THE PROCESS OF GENERATION AND DEVELOPMENT OF SECOND LANGUAGE JAPANESE ACCENTUATION

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ABSTRACT

This study will investigate how non-native speakers of Japanese acquire Japanese accentuation from the viewpoint of the location of the accent nucleus. Hypothetical models for the process of generation and for developmental sequence of interlanguage Japanese accentuation, which is interim accentual system created by learners, will be proposed.

The subjects appear to generate their interlanguage as the results of application of strategies or examples of accentuation. Those seem to be discovered from L2 input, or chosen and fetch from their memory.

The subjects' competence of accentuation appear to be developed by L2 input, starting with L1 and universal property. They seem to discover and apply 5 types of strategies toward acquisition of target accentual rules of Japanese.

1. INTRODUCTION

The task for pronouncing the Japanese accent correctly can be divided into following five steps[9]. (1) Sentences must be segmented into accentual phrases, each of which correspond to a unit of accentual pattern. (2) Accentual phrases must be divided into syllables, and syllables into morae. (3) The accentual nucleus (AN), if any, must be placed on the correct syllable in a phrase. (4) The distribution of high and low morae in a phrase must be determined. (5) The resulting combination of high and low morae must be pronounced.

All of above 5 steps, i.e., 5 domains for acquisition of Japanese accentuation relate each other, and each of them seems to have its own developmental sequence toward acquisition. Learners seem to produce systematically their own rules, i.e., "interlanguage" [5], which is an interim accentual system produced on the process of acquisition, and which develops toward acquisition and comprises both correct and error accentuations.

I will focus my attention only on step (3), In other words, the domain of the learning in this study is the placement of the accent nucleus, if any, on the appropriate mora in an accentual unit. The target of learning in this study is the acquisition of accentual rules, i.e., ordinary rules, and listing rules[8] [10,11]. Ordinary rules in this study are the accentual rules, e.g., for compound words with endings of inflectional words, suffixes, prefixes, or particles. Listing rules assign accent not to group of words but to individual items, e.g., case of exceptions to ordinary rules, and AN is placed individually.

2. DATA

The data consists of 2 sets, (1) discourse collected at three times in 5 months after start of learning Japanese by 11 subjects with various mother tongues and (2) six individual conversations between a native speaker and an advanced level students, whose mother tongue is English. These data are all tape-recorded, transcribed and then analysed from the viewpoint of the location of accentual nucleus[12].

3. INTERLANGUAGE

It was confirmed by the data analysis that three types of accentual patterns (i.e., interlanguage patterns, "IP") have been created by the subjects [12].

3.1. Three Types of IP

Through the analysis of subjects' misaccented output it was deduced that subjects appear to have created the following three types of accentual patterns[12].

(1) Type 1

Type 1 seems to be the basic type of interlanguage patterns, which are over-generalizations of the patterns of the target language. The number of possible varieties of patterns of an n-syllable phrase by native speakers is (n+1), the +1 this being the unaccented case, and if a syllable contains two morae (e.g., *tai*), the accent falls on the first mora. However, in case of learners, although they also generate (n+1) morae, they sometimes place the AN on the second mora of two mora syllable, making the number to be (n+2). This is because it is difficult for the learners to distinguish mora and syllable until the domain (3) mentioned above is acquired. Examples of type 1 are, *tÛkidoki* "sometimes", *okanÈ-ga* "money is", *anm·ri* "not very", *purezÈnto-o* "present or gift", *wakarimasen-ga* "I don't understand". Underlines here indicate correct accents, while accent marks indicate the accent placed by the subjects.

(2) Type 2

Type 2 is the combined accentual phrases without any indication of boundary. According to this type, there is no AN in preceding phrase or phrases, which is followed by an accented phrase. This type seems to be over-generalization of a compound word accented only in the last component of a phrase, or over-generalization of "an intonational phrase"[7], which is an intonational unit, and unaccented phrase or phrases are preceded to an accented phrase. E.g., *watasi-no + hÈya-ga* "my room", *dokono + k• nidemo* "in any country", syoozikini + *iim:suto* "honestly speaking". When native speakers pronounce two or more accentual phrases without posing, ANs are retained. The subjects seem to consider type 2 patterns as one accentual unit.

(3) Type 3

Type 3 is the case where more than 2 accent nucleuses are placed in a phrase, e.g., *nigiy·ka-dÈsita* "was lively". The subjects appear to consider one component of the phrase as one accentual unit.

On those respects, simple strategy that more than two ANs are not placed in one unit is applied for types 1 to 3, probably with some other strategy. Unless domain 1, i.e., correct segmentation, is not acquired, it is possible to be generated type 2 or 3.

3.2. Features of IP

(1) Development

It is presumed that the subjects develop their generation competence of IPs. According to Yamada[12], type 1 IP is basic, type 2 IP is advanced, and type 3 IP is comparatively primitive, and the subjects generate more advanced IP along with the improvement of generation of correct accentuation. On the other hand, the length of IP becomes larger in the order of type 3 1 2, which is pararel to the development of perceptual sense unit [4], and this order corresponds to that of above three improvement levels.

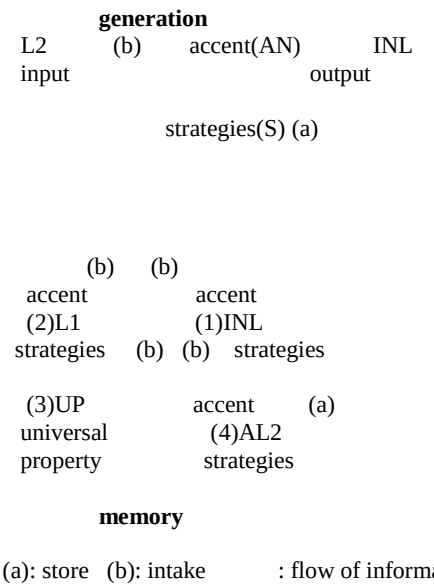
(2) Variability

Accentuation by all subjects is variable [2] [9,10] A single subject may apply different IP even for a particular word depending on occasions. For example, one subject used Japanese word "teacher" 9 times in 3 minute discourse, once correctly *sensÈi*, 5 times like *sÈnsei*, and 3 times *sensei* in different IP[12].

4. GENERATION MODEL

Corder[1] claimed that the second language acquisition as a cognitive process is creating a body of implicit knowledge upon which the utterances in the language are based. From the viewpoint of cognitive psychology, the acquisition or revision of knowledge is viewed as the construction of active mental process by human beings. That activity must meet both the internal constraints of innate acquisition device and the knowledge acquired by that time, and the external social and cultural constraints (see [3]). Through the accentuation performed by the subjects in my data, I will propose the following hypothetical generation model of interlanguage accentuation.

The internalized memory consist of the following 4 components, (1) interlanguage (INL) generated before, (2) mother tongue (L1), (3) universal property, (4) acquired words and rules (AL2). The subject appear to generate their interlanguage accent as the result of application of strategies or examples of accentuation. They seem to discover the strategies and examples of accentuations from L2 input , or choose and fetch them from the memory, where the above 4 components are internalized. The acquisition in this study means "nearly complete acquisition". It is too difficult to define an acquisition point of each subject because of the variability of their performance. I assumed an item having been acquired if (1) the number of occurrences was reasonably high, (2) the accentuation was consistently correct and (3) the accentuation of the item was not affected by IP which the subject seems to have created, in particular, type 2. IP. Figure 1 is a proposed generation model of interlanguage Japanese accentuation.



(a): store (b): intake : flow of information

Figure 1: Generation Model of Interlanguage Japanese Accentuation

4.1. Generation

Although learners at the early stage do not possess accentual rules, they have to try to solve the problem to place the AN on the appropriate mora, and generate accent. For that purpose, they appear to generate strategies.

Learners seem to discover strategies (S), or take in the examples of accent or strategies from target language (L2), which is taken in from outside. Learners may also choose and utilize strategies or examples of accent from the knowledge which is memorized and stored. Namely it seems that (1)INL, (2)L1, (3)UP, and (4)acquired L2(AL2) are stored in memory. And then learners generate interlanguage strategies and/or accent (AN).

4.2. L2 Input

Learners do not always understand or take in L2 input. The degree depends on the state of development of learning or understanding of the target accent[7]. However, even if it is difficult to find target accentual rules directly from the input, it may possible to find some strategies. At the early stage of learning, the subjects do not fully utilize all of the learned interlanguage patterns. They seem to discover patterns one by one, and this means strategies are also discovered and learned one by one, then IP would be generated.as the result of the application of these strategies The strategies for generation of isting will brules e discussed next.

(1) Stordinary rules and lrategies for Ordinary Rules

The following three types of strategies appear to be generated in

their order.

1. Type 3 Strategies
2. Type 1 Strategies (sub-goal 1)
3. Type 2 Strategies (sub-goal 2)

At the early stage of learning, the subjects appear to discover Type 3 Strategy, i.e., not to place more than 2 ANs in an accentual unit, and probably apply them together with some other strategy. When they apply this strategy type inappropriately they would generate incorrect accent, i.e., IP of type 3.

At a result of application of Type 1 Strategies, subjects seem to generate IPs of type 1, which include both correct and incorrect cases. And those IPs show variability because the subjects do generate patterns of target accentuation by using those strategies, but they have not yet acquired the rules of the target, hence, they do not know which IP should be used for which phrase. Therefore, the formation of this strategy can be considered a sub-goal yet.

IP of type 2 appears to be generated as a result of application of Type 2 Strategy, which seems to be discovered from the examples of compound words in which ANs are placed on the last component, or of intonational phrases which are accented only on the last components. The formation of Type 2 Strategies can be regarded as another sub-goal.

(2) Strategies for Listing Rules

According to the listing rules, AN falls on a syllable in a phrase individually. Strategies for listing rules must be discovered for each word separately from L2 input. On the other hand, the subjects generate correct accent for 62% of caseseven one month after start of learning, when they do not seem to find and use all IPs of type 1 in my data [12]. Presumably they apply strategies for listing rules even for the phrases which are justly accented according to ordinary rules even when the strategies for those phrases are not discovered [10].

4.3. Memory

At the starting point of learning, UP and L1 must be stored in subjects' memory.

(1) Interlanguage (INL)

AN generated by subjects are outputted as INL, or it will be stored in a memory (Figure 1, a). INL in the memory is possible to be fedback and selected (Figure 1, b) repeatedly. However, the rules or words which seem to be acquired should be considered separately as an AL2 in this study.

(2) Acquired Target Accent (AL2)

Learners will acquire rules and words one by one by repeating the process of generation of strategies and accentuuuuation. Yamada [10] reported that it is confirmed that all subjects of advanced level appear to acquire some rules and words in 15 minute conversations.

(3) Mother tongue (L1) and other learned languages

Strategies or examples of accent stored in learners' memory are not only INL or AL2 the mother ongue (L1) and some other learned languages, e.g., English are also stored. They seem to be taken in by subjects for generation of Japanese accent. Examples in our data are *AmÈrika-no* "American", *kur·su-no* "in a class". In addition, we could find other examples of "borrowing from L1", that is the strategies of mother tongue or other learned languages, for example, the first component of a compound word is accented as in English, such as *Kan·zawa-daigaku* "Kanazawa university", although only the second component should be accented here in Japanese[12].

(4) Universal Property (UP)

In general, accent has a function of grouping an accentual phrase, i.e., an accentual unit. Native speakers usually place the AN or raise the pitch from the first mora to the second mora of accentual phrase to indicate the boundary of a phrase.

However, in case of our subjects, the application of unaccented patterns show a variety of endings which indicate an accentual unit by marking the border of each phrase. For example, some subjects raise the pitch of ending syllable whether the phrase is accented or unaccented. By this they appear to indicate a unit of their accentual phrase. This function of grouping a phrase may be a universal property of accentuation [12]. UP may contribute to generate interlanguage accentuation as a fundamental function.

4.4. Evaluation

When strategy and accentuation in above are generated, they seem to be evaluated usually subconsciously according to the subjects' competence of evaluation which is memorized in above INL and AL2.

5. DEVELOPMENT OF INTERLANGUAGE COMPETENCE

It is presumed that learners develop their interlanguage competence by utilizing L2 input as time goes on (Fig. 2). Presumably at the starting point, they have only L1 and UP, then discover and apply the following strategies in that order.

1. Place the accent for each word separately.
2. Form Type 3 Strategy, i.e., do not place more than one accent for one accentual phrase.
3. Form Type 1 Strategy, i.e., sub-goal 1.
4. Form Type 2 Strategy, i.e., sub-goal 2.
5. Discover target accentual rules of both (a) listing rules and (b) ordinary rules, and apply as strategies.

In this process, before step 5, i.e., discovery of target rules, strategies seemed to be structured and categorized. We can surmise from our data [10] p.116, that, although rules are not yet fullyacquired, all subjects of advanced level seem to be in the process of partial acquisition of some rules.

The application of all above 5 strategies are continueing in

parallel.

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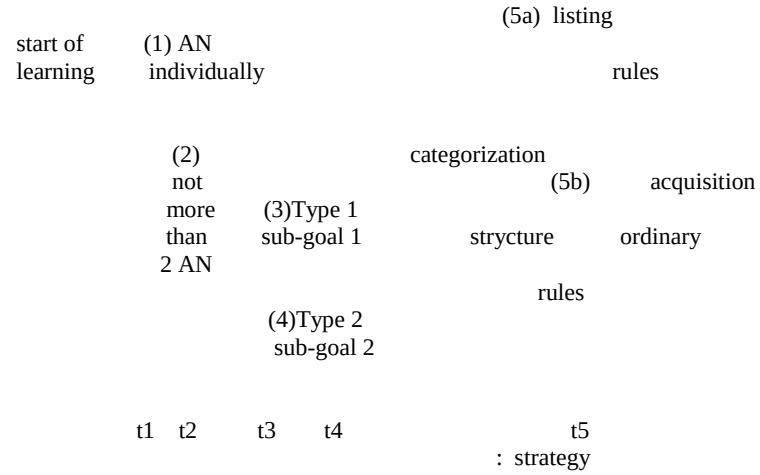

figure 2: Development model of interlanguage Japanese accentuation : information flow t: time flow