Indo-European language, holds significance for second language theory as well as Japanese language pedagogy.

OUTLINE OF THE STUDY

This paper reports the acquisition of negation in Japanese as a second language (JSL) by adult learners in the U.S.[1] Specifically, propositional negation in the spoken data of classroom learners is examined to determine whether there exist common developmental sequences in negative constructions.

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The study involved twelve adult subjects just beginning their study of Japanese, interviewed individually four times over an academic year. Data are analyzed in terms of: 1) negation patterns produced at each interview time and 2) the order of predicate environments in which negation is acquired first/last. Specific patterns of negation in learners are compared to findings from research on the development of negation in Japanese L1 as well as in Indo-European L2s.

Motivation

Motivation for the study came from personal experience as a classroom teacher informally observing students' attempts to master the Japanese negation system. It was noted that their negative constructions frequently diverged from teacher input and textbooks, despite explicit grammatical instruction. Furthermore, individual learners' negative productions seemed to fluctuate from one time to another. It was intuitively assumed that their difficulty, at least in part, must be related to the relative complexity of negation rules in Japanese, which vary by predicate category (i.e., verbal, V-*nai*; nominal, N-*zya-nai*; and adjectival, A-*ku-nai*) as well as by tense and politeness level.[2] An empirical study of L2 learners acquiring Japanese negation promised to provide some insight into these issues.

Previous Research on JSL

In the past five years a new body of research on the acquisition of Japanese L2 has begun to emerge, providing a new source of data and information to the field of second language acquisition. Recent studies include investigations of the acquisition of Japanese case particles (Doi & Yoshioka, 1990; Sakamoto, 1993; Yagi, 1992), reflexives (Thomas, 1994), and complementizer phrases (Kaplan, 1993). There are also studies focusing on attrition of Japanese in children and adults, including the loss of negation (Hansen-Strain, 1993; forthcoming). However, to this researcher's knowledge, no research has been carried out on the L2 acquisition of negation in Japanese. It is hoped that this study, by examining a previously unknown aspect of Japanese L2, will contribute to a greater understanding of how Japanese is acquired by instructed learners.

Research Questions

Previous L2 research has established the fact that learners, regardless of their L1, pass through common developmental stages in acquiring such features as questions and negation. Though individual rates of acquisition and eventual attainment may differ, learners seem to follow a common developmental route which is similar to that of L1 children. Since previous research on developmental sequences has been limited to English and Indo-European languages (mostly SVO), expanding the scope of research to include

typologically dissimilar languages such as Japanese (SOV) can help strengthen or modify previous findings. The following questions are addressed:

1. Do classroom learners of Japanese follow a common developmental sequence in the acquisition of propositional negation?
2. Do classroom learners of Japanese follow developmental patterns of negation which are similar to those of Japanese children?

In the following section the literature on negation in L1 and L2 English, German, and Swedish will be reviewed briefly, followed by a summary of previous research on L1 negation in Japanese.

LITERATURE SURVEY

L1 and L2 Negation in Indo-European Languages

There is an extensive body of research on L1 and L2 acquisition of negation in English, German, and Swedish, and other European languages. At beginning stages of learning English, it has been documented that learners, regardless of L1 background, commonly employ the preverbal 'no + verb' pattern to construct negative utterances (Cancino, Rosansky, & Schumann, 1978; Schachter, 1986; Stauble, 1984). Similarly, beginning learners of German (Eubank, 1987; Meisel, Clahsen & Pienemann, 1981; Wode, 1978) and Swedish (Hyltenstam, 1977) sometimes place the negator in preverbal position, though both languages require postverbal placement of negators in main clauses. At later stages of development, most learners begin to fine-tune their internal hypotheses, placing the negator before or after the verb according to its main or subordinate clause status.[3] These studies show that although there are individual differences in rate and level of language acquisition, learners basically proceed through common developmental routes in negation patterns. Furthermore, it has been shown that adult learners' negation patterns are very similar to the development of the negative construction in L1 children.

While the above studies focused only on verb negation, it is important to note that in Japanese, learners must differentiate negation rules for three predicate categories (verb, adjective, and nominal) as well as several politeness levels. Thus, we might expect that L2 Japanese learners will exhibit somewhat more complex patterns in expressing the negative than do learners of English and other Indo-European languages.[4] On the other hand, if learners' negation production is similar to Japanese children, we can expect some degree of systematicity in their interlanguage. We now turn to a brief review of some research on the emergence of negation in Japanese children.

L1 Negation in Japanese Children

Table 1 represents a proposed sequence for the emergence of negation in Japanese children beginning with the two-word stage based on data taken from Clancy (1985). Initially, Japanese children use one form of NEG, unanalyzed *nai*, attaching it externally to all predicates in nonpast or past tense. Later, they begin utilizing several more unanalyzed negators, again in post-predicate position. The third phase represents a transition in which negators and negated elements are analyzed into their parts (i.e., negative morpheme *-na-* is suffixed to predicate roots, preceding tense marker *-i* (nonpast) or *-ta* (past). It should be noted that the L1 research does not report any instances of pre-verbal or pre-predicate negation construction by Japanese children, in contrast to the pre-verbal negation so characteristic of the beginning stages of acquisition of English and other European languages.[5]

Table 1: Developmental Sequence of Propositional Negation in L1 Japanese

Negator	Verb	Adjective	Nominal
I. Unanalyzed predicate + 'nai'			
	nonpast		
nai *	taberu-nai	*akai-nai	*hon-nai
	(I) eat not	(It) red not	(It) book not
			*kiree-nai
			(It) pretty not
	past		
	*tabeta-nai	*akakat-ta-nai	*kiree-datta-nai
	(I) ate not	(It) red-was not	(It)pretty-was not
II Unanalyzed predicate + various unanalyzed negators			
	nonpast		
nai *	taberu-zya-nai	*akai-ku-nai	*hon-da-zya nai
zya-nai	(I) eat not	(It) red not	(It) is book not
ku-nai			
			*kiree-ku-nai
			(It) pretty not
	past		
	*tabe-ta-zya-nai	*akakat-ta-ku-nai	(no examples
	(I) ate not	(It) red-was not	given in data,
	*tabe-nai (in past context)		
	(I) eat not		

* usage does not follow adult standard

Table 1: Developmental Sequence of Propositional Negation in L1 Japanese (con't.)

Negator	Verb	Adjective	Nominal
IIIa Analyzed predicate + nonpast negator 'nai'			
V-nai	tabe-nai	aka-ku-nai	hon-zya-nai
Aku-nai	(I) don't eat	(It) isn't red	(It) isn't a book
N-zya-nai			
			kiree-zya-nai
			(It) isn't pretty
IIIb Analyzed predicate + past negator 'nakatta'			
V-nakatta	tabe-nakat-ta	aka-ku-nakat-ta	hon-zya-nakat-ta
Aku-nakatta	(I) didn't eat	(It) wasn't red	(It)wasn't a book
N-zya-nakatta			
			kiree-zya-nakat-ta
			(It) wasn't pretty

Based on data from Clancy (1985)

As for the question of how negation emerges according to predicate category, researchers agree that children generally master verb negation first and adjective negation last (Clancy, 1985). Noun negation also appears early, some time before adjective negation.

Based on the findings for Japanese L1 and from informal observation of classroom learners of Japanese, it is predicted that adult L2 learners, like children, will have the most difficulty acquiring adjective negation. Overall, it is predicted that learners will follow a similar route as children, using unanalyzed negators initially and showing a differential order of acquisition of negation by predicate category (verb, nominal, and adjectival). Additionally, while children's utterances are in the informal or plain style, we can expect learners to use the style they are first exposed to in the classroom—usually the formal style with predicates ending in *-des-u* or *-mas-u* in nonpast tense.

THE STUDY

The original study was designed to combine longitudinal and cross-sectional approaches, following a group of subjects at three proficiency levels for an academic year. In this paper results obtained from beginning level learners only are discussed. For results from intermediate and advanced subjects, see Kanagy (1991).

Subjects

Placement into levels

As displayed in Table 2, twelve subjects enrolled in beginning Japanese at two different universities in the U.S. were recruited for the study. Their native tongues were English, Korean, Chinese, French, Punjabi, and Tagalog; however, all were also sufficiently fluent in English to enable them to handle college courses.[6] The twelve subjects were divided into two groups according to the amount of their exposure to Japanese at their respective institutions. The seven 'low beginning' subjects were enrolled in a non-intensive, three-hour weekly course, while the five 'high beginners' had more than twice as many hours (eight) of exposure to Japanese weekly. When the study began four weeks into the school year, it appeared that the high beginners, based on the first interview, were somewhat more proficient in spoken Japanese than were the low beginners.

Placement into groups was determined by number of hours of prior classroom study rather than by means of a standardized test. This was felt to be appropriate for the purposes of this study because: 1) being in a foreign language setting, subjects' exposure to Japanese was largely limited to the classroom, and 2) at the time the data were being gathered no standardized test of Japanese comparable to the TOEFL was available.

Table 2: Japanese L2 Subjects by Placement Level

Group	Course Name	Hours/Week	n Subjects
Low-Beginning	First-year Japanese	3	7
High-Beginning (Intensive)	First-year Japanese	8	5
			n = 12

Hours of instruction

Table 3 compares the number of cumulative hours of instruction each group received at each bi-monthly interview over an academic year. As evident in the table, the study was designed to be both cross-sectional and longitudinal in order to capture the development of negation over time: Low beginners had 20 hours when the study commenced and 75 hours by the end of the study, which is close to the number of hours high beginners received by their second interview (i.e., 90 hrs.). By the fourth and last interview, high beginners had 180 classroom hours, over twice the number hours of instruction received by low beginners during the same period.

Table 3: Comparison of Approximate Cumulative Hours of Japanese Instruction Received by Each Group at Each Interview Time

Group	Time: 1	2	3	4
Low-Beginning	20 hrs.	35 hrs.	50 hrs.	75 hrs.
High-Beginning	40 hrs.	90 hrs.	130 hrs.	180 hrs.

Teacher input

Low and high beginners differed in terms of the instructional approach used by the teachers in their respective classrooms. Low beginners were not assigned any textbook; instead, the teacher stressed primarily oral input, directing students to perform actions and manipulate objects through spoken commands. Periodically, the instructor gave students vocabulary lists and reviewed what was presented in class, but with little explicit grammar instruction. At the end of the first semester (45 hours of instruction), the teacher outlined on the board rules for affirmative and negative constructions of verbs, adjectives, and nominals in Japanese. It should be noted that this teacher used mostly informal style speech with the students (i.e., *-nai-desu* endings for adjectival and nominal negations, but the formal *-masen* pattern for verb negations).

In contrast to the low beginners, the high beginners were enrolled in a grammar-based course with pattern drills and explanations in class. During week two of the fall semester students were introduced to Japanese verb negation rules in the formal style (i.e., V-*masen*, non-past; and V-*masen desita*, past). Instruction on formal style adjective and nominal negation (A-*ku-arimasen*, N-*zya-arimasen*) came in week three. Data gathering for the study began about six weeks into the semester, after all the formal negation patterns were presented. High beginners were instructed in informal style negation rules in mid-November, before the second interview.

Thus, it was expected that high beginners would express negation in the formal style initially, and the informal style later on, following a typical syllabus for beginning Japanese courses. Low beginners were expected to diverge from this pattern somewhat, as they were exposed to mostly informal input from the teacher. However, as the purpose of this study was to examine the development of negative constructions rather than the acquisition of informal and informal style speech, formality levels will be noted only when relevant to the discussion.

Materials and Procedures

The instrument used to gather oral production data consisted of 30 pictures and questions designed to elicit both affirmative and negative responses. Learners were told that the purpose of the study was to investigate conversational development in Japanese. Twenty-minute interviews of each subject were carried out at approximately eight week intervals and tape-recorded for later transcription and analysis.

Figure 1 below lists sample questions and standard negative responses for three predicate types: verbal (V), nominal (N), and adjectival (A). At the first and fourth interviews, the same pictures and questions were used, changing the order of presentation; in interviews 2 and 3 different sets of pictures were used. The elicitation instrument was designed such that the questions would be comprised of approximately one-third each of the three predicate categories.

Figure 1: Sample Interview Questions Used with Pictures Covering Three Predicate Categories. (FOR=formal style, INF=informal style, S=subject)

1. Koohii o nomimasu ka (V)	'Do (you) drink coffee?'
S: Iie, nomi-**masen** (FOR)	'No, (I) **don't** drink (it)'
Iie, noma-**nai** (INF)	
2. Kuruma desu ka (N)	'Is (it) a car?'
S: Iie, kuruma-**zya-arimasen** (FOR)	'No, (it) **isn't** a car'
Iie, kuruma-**zya-nai** (INF)	
3. Ookii-desu-ka (A)	'Is (it) big?'
S: Iie, ooki-**ku-arimasen** (FOR)	'No, (it) **isn't** big'
Iie, ooki-**ku-nai** (INF)	

As noted above, beginning learners of Japanese usually speak formal style Japanese, the level typically introduced first in beginning Japanese courses. The low beginners in the study were an exception since they were exposed primarily to informal speech from their teacher. However, because differences in

politeness levels are not a focus of this study, learner responses are coded on the basis of predicate types and negation patterns without regard to formality level. Thus, in the following tables and figures quantifying groups results, (formal) V-*masen* includes (informal) V-*nai*; likewise, (informal) A-*ku-nai* and N-*zya-nai* include instances of (formal) A-*ku-arimasen* and N-*zya-arimasen*, respectively.

Analysis was carried out on both individual data and combined group data to determine: 1) forms of negators used at each interview, 2) placement of negators and tense markers relative to negated elements, and 3) percentage of utterances containing negators appropriate to that predicate context. Results are discussed below.

RESULTS

In this section the results obtained from beginning level L2 subjects in the study are presented, followed by a comparison of findings to L1 Japanese negation.

The Case of Subject 1

At the first interview, some low beginning learners utilized a single negating device such as -*nai(desu)* to form negative responses, regardless of predicate category. Most beginners showed evidence of two or three negating devices in their utterances. Subject 1 is representative of the latter, in that he used three main negation patterns at first. In Figure 2.1, six of his negative responses at interview one are excerpted and predicate types marked as V, A, N, or NA (nominal adjective).[7] This subject uses -*zya-nai* most frequently, as an unanalyzed NEG device in all predicate environments (A in response 2 and 6, NA in 8, V in 10). In 18, he attempts to reply in the past tense by placing a negator -*sen* (probably derived from the standard -*masen*) externally to the past inflected verb *simasita* .

Figure 2.1: Subject 1 (Low-Beginner), Interview 1

pred.
type Q#

A *2. Ooki-i-**zya-na-i-desu**.
big NEG-NONP-FOR
'It isn't big'

N *5. Iie...um on- onnazi onazi onazi-**ku-na- ku-na-i-desu**
No sa- same same same NE- NEG-NONP-FOR
'No, It's not the same'

A *6. Iie, furu-i-**zya-na-i-desu.**
No old NEG-NONP-FOR
'No, it isn't old'

NA 8. Iie, kiree-**zya-na-i-desu.**
No, pretty NEG-NONP-FOR
'No, she isn't pretty'

V *10. Iie, ta- um tab- tabe-**zya-na-i-desu.**
No, ea- ea- eat NEG-NONP-FOR
' No, I didn't eat it'

V *18. Aah, iie, um, simasi**ta-sen**?
uh no do PAST-NEG
'No, I didn't do it'

Figure 2.2: Subject 1 (Low-Beginner), Interview 4
(7 months later)

pred.
type Q#

A 2. Iie oo**ku-na-i-desu**, tiisai-desu.
no big[sic]NEG-NONP-FOR small-FOR
'It isn't big, it's small'

N *5. uh ona- onazi-**ku-na-i-desu.**
sa- same NEG-NONP-FOR
'Uh, it's not the same'

A 6. um furu-**ku-na-i-desu.**
old NEG-NONP-FOR
'Uh, it isn't old'

NA*8. uh, kiree-**ku-na-i.**
pretty NEG-NONP
'Uh, she isn't pretty'

V 10. Iie, tabe-**masen**.
No, eat NEG-NONP-FOR
'No, I don't eat it'

V *18. Oh, oh si- simas- simasi- **ta-sen**, wakari**masen**.
do do do PAST-NEG know-NEG
'Oh oh I didn't do it'

Results for the same subject at interview 4 (approximately six months later) are excerpted in Figure 2.2. This time the learner successfully applies the adjective negation pattern *-ku-nai* to two A predicates in 2 and 6, but overgeneralizes the negator to N/NA (5 and 8) environments as well. He uses *-masen* to negate a verb appropriately in 10 although in 18 the tense-negator ordering is still reversed.

Figure 2.3 displays graphically the relative proportion of each device used by subject 1 in his negative expressions at the four interviews, at approximately two month intervals. There is a change over time in both kind and number of negation patterns used: *-zya-nai* is most frequently used at time 1, followed by A and V negators (*ku-nai* and *-masen*), and a few instances of unanalyzed *-nai*. Six months later *-zya-nai* appears proportionally less often than at time 1, while *ku-nai* and *-masen* become more productive; each of the three patterns occur in roughly one-third of the negative responses, although not necessarily with the appropriate predicate. Next, combined results for all seven low beginners are presented and compared to the five high beginners.

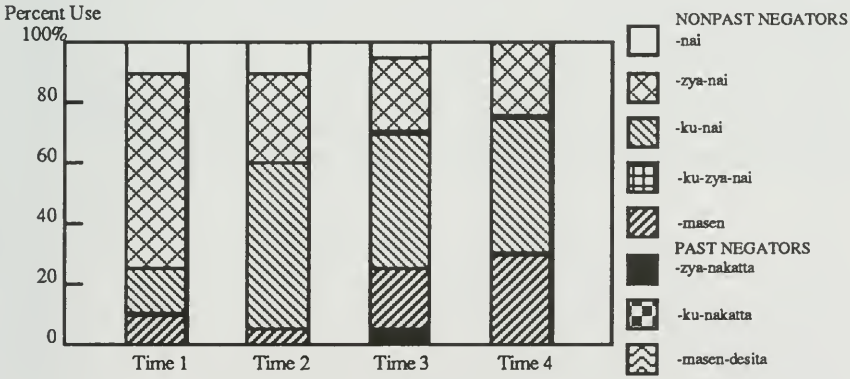

Figure 2.3: Changes in Japanese Negation Patterns Over Four Interview Times: Low-Beginner, Subject 1

Summary of Forms of Negators Used by Beginning Learners

In order to create a clearer picture of negation patterns used by two groups of beginning JSL learners, percentages were calculated in terms of the relative proportion of each pattern used in negative utterances at the first and last interviews. Results are displayed graphically in Figure 3. As a group, we see that low beginners initially negate the greatest number of predicates with *-zya-nai* (the N pattern), in fully 50% of their combined utterances. A number of subjects employ unanalyzed *-nai* in their responses at time 1, totaling 25% of their utterances—recall that this is similar to Japanese children's early negative constructions, discussed above. Over a six month period, the use of unanalyzed *-nai* gradually diminishes, with a corresponding increase in *-masen* and *-ku-nai* type negations. At this point low beginners as a group employ three non-past negators in their utterances, but almost no past-tense negation forms.

High beginners' negative constructions (right half of Figure 3) are more complex, due to the greater number of negation forms used. At time 1 they utilize four non-past and two past-tense devices, one of which seems to be a non-standard combination of the N and A negation patterns (*-ku-zya-nai*). This form almost disappears six months later, while the five standard forms continue to be used. The greater variety of negation patterns produced by high beginners is not surprising if we recall that they had received approximately 40 hours of instruction when the study began, compared to only 20 hours for low beginners.

Viewing Figure 3 from left to right as a time line, we can postulate a possible sequence of negation patterns typical of in beginning JSL learners over one year (i.e., combining the two six-month periods). We can expect initial reliance on unanalyzed -nai as negator to decrease in the first six months of instruction, but not to disappear entirely (note its occurrence in some high beginners' responses at time 4). In addition, we can predict that past-tense negation patterns will become productive later than non-past forms, as low beginners produced very few past negation patterns during the study.

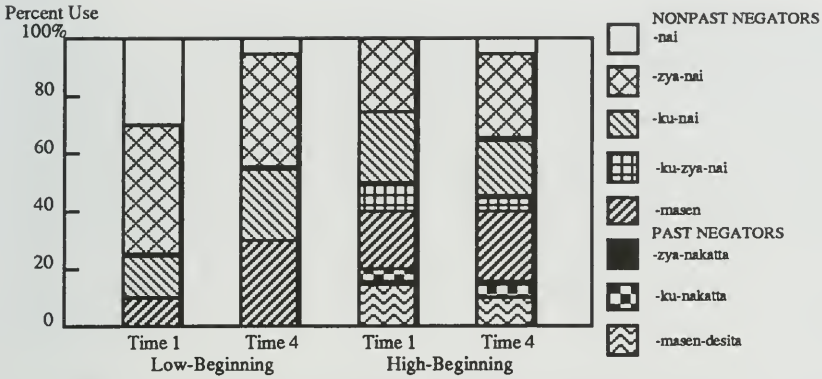

Figure 3: Comparison of Negation Patterns at Times 1 and 4 by Low Beginning (n=7) and High-Beginning (n=5) Learners of Japanese

Emergence of Negation According to Predicate Category

Another aspect of the emergence of negation in Japanese L2 involves how negation develops within each predicate environment: V, A, and N (including both nouns and nominal adjectives). Given the fact that standard Japanese negation rules differ according to type of predicate, it was thought that differences might emerge in which predicate category was first or last to be provided with analyzed negation (i.e., where the negating device is specific to that environment). Occurrences of context-specific negation in each predicate type were quantified as the percentage of time a predicate was negated appropriately.

Figures 4.1 displays results for low beginners. At the beginning of the study N negations are most often produced in the standard pattern (60% of the time) followed by V (43%), with A predicates least likely to be negated appropriately (only 4% of the time). Four months later (time 3), the gap between N and V closes and each type of utterance contains the category-specific negator 70% of the time. By time 4 low beginners' production of context-appropriate negation of V (at 82%) surpasses N (68%). Their A utterances, however, contained few A-specific negators, reaching only a 30% rate at the end of the study. Results indicate that in these subjects, adjectival predicates are least likely to be negated with the appropriate form (*-ku-nai*) compared to N and V predicates. Considering an 80% suppliance rate as the criterion indicating acquisition of a particular structure, V emerges as the first predicate category in which negation is mastered by this group of learners.

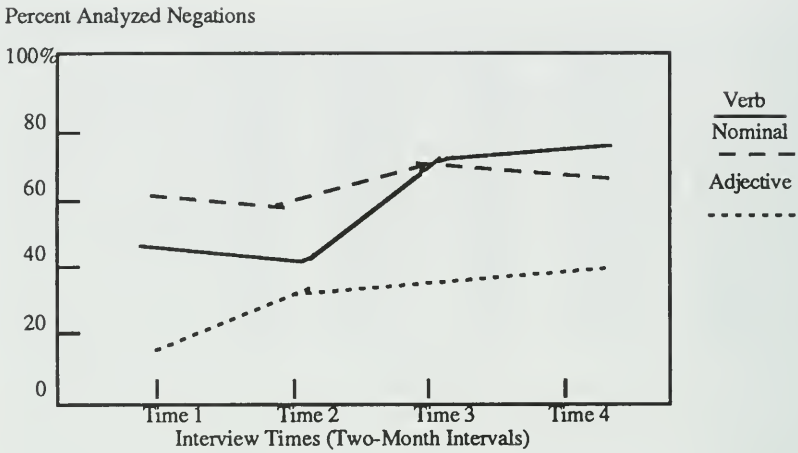

Figure 4.1: Changes in Percentage of Analyzed Negations of Predicates V, N, and A at Times 1 to 4: Low-Beginning Learners of Japanese (n=7)

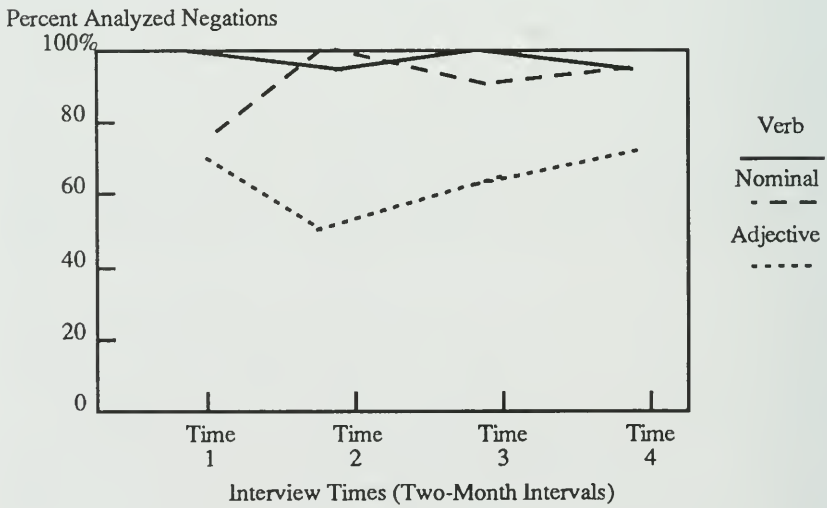

Figure 4.2: High-Beginning Learners of Japanese (n=5)

At time 1 in Figure 4.2, high beginners demonstrate that they have already acquired V negation in that they use *-masen* (or its informal equivalent) close to 100% of the time when negating V predicates. In N utterances, negation with *-zya-nai* increases from 77% initially to 96% at time 2, indicating mastery. By contrast, their production of context-appropriate A negations actually decreases from 74% at time 1 to 56% at time 2, rising again to just 67% at the final interview. Thus, in both low and high beginners, A-specific negation fails to reach 80%, indicating a longer developmental period than for V and N negation.

Comparison of the Development of Negation in L1 vs. L2 Japanese

Table 4 is a proposed sequence of development for Japanese negation in L2 learners along with the sequence outlined in Table 1 for L1 children. It should be noted that the examples under Japanese L2 are actual utterances gathered in this study (including some from intermediate and advanced learners, not discussed here), while the L1 examples are from the literature on Japanese L1 acquisition. Horizontal lines separating phases I, II, and III are not meant to mark a rigid division into 'stages' but to suggest the route most learners appear to pass through while learning to express negation in Japanese.

Table 4: Development of Negation in Japanese L1 and L2

Negator	Japanese L1	Japanese L2	Negator
I Unanalyzed	**Predicate + 'Nai'**		
Nonpast	*tabe-ru-nai (V) eat-NONP-NEG	*ikimasu-nai-desu go-NEG-FOR	
nai			*nai-desu*
	*aka-i-nai (A) red-NONP-NEG	*yasu-i-nai-desu cheap-NONP-NEG-FOR	
	*hon-nai (N) book-NEG	*kuruma-nai-desu car-NEG-FOR	
Past			
	*tabe-ta-nai (V) eat-PAST-NEG	*yokat-ta-nai-desu (A) good-PAST-NEG-FOR	

Table 4: Development of Negation in Japanese L1 and L2 (con't.)

Negator	Japanese L1	Japanese L2	Negator
II Unanal/Modified Predicate + Various Unanalyzed Negators			
Nonpast	*tabe-ru-zya-nai (V)	*yome-ku-nai-desu	
zya-nai	eat- NEG	can read-NEG-FOR	*ku-nai-desu*
	*aka-i-ku-nai (A)	*aka-i-zya-arimasen	
ku-nai	red- NEG	red- NEG-FOR	*zya-arimasen*
	*kiree-ku-na-i (NA)	*kiree-ku-nai-desu	
	pretty-NEG	pretty-NEG-FOR	*ku-zya-nai-desu*
		*oisi-ku-zya-nai-desu (A)	
		tasty-NEG-FOR	
Past			
	*tabe-ta-zya-nai (V)	*tabe-masita-mase-n	
	eat-PAST-NEG	eat-PAST- NEG-FOR	*masen*
	*naka-nai (V)	*kirei nari-ku-nai-desu (NA)	
nai	cry- NEG	clean become-NEG-FOR	
III Analyzed Predicate + 'Nai'/'Nakatta'			
Nonpast	tabe-na-i (V)	tabe-mase-n	
nai	eat- NEG-NONP	eat- FOR-NEG	*masen*
	aka-ku-na-i (A)	aka-ku-arimase-n	
	red- NEG-NONP	red FOR-NEG	*arimasen*
	kiree-zya-na-i (NA)	natu-zya-arimase-n (N)	
	pretty- NEG-NONP	summer- FOR-NEG	
Past			
	tabe-nakat-ta (V)	tabe-mase-n-desita	
nakatta	eat- NEG-PAST	eat- FOR-NEG-PAST	*masen-desita*
			arimasen-desita
	aka-ku-nakat-ta (A)	aka-ku-arimase-n-desita	
	red- NEG-PAST	red- FOR-NEG-PAST	
	kiree-zya-nakat-ta(NA)	kiree-zya-nakat-ta-desu	
	pretty- NEG-PAST	pretty- NEG-PAST-FOR	

As outlined in Table 4, negative constructions by learners are quite similar to those of Japanese children in both forms and placement of negators. For example, in phase I both learners and children produce post-predicate negations, attaching an unanalyzed negator in sentence final position (e.g., *aka-i-nai* 'is red NEG,' by children and *yasu-i-nai-desu* 'is cheap NEG,' by learners). This phenomenon occurs in past tense negations as well, with *-nai* (*desu*) suffixed to past inflected predicates: Learners may say *yokat-ta-nai-desu* 'was good NEG', while the adult native standard would be *yo-ku-nakat-ta-desu* 'good NEG was,' suffixing the past-inflected negator to the predicate root. In phase II, the predicate is unanalyzed or modified with various NEGs attached, while phase III negations are fully analyzed constructions with NEG before the tense marker, as in native speaker speech.

When comparing L1 and L2 Japanese negative constructions, a number of differences are also apparent. For example, L2 learners seem to overgeneralize some negating devices (e.g., *-ku-zya-nai*) to a greater extent than do L1 children. And though both children and learners utilize the one negator strategy in phase I, learners in phase II appear to use a greater number of negating devices (four) than do children (three). By phase III, most learners are able to handle both formal and informal style negations, while young Japanese children produce mostly informal negative constructions, with the formal style acquired later.

CONCLUSION

Summary of Findings

The results reported in the previous section provide clear evidence that the ability to express propositional negation in Japanese L2 does not come all at once, but is a gradual, step-by-step process. In the beginning, some learners use one negator in all environments, attaching it to unanalyzed inflected predicate forms. Other learners use two or three negating devices, though not always in the appropriate predicate context. When learners are able to analyze negated predicates and negating elements into their parts, they begin producing native-like negative constructions consisting of a predicate stem followed by negator and nonpast or past tense marker.

In terms of the predicate category supplied with context-appropriate negation first or last, Japanese children reportedly master verbal negation relatively early and adjectival negation last (Clancy, 1985). Although low beginners in this study appeared to be further developed in nominal negation initially (60% supplied with appropriate negator) as compared to verb negation (43% appropriate), verb negation was mastered (over 80%) by the last interview. The high beginners had already acquired V negation when the study began, with N

negation also close to the 80% acquisition mark. However, neither group of learners showed mastery of A negation during the time they were being studied. This result parallels A negation development in Japanese children.

To sum up, our results reveal at least two developmental changes during the acquisition of Japanese negative constructions by learners: 1) an increase from fewer to more negating devices used over time and 2) an ordering in terms of the predicate environment in which negation is acquired first (verbal and nominal before adjectival). These results are significant in that we have been able to demonstrate that: 1) L2 learners of Japanese exhibit common developmental sequences in acquiring negation, as previously shown in learners of English and other Indo-European languages; and 2) the developmental route of negation for L2 learners is remarkably similar to that for L1 Japanese children. These findings are discussed further in the next section, with reference to second language acquisition research and Japanese language pedagogy.

Significance for second language acquisition research

Being one of the first studies on the acquisition of negation in Japanese L2, the results are preliminary. Nevertheless, a number of implications can be drawn. First, the study provides evidence for a common developmental sequence in negation in an Asian language typologically dissimilar to English-type languages. This lends support to previous claims for developmental sequences based on Indo-European languages only. Secondly, we have seen that pre-verbal negation, so common in beginning learners of English and related languages, does not occur in learners of Japanese: Our subjects produced no instances of pre-verbal (or pre-predicate) negation which, if they had, would violate the post-predicate placement rule of NEG in Japanese. Instead, learners seem to quickly discover that negation occurs in suffix position in Japanese, although at first they have trouble deciding whether NEG should follow the inflected predicate or its altered form. The fact that both learners and children exhibit a post-predicate negation pattern in Japanese may be indicative of the strength of language typology in L2 acquisition and bears further investigation.[8]

Significance for Japanese language pedagogy

The fact that Japanese learners follow a clear developmental sequence in negation should interest classroom teachers seeking to understand how learners change over time in their ability to form negative expressions. Given the gradual, step by step process of development and a different rate of acquisition in the three predicate categories, teachers may discover a more effective way of introducing negation rules gradually, rather than in one or two consecutive lessons. This, in turn, carries potential applications for formulating a more effective pedagogical syllabus for teaching negation and other structures in Japanese.

Teachers may also wish to reconsider how and when to correct learner 'errors' in the classroom in view of the fact that learner interlanguage has its own

internal 'clock' or time line, which may or may not be amenable to change. There is evidence that drilling students repeatedly on structures which they are not developmentally ready to produce may, in fact, cause them to avoid difficult structures or randomly select from among several forms. In our data, for example, beginning subjects sometimes 'tried out' two or more negation devices in the same utterance:[9]

oh tea, coffee-*nai-desu*, tya-desu, coffee-*zya-nai-desu*.
NEG-NONP-FOR tea is NEG-NONP-FOR
'Oh tea, coffee isn't, it's tea, it isn't coffee'

In this instance, the second version using *-zya-nai-desu* is the standard nominal negation, while the first is not. The juxtaposition of two different negation patterns perhaps signals a transition from the phase I unanalyzed *-nai-desu* utterances to the phase II and III ability to distinguish among predicate categories and use the appropriate negator. As further evidence of developmental change, the same student later voiced her uncertainty as to which negator was appropriate for the predicate, saying:

'taka*ku-nai-desu*, takai- *zya-nai-desu*, oh it's one of those.'
expensive NEG-FOR, expensive NEG-FOR
'It's not expensive, not expensive, oh it's one of those'

Here the first attempt, A-*ku-nai-desu*, happens to be the native A-negation pattern (phase III), while the second try not only contains the 'wrong' negation pattern (i.e., the nominal one), NEG is suffixed to the inflected A (*taka-i*) form rather than to the appropriate stem form (*taka-*). The learner's remark in English signals her awareness that her negation system is still in flux; apparently, her strategy for constructing negatives at this point is: if in doubt, try several variations and hope that one is right

Another piece of evidence supporting the notion of an internal developmental time line has to do with beginning learners' initial avoidance of past tense negation, by substituting nonpast constructions or by suffixing NEG to the past tense predicate. Recall subject 1's reply in #18 in Figures 2.1 and 2.2 in response to the interviewer's question:

Simasi*ta*-ka
do PAST-Q
Did you do it? [pointing to a picture of a broken cup]

Both times the learner repeats the predicate form presented in the question, suffixing his version of V-NEG *-masen* to negate it:

...simasi*ta-sen*
do PAST-NEG
I didn't do it

He avoids past-inflecting NEG by attaching it externally to the past-inflected predicate. In our study, learners produce phase III past tense negation only after they could analyze predicate stems, tense markers, and formality indicators and put them in the correct order.

In addition to respecting each learner's developmental time line, there are also pragmatic reasons linking the ability to appropriately express negation with Japanese language pedagogy. We know that in order to achieve communicative competence in interacting with Japanese native-speakers in various situations, learners must be taught that invitations, offers, and requests in Japanese are often carried out using negative constructions. For example, invitations to accompany the speaker to a certain place are most commonly phrased *iki-masen-ka* 'Won't you go [with me]?' or its honorific equivalent, rather than the typical English 'Would you like to go?' or 'Will you go with me?' Learners unaware of such sociolinguistic conventions may experience difficulty both in initiating and responding to such situations with Japanese interlocutors. In addition, what constitutes an appropriate response to negative questions in Japanese contrasts with English, and these pragmatic rules should be presented to Japanese language learners.

Suggestions for Future Research

As one of the first investigations of Japanese L2 negation, the findings of the present study were based on a small number of subjects (twelve beginners) and a relatively short time period (one academic year). In order to support or modify the results discussed above, further research with more subjects and using different elicitation techniques is needed. In this regard, a recent study by Hansen-Strain (1993) examining the attrition of Japanese negation in young learners is informative. In addition, future studies taking into consideration such factors such as learners' L1 background and psycho-social factors may provide some clues to the variation in negation production found among individuals at similar points of development. In addition, the acquisition of negation should be investigated along with other features such as affirmation, tense, aspect, and modality in Japanese L2, so that we can understand how negation emerges in the context of other structures. Since relatively few empirical studies have been conducted to date on non-European L2s such as Japanese, further research on the above topics can provide new cross-linguistic evidence for language learning which can inform our present understanding of second language acquisition processes.

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NOTES

[1] More precisely, subjects in this study are learning Japanese as a foreign language (JFL) because they are being instructed outside the target culture. However, for the purposes of this paper I use JSL as a broad term covering both JFL and JSL learning/acquisition.

[2] Polite adult equivalents are: verbal (V-*nai-desu/-masen*), nominal (N-*zya-nai-desu/-zya-arimasen*), and adjectival (A-*ku-nai-desu/-ku-arimasen*). Strictly speaking, morphemes -*zya* and -*ku* (which occur with nominals and adjectives, respectively) are not part of the negative morpheme -*na-i*; however, learners in this study were found to employ these forms as 'unanalyzed chunks,' thus, they are treated as part of learners' interlanguage system of negation. For a linguistic analysis of Japanese negation, see Kuno (1978) and McGloin (1986).

[3] German speakers must learn to distinguish negation rules according to context (i.e., main clause vs. subordinate clause, and main verb vs. Aux.). Children and learners initially exhibit variable placement of NEG in German utterances until the restrictions are learned. This is in some ways similar to the task Japanese children and learners face—that is, learning different negation patterns according to V, N and A predicate categories.

[4] No differential order of acquisition of negation according to predicate environment has been shown to emerge in English, since English L1/L2 research generally links the emergence of negation to the development of verb morphology and word order. However, Schachter (1986) includes an analysis of negation in N and PP (prepositional phrase) contexts and found that the *no* + constituent pattern of negation appears in all contexts initially.

[5] Unlike children acquiring Indo-European languages, Japanese children were not found to vary placement of NEG before and after the negated element (predicate), even in the earliest phases. This may be indicative of the constraints of language typology on the route of negation development in Japanese, English, German, and other languages. Further cross-linguistic research is needed in order to determine the degree of influence of language typology and markedness conditions on the development of negation in various languages.

[6] Influence of subjects' L1 on the acquisition of Japanese was not examined in this study for several reasons: The number of subjects in each L1 was too few to form a meaningful sample; additionally, the impact of English as an L2 among non-English subjects was difficult to determine, as their age of first exposure to English ranged widely from infancy to the teens.

[7] Nominal adjectives and nominals follow the same negation pattern and are grouped together in displaying and discussing the results.

[8] Research on negation in German L2 reports pre-verbal NEG placement to be common among beginning learners, though later they learn that German requires post-verbal placement in main clauses.

[9] In such cases of 'self-correction,' the first utterance was counted in coding data.

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