

On the Role of Contextual Factors on Learners' Beliefs

Formation:

A case study of Japanese onomatopoeia

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The study investigates the beliefs of an integrative nature of proficient Japanese sojourners within the framework of hypothesized relations with contextual factors. That is, the correlations between the dependent variables of beliefs (two beliefs about onomatopoeia) and the independent variables of contextual factors are examined. The contextual factors are length of stay in Japan ("LSJ"), length of studying Japanese language ("LSJL") and ethnic group factor ("EG"). Statistical analyses of the data from 102 sojourners show that the extrinsic beliefs are affected by the factors of "LSJ" and "LSJL" while the intrinsic ones are not. That is, intrinsic concepts seem to exist regardless to learner's external factors, both contextual ("LSJ") and second language education-related ("LSJL") ones. On the other hand, the extrinsic concepts are likely to be subject to change according to context and length of studying the language. Korean speakers appeared to have weaker beliefs than other sojourners. This result is explained by the abundance of mimesis in Korean language.

1. Introduction

The influence of personal and social epistemologies on academic learning, thinking, reasoning, and problem solving has been acknowledged in psychology, where it has been stated that epistemological beliefs are shaped by learners' factors (e.g., Schommer, 1993). One would assume

the existence of similar relationships in the domain of language learning beliefs, i.e. that the factors that affect the formation of epistemological beliefs affect language learning beliefs. However, a study of epistemological and language learning beliefs of Japanese language learners in a Foreign Language Acquisition (FLA) context showed no correlation between the belief domains, which consisted of multiple independent dimensions (Mori, 1999). This finding, indicating that the relationship between domains of the epistemological and language learning beliefs is not straightforward, requiring a context-specific approach to examine the matrix of beliefs and the correlations of its constituents with affective factors.

The research shows that learners' beliefs are a complicated phenomenon, and "cannot be reduced to a single dimension but are composed of multiple, autonomous dimensions, each of which has unique effects on learning" (Mori, 1999: 382). Thus, in order to inquire into the nature of beliefs, complicated beliefs need to be divided into smaller ones comprising them. The present study is concerned with one dimension in the beliefs matrix in that it deals with beliefs about vocabulary acquisition in Japanese, namely, onomatopoeia acquisition.

Research of beliefs about language learning ranges from measuring instruments to theoretical frameworks. The extensive overview of beliefs research provided by Bernat et al. (2005) demonstrates that the main body of research has been conducted in EFL contexts. However, numerous studies provide evidence of a "context-specific" nature of beliefs (e.g., Lee, 2003, Katagiri, 2005, Kitani, 1998). Likewise, research on motivation in SLA, which is concerned with exploring attitudes toward the target language and therefore partly overlaps with beliefs research, has shown differences between SLA and FLL contexts (Dörnyei, 1990). It follows, then, that a context-specific approach is important and that the results of previous research conducted in EFL contexts cannot be automatically applied to SL contexts. Bernat (et. al. 2005) distinguishes three approaches in the beliefs research: (1) the normative approach pioneered by Horwitz (e.g. 1987),

characterized by the use of Likert-scale questionnaires (it is noted that one of the findings of these studies is that learner beliefs about language learning are context specific); (2) the metacognitive approach, which describes beliefs as “stable, stable, although sometimes incorrect knowledge learners acquired about language”; (3) the contextual approach, which views beliefs as “embedded in students’ contexts”. Moreover, as reported in Dörnyei (2001), various studies have indicated the theoretical significance of task-based approaches, which make it possible to break down the complex L2 learning process into components with well-defined boundaries and are therefore helpful in creating meaningful insights into various dimensions of L2 processing.

A study of the specific context of Japanese sojourn, which differentiated beliefs by scope into broad-scoped (beliefs about Japanese language learning) and narrow-scoped beliefs (beliefs about onomatopoeia acquisition) showed that beliefs of an integrative nature were interrelated (Tsygalnitsky, 2006). The narrow-scoped beliefs “Integrative orientation towards studying onomatopoeia” and “Importance of onomatopoeia and the desire to acquire it” were highly correlated with the broad-scoped belief “Integrative aspect”. These narrow-scoped beliefs are similar in the sense that they both refer to sojourners’ motivation¹ to study onomatopoeia. Both beliefs indicate the sojourners’ will to study onomatopoeia. Hence, these beliefs are called “orientation beliefs”. These beliefs are context-specific, so the context of academic sojourn in Japan is hypothesized to be an influential factor in shaping learners’ beliefs. Given the importance of the contextual approach, analysis of the narrow-scoped beliefs as dependent factors in relation to independent contextual factors is therefore considered to: (1) provide an insight of the functioning of the narrow-scoped beliefs within the context; (2) shed light on the beliefs structure.

2. Hypothesized factors

¹ The term “motivation” here is used interchangeably with the term “orientation”, both terms defined as “reasons to study”.

Length of stay in Japan is representative for the context of the academic sojourn. Previous research, conducted in the context of foreign sojourn (Hifumi, 2003; Uematsu, 1998) shows the existence of negative correlations between this factor and factors of a psychological nature and language performance. Hifumi (2003) reports on the negative correlations between the length of stay in Japan and learners' motivational orientations. This finding suggests that this factor may also weaken beliefs of a more specific nature, that is, beliefs about onomatopoeia. At the same time, there is evidence of the existence of negative correlations between the variable of "length of stay" and foreign accent (Uematsu, 1998)². Hence, the factor of length of sojourn in Japan (subsequently, "LSJ") appears to be influencing different aspects of sojourn. Therefore, the first hypothesis of this study is as follows: extended sojourn in Japan weakens beliefs. In other words, negative correlations are expected between this factor and the beliefs about onomatopoeia.

As onomatopoeia is mainly acquired at the intermediate level of studying Japanese, the subjects of this study of beliefs about onomatopoeia were sojourners of intermediate level and higher. Therefore, the nature of the present study, which deals with onomatopoeia, requires taking into consideration the factor of length of studying Japanese. This factor, unlike the length of stay in Japan, is reported to positively affect both the integrative and the instrumental constructs of learners' beliefs (see Nuibe, et. al.1995, Katagiri, 2005). This study aims to examine the existence of relations between this factor and the beliefs about onomatopoeia. Thus the second hypothesis is that the factor of length of studying Japanese language (subsequently, "LSJL") would strengthen the beliefs about onomatopoeia.

The third hypothesis is designed to investigate the role of learners' cultural background, i.e. ethnicity, in affecting their beliefs. The review of research on beliefs in language learning environment by Bernat et al. (2005) reports on the following factors as influential on the formation

² Uematsu (1998) investigated context of ESL of Japanese high school students living in the US.

of beliefs: (1) background factors, like family and cultural background and (2) the nature of the language studied. Research of beliefs in different ethnic groups shows that ethnicity may be a decisive factor in shaping learners beliefs (e.g. Kitani, 1998, Katagiri, 2005, Nuibe et.al 1995, Wakai et. al. 2004). A framework of differentiating between the scopes of the learners' beliefs requires an investigation of the ethnic factor with regard to the narrow-scoped beliefs.

The sample of the present study consists of 102 participants, which is insufficient for conducting a statistically significant comparison between all ethnic groups of the sojourners. Therefore, it was decided to differentiate groups of participants which count more members than other groups and compare them with the rest of the data. The groups of Chinese³ and Korean students included more members than other ethnic groups, so it was decided to differentiate these groups and examine the impact of ethnicity on the beliefs. Thus, the ethnic group factor (subsequently, "EG"), i.e. the factor of being a native speaker of Korean and Chinese, was hypothesized to be influential in the construction of beliefs about onomatopoeia. The third hypothesis suggests a discrepancy in beliefs, however, no specific assumption was made.

3. Method

3.1. Subjects

The data of a total of 102 academic sojourners⁴ of Japanese is processed in the study. Participants' length of stay in Japan and length of studying Japanese averaged 2.69 and 5.26 years respectively⁵. Participants' age ranged from 18 to 37 years, with an average of 26.7 years (one data

³ 5 Taiwanese sojourners were included in the group of Chinese sojourners, which formed a group of 23 participants. The group of Korean sojourners includes 17 participants.

⁴ Apart from 2 company employees (former students), all of the participants presently belong to an institution of tertiary education: graduate students (64), undergraduate students (22), research students (9), researchers (2), "Other" or skipped the question (5). Participants came from 31 majors, which were classified by field of study.

⁵ Length of stay in Japan ranged from less than one year to ten years, with the total picture as follows: "under one year" (40), "under 3 years" (31), "under 5 years" (17) and "between 5 to 10 years" (14). As for the length of studying Japanese, the shortest period was "less than 2 years" and the longest "around 16 years" with the following overall distribution of data: "less than two years"(20), "2 to 3 years"(22), "between 3 to 5 years"(19), "between 5 to 10

is missing). The 65 (63.7%) female and 37 (36.3%) male participants originated from Asia (62), Europe (26), North and Central America (9), South America (1), Africa (3) and Oceania (1)⁶.

3.2. Instrument

A questionnaire consisting of a face-sheet and 8 items of beliefs about onomatopoeia served as a measurement instrument in this study.

4. Results and Discussion

4.1. Factor analysis of Beliefs

In order to identify the beliefs about onomatopoeia, an Exploratory Factor analysis (Principal Axis Factoring) and a Varimax rotation⁷ were conducted. 8 items of beliefs about onomatopoeia were subjected to the analysis. Two beliefs factors were identified and given a title according to the items loading them: “Integrative orientation towards studying onomatopoeia” and “Importance of onomatopoeia and desire to acquire it”. The factors’ reliability coefficients (α) were .824 (Factor 1) and .854 (Factor 2), which is statistically satisfactory, so the factors were retained for further analysis. The factor loading items are shown in Table 1 together with their reliability coefficients.⁸The two factors, i.e. the beliefs about onomatopoeia were converted into variables by summarizing the mean values of the Likert-scale items comprising them (six and

years”(31), “more than 10 years”(9).

⁶ As the participants come from 34 countries, a classification by continent was conducted.

⁷ Varimax is a method of orthogonal rotation which provides an easy to interpret representation of factors.

⁸ These findings are similar to the findings of the factor analysis, conducted in Tsygalnitsky (2006), where two factors of narrow-scope beliefs about onomatopoeia were verified alongside other onomatopoeia-related factors. Tsygalnitsky (2006) processed data collected by a belief-measuring questionnaire. The 13-page questionnaire consisted of: (1) face-sheet; (2) 22-items battery for measurement of the broad-scope beliefs-orientations for studying Japanese language; (3)-(5) onomatopoeia proficiency test; (6) 20-items battery for measurement of the narrow-scope beliefs-orientations for studying Japanese language. The five narrow-scope beliefs identified by Explorative Factor Analysis in Tsygalnitsky (2006) were as follows: Factor 1: “Difficulty of usage and memorization” $\alpha = .713$; Factor 2: “Importance of onomatopoeia and the desire to acquire it” $\alpha = .824$; Factor 3: “Meaning difficulties of onomatopoeia” $\alpha = .891$; Factor 4: “Integrative orientation towards studying onomatopoeia” $\alpha = .854$; Factor 5: “Amotivation to study onomatopoeia” $\alpha = .640$.

two respectively).⁹

The two variables and the hypothesized factors are analyzed with SPSS software by Pearson Correlations Coefficient Analysis and Descriptive Statistical analysis.

Table 1-Beliefs about Onomatopoeia

Loading items and reliability coefficients	Factors	
	1	2
B_1: "Importance of onomatopoeia and the desire to acquire it" $\alpha = .824$		
Q_13 "Do you think onomatopoeia is important part of Japanese speech?"	.730	.126
Q_22 "Do you think that in order to get a deeper understanding of Japanese culture, one needs to know onomatopoeia?"	.683	.086
Q_11 "Do you think it is necessary to study Japanese onomatopoeia?"	.669	.279
Q_12 "Do you think onomatopoeia is widely used in Japan?"	.611	.185
Q_17 "Do you want to acquire knowledge of onomatopoeic expressions?"	.561	.348
Q_2 "Do you think that knowledge of onomatopoeia is useful for communication with Japanese people?"	.498	.344
B_2: "Integrative orientation towards studying onomatopoeia" $\alpha = .854$		
Q_5 "Do you think that studying of onomatopoeia is fun?"	.143	.973
Q_1 "Do you find Japanese onomatopoeia interesting?"	.294	.768

To verify the first two hypotheses assuming the existence of correlations between 1. the beliefs and the factor of length of stay in Japan ("LSJ") and 2. the factor of length of studying Japanese language ("LSJL") (negative correlation in case of "LSJ" and positive in case of "LSJL"), the two variables of beliefs and the two factors were subjected to a Pearson Correlations Coefficient Analysis (Table 2)¹⁰. The analysis showed statistically significant negative correlations between

9 A reliability index of Cronbach alpha was calculated for all Likert-scale variables and only variables with statistically satisfactory reliability indexes (i.e. with an index of $> .6$) were included in the analysis.

The Likert-scale items of the questionnaire inquiring about beliefs were arranged in random order, to preserve the validity of data.

10 For representational convenience, the variables of the beliefs were given an abbreviated titles B_1 (Belief_1) and B_2 (Belief_2).

the belief “Importance of onomatopoeia and desire to acquire it” and “LSJ” (.313) and “LSJL” (.302). It is clear, then, that the two factors negatively affect this belief. That is, longer stay in Japan and longer experience of studying Japanese language weaken the desire of sojourners to engage in onomatopoeia acquisition. The results show that the two beliefs of an integrative nature differ in their correlations with the factors.

Table 2 -Beliefs and Factors: Correlation Analysis.

Beliefs and Factors	LSJ	LSJL	B_1	B_2
LSJ: length of stay in Japan	1	.462(**)	-.313(**)	-.160
LSJL: length of studying Japanese language	.462(**)	1	-.302(**)	-.186
B_1: “Importance of onomatopoeia and desire to acquire it”	-.313(**)	-.302(**)	1	.634(**)
B_2: “Integrative orientation towards studying onomatopoeia”	-.160	-.186	.634(**)	1

**p <.01. N=102.

In order to interpret the discrepancy between the beliefs of a similar nature, an analysis on a more concrete level, i.e. on the level of the items comprising the beliefs was conducted. The beliefs were divided into smaller units comprising them: sub-beliefs. The belief “Importance of onomatopoeia and the desire to acquire it” consists of the following items (sub-beliefs): “Do you think it is necessary to study Japanese onomatopoeia?”; “Do you think onomatopoeia is widely used in Japan?” “Do you think onomatopoeia is an important part of Japanese speech?” “Do you think that in order to get a deeper understanding of Japanese culture, one needs to know onomatopoeia?” “Do you want to acquire knowledge of onomatopoeic expressions?” “Do you think that knowledge of onomatopoeia is useful for communication with Japanese people?” The belief

“Integrative orientation towards studying onomatopoeia” is comprised of “Do you think that studying onomatopoeia is fun?” and “Do you find Japanese onomatopoeia interesting?” The items of the latter deal with “interest” and “enjoyment”, while the former belief includes the concepts of “necessity”, “frequency of use”, “importance”, “need”, “want/desire” and “usefulness”. It can be concluded then that the distinction between these beliefs is that of “interest and fun” as opposed to “practically reasoned manifestations of desire/want to acquire onomatopoeia”. In other words, this distinction can be interpreted as a distinction between intrinsic/extrinsic natures of these concepts. The intrinsic aspects of interest and enjoyment show discrepancies in their relations with the external factors with the extrinsic aspects of need, necessity, importance, etc. in their relation with the same external factors. The results indicate then that the extrinsic beliefs are affected by the factors of “LSJ” and “LSJL”, while the intrinsic ones are not. That is, the intrinsic concepts seem to exist regardless to learner’s external factors, both contextual (“LSJ”) and second language education-related (“LSJL”) ones. On the other hand, the extrinsic concepts are likely to be subjected to change according to context and length of studying the language.

This distinction between intrinsic and extrinsic aspects was emphasized in previous studies which focused on exploring motivation (e.g. Decy and Ryan, 1985; Noels et al., 2000). Noels et al (2000) define intrinsic motivation as “motivation to engage in an activity because that activity is enjoyable and satisfying to do.” Extrinsically motivated behaviours, on the other hand, are seen as “actions carried out to achieve some instrumental end, such as earning a reward or avoiding a punishment”. It is clear, then, that the two definitions fit the distinction between the concepts of the two beliefs in the present study. That is, the different nature of the beliefs appears to serve as an explanatory factor of the beliefs’ discrepancy with the external factors, discussed in the study. The study shows that the nature of beliefs affects their functioning.

The third hypothesized factor of “ethnic group” was analyzed by descriptive statistics: the

mean values of the two beliefs were calculated and compared within the dispersions between the groups. Two analyses were conducted: one between the group of Chinese speakers and the rest of the sojourners, the other between the group of Korean speakers and the rest of the sojourners. The results are shown in Table 3.

While there was no significant difference between the Chinese speakers and the rest of the participants (Belief 1: (25) and (26.47); Belief 2: (7.65) and (7.61) respectively), the Korean speakers were found to hold weaker beliefs than other sojourners (Belief 1: (23.35) versus (26.69); Belief 2: (5.53) and (8.04) respectively). The results indicate that the orientations to study onomatopoeia of Korean speakers are weaker than those of non-Korean speakers.

Table 3-Descriptive analysis of beliefs of Chinese speakers versus non-Chinese speakers and Korean speakers versus Non-Korean speakers

Beliefs	Ethnic group	N	Mean
B_1: "Importance of onomatopoeia and the desire to acquire it"	Chinese	23	25.00
	Non-Chinese	79	26.47
	Korean	17	23.35
	Non-Korean	85	26.69
B_2: "Integrative orientation towards studying onomatopoeia"	Chinese	23	7.65
	Non-Chinese	79	7.61
	Korean	17	5.53
	Non-Korean	85	8.04

The results can be interpreted as follows. The beliefs investigated in this study refer to onomatopoeia, which is one aspect of Japanese vocabulary. Onomatopoeia, namely *gitaigo*

(mimesis) is considered to be a feature unique to Japanese, both in their structural peculiarities and their frequency of use (e.g., Tamori et al, 1999, Tamori, 2002). However, Korean is also said to be abundant in onomatopoeic expressions, which also share structural characteristics of Japanese onomatopoeia (e.g., Kanno, 1982; Osaka, 1987).

The fact that Korean is abundant in onomatopoeia might explain the existence of relatively weak beliefs towards onomatopoeia. As the phenomenon of reduplicated mimesis is not new to Korean sojourners, they do not attribute much importance to acquiring onomatopoeia, at least in terms of distinguishing it from the rest of vocabulary and realizing the need to study it. However, further research is needed to clarify this issue.

5. Summary

The present study investigated narrow-scoped beliefs (beliefs about onomatopoeia) of academic sojourners within the framework of hypothesized background factors. By doing so, i.e. by analyzing correlations between the narrow-scoped beliefs and the factors which are considered to be influential for broad-scoped beliefs, the study aimed to inquire into the nature of the narrow-scoped beliefs.

The two beliefs about onomatopoeia were analyzed for their correlations with the three factors of length of stay in Japan, length of studying Japanese language and the ethnic group factor. “Importance of onomatopoeia and the desire to acquire it” and “Integrative orientation towards studying onomatopoeia” differed in their correlations with the factors of length of stay in Japan and length of studying Japanese language. The belief “Importance of onomatopoeia and the desire to acquire it” was found to be negatively correlating with the two factors, while no correlations were observed between the belief “Integrative orientation towards studying onomatopoeia” and the two factors. This discrepancy between the two beliefs is explained by the difference in their

nature: intrinsic versus extrinsic. The results show that while extrinsic beliefs are influenced by these factors, intrinsic ones are not.

The findings of the present study indicate that the basic aspects of the sub-beliefs which form the two beliefs differ, thus resulting in the discrepancies between the beliefs due to the distinction between the intrinsic and extrinsic natures of these aspects. Therefore, the findings provide evidence that the distinction between extrinsic and intrinsic beliefs can serve as a predictor of discrepancies in their functioning. In other words, the narrow-scoped beliefs appear to have a complicated structure, being comprised by different units which reshape the functioning of the beliefs with the external factors.

The analysis of beliefs between ethnic groups showed that Korean speakers's beliefs were weaker than those of other sojourners. The fact that Korean is abundant in onomatopoeic expressions of reduplicated morphology is considered to be an explanatory factor for these results. However, this finding requires future research.

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