A CIA Analysis of Metalinguistic Transfer in L3-Japanese Translation

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日本語を母語としない人が、日本語を別な言語に（あるいは別な言語を日本語に）翻訳する場合にどんな困難が伴うかを、『星の王子様』の一節をテキストにメタ言語レベルで解析した。

Abstract

Odlin (1989) defines linguistic transfer as 'the influence resulting from similarities and differences between the target language and any other language that has been previously acquired.' 'Reverse transfer' happens when the direction of linguistic transfer is the reverse (Cook, 2003).

In the field of Third Language Acquisition (TLA), language transfer could be more complicated than that of Second Language Acquisition (SLA) because it involves three different languages. Different studies have investigated L1/L2/L3 transfer factors (Cabrelli Amaro et al., 2012; Cenoz et al., 2001; Hammarberg, 2009) and it has been widely shown that L2 is preferred to L1 as a transfer source in the process of learning L3. However, most of the previous research was performed on the transfers among European languages, with English being one of them, from the viewpoint of learners' metalinguistic awareness of L1 and L2 syntax and lexicon.

The current study attempted to visualize metalinguistic transfer as well as cross-linguistic transfer among L1/L2/L3 in L3 Japanese acquisition. Specifically, advanced-level L3-Japanese learners from different mother-tongue backgrounds were asked to participate in a language background survey, translation tasks from their L1 into L2-English and L3-Japanese, and follow-up interviews. Analysis suggested some evidence of metalinguistic transfer in Chinese speakers' writing/reading production. Following Granger's (1996, 2015) Contrastive Interlanguage Analysis through the application of KH Coder network analysis, this study also tried to contribute to the development of new perspectives and strategies for Japanese-language teaching and learning in the forthcoming multicultural/multilingual/plurilingual societies.

Keywords Metalinguistic Transfer; TLA; L3-Japanese; Contrastive Interlanguage Analysis; KH Coder

1. Introduction

Metalinguistic knowledge and skills have been studied by many researchers. Richards defines metalinguistic knowledge as "the knowledge about linguistic form and structure which learners reach when they reflect on and analyze the target language" (Richards et al., 2013). It is also explained as "the learners' clear and precise awareness about the vocabulary, syntactic, grammatical, morphological and phonological structures of the second language" (Roehr, 2006). According to Berry, without essential metalinguistic awareness such as present perfect, adjective, and noun, students will have problems in understanding details by educators and textbooks for testing purposes (Berry, 2005). Therefore, metalinguistic knowledge of native speakers is often used as a resource for language analysis (Richards et al., 2013).

Ever since Cummins (1979) introduced Developmental Interdependence Hypothesis in the field of SLA, the issues related to metalinguistic awareness has become even greater. Cummins (2001, pp. 112-113) suggested

that literacy-related aspects of a bilingual's proficiency in L1 and L2 are seen as common or interdependent across languages and the "metalinguistic awareness is regarded as one specialized aspect of cognitive academic language proficiency (CALP)." In the meantime, Clapham's study of 'direct object' found evidence of metalinguistic transfer from English to French, albeit implying the difficulty and importance of, and the needs for more research in the field (Clapham, 2001). Bialystok (2007) also mentions that this cross-linguistic transfer is what informs "literacy instruction" for teachers of bilingual learners. Although Alderson, Clapham, and Steel investigated and reported that the relationship between metalinguistic knowledge of learners and linguistic proficiency was weak (1997), metalinguistic transfer from a native language to another seems worth further investigation so as to contribute to the development of new perspectives on language proficiency at the academic level.

In the present study, a group of foreign graduate students at the University of Tsukuba in Japan were asked to translate a short passage into their second language (L2 English) and third language (L3 Japanese) in order to observe metalinguistic transfers from their mother tongue (L1s) and between L2 and L3. There have been a number of studies conducted on linguistic transfers and reverse transfers between L1 and L2. However, has there never been a single study focusing on Japanese as a third language nor considering translation as a method to delve into the influence of pre-learned languages on the metalinguistic skills of L3-Japanese reading and writing. Using KH Coder, a text-mining software tool, this paper visualizes learners' metacognitive awareness and transfer among L1, L2, and L3 and suggests strategic implications for future Japanese-language teaching and learning.

2. Literature Review and Research Questions

Linguistic Transfer and Metalinguistic Transfer

Researchers have been striving to reach the definitive frameworks of linguistic transfer for decades. Robert Lado first developed a theory called the contrastive hypothesis that is very akin to the concept of linguistic transfer. He stated that systematic comparison of languages can help predict and describe the difficult features that can face a second language learner in learning L2 (Lado, 1957). In Chomskyan theories of language, the linguistic transfer has been reviewed within the scope of questioning whether universal grammar (UG) is applicable to SLA or a completely different parameter is involved (Sakota, 2020). Meanwhile, some interesting studies have adopted the Competition Model to provide empirical evidence (Bates and MacWhinney 1981, Sasaki, 1991), and the others even started using the Connectionist Model to explain linguistic transfer (Shirai, 1992).

As the field of study developed, the term "transfer" had been replaced and presented using different terminology and concepts, such as "cross-linguistic influence," "positive transfer," and "negative transfer" (Corder, 1973). Although some scholars were not completely in congruence with the idea of transfer at the time (Kellerman, 1995), Odlin's *Language Transfer* (1989) is the most extensive and comprehensive study of the field. He defined linguistic transfer as "the influence resulting from similarities and differences between the target language and any other language that has been previously acquired," not only attributing the issue to positive nor negative types but rather to the linguistic distance between target languages (e.g. L1 & L2) (Odlin, 1993, p.27). Later, "reverse transfer" was introduced by Cook (2003) to describe the cases where the direction of linguistic transfer (e.g. L1→L2) is the reverse [L2→L1]. It has also been proved that phonological transfers happen more frequently than morphological and syntactic transfers (Ioup and Weinberger, 1987; Mizuno, 2000; Takahashi, 1984).

The central discussion of this paper, however, is the transfer in metalinguistic skills and awareness that affects language learning proficiency especially with regard to upper-level literacy skills – reading and writing. Koda's Transfer Facilitation Model posits that bilingual children naturally tend to capitalize on metalinguistic skills gained from one language in learning the other (Koda, 2005, 2008). This cross-linguistic transfer facilitation in Malay-English bilingual reading is depicted

well in Zhang, Chin, and Li (Zhang et al., 2017):

> …metalinguistic awareness can be transferred from the source language as a resource to facilitate the development of reading and its related abilities in the target language.…Target language competencies are thus developmentally an outcome of the complex interplay between transferred metalinguistic awareness from the source language and learners' print exposure or reading experience in the target language (p. 6).

Malakoff and Hakuta (1991) also maintains as follows:

> Metalinguistic awareness and bilingual proficiency are separate but related linguistic skills…the correlation between these skills is in part the result of influence of academic experience on both skills… Children who have a more developed sense of metalinguistic awareness are likely also to have more developed language skills in general: this appears to be particularly true for written-language skills. Cummins argues that these meta-linguistic and written-language skills are also shared across both languages. (pp. 148-9)

Jessner defined metalinguistic awareness as a "set of skills or abilities that the multilingual user develops owing to his/her prior linguistic and metalinguistic knowledge" (Jessner, 2008, p. 275). Over the last 20 years, "the growing interest in multilingualism has given rise to a wave of research emphasis on the role of language awareness in multilingual learning and education" (Jessner, 2015). Jessner herself is one of the TLA (Third Language Acquisition) advocates and claims that the development of proficiency in two or more foreign languages can lead to higher levels of metalinguistic awareness. Despite some counterarguments that there is no difference between SLA and TLA (and so forth) and that all the non-native languages are second languages (Mitchell and Myles, 1998; Singh & Carroll, 1979,), it is true that TLA has gained a field in its own right reflecting the multilingualism and multiculturalism in this global age. In the meantime, it may be appropriate to revisit the remaining issue (SLA vs. TLA) with the application of "plurilingualism" where a person's multilingual competence does not necessarily coincide with the linguistic circumstances in the actual society.

Translation and Metalinguistic Skill

Translation involves various different skills. Therefore, there is a unanimous agreement among linguists and translation theorists on the use of translation as a foreign language learning and teaching strategy (Al-Kufaishy, 2004, 2006 cited in Al-Hassnawi, 2010). Some scholars suggested that the processes involved in the comprehension of text can be better understood through translation and interpretation (Mininni, 1981; Nida, 1976). According to Komatsu (2018), "translation is an activity that selects out possible words and phrases that express succinctly the meaning of the original text including nuances. In doing so, the most important thing is to re-construct the author's view described in the original text" (p.1). Clearly, translation is different from interpretation in that translation refers to the written modality and interpretation refers to the oral modality (Malakoff and Hakuta, 1991). In this paper, the former is mainly reviewed.

Although the history of translation theory dates back to the ancient times — translation has been used to teach a second language since Roman times —, the empirical literature on translation was sparse until the late 20th century (Malakoff and Hakuta, 1991, p. 144). Yet, some of the previous studies have provided interesting insights into the theory of translation. For example, Ljudskanov (1969) divided the process of translation into two stages: (1) analysis of the source-language text; and (2) synthesis of the information into a target-language text. Because this binary model does not consider the communicative dimension of the translation, Seleskovitch (1976) later added a third step called "(3) comprehension of the meaning." However, Malakoff and Hakuta claims that Seleskovitch's work makes no distinction between the communicative demands and the metalinguistic demands (p. 143). Therefore, these theories were revised as follows:

> Translation requires the manipulating of language at two levels: it must apprehend and convey the meaning of the source text: and it must formulate an

> appropriate target-language sentence structure in which to embed this meaning…from this two-level perspective, translation is a composite of communicative and metalinguistic skills – skills that are "translinguistic," in the sense that they are not particular to any one language. (Malakoff and Hakuta, 1991, p. 150)

Interestingly, the above quote already implied the significance of the extensive study of multilingualism (or even plurilingualism). Malakoff and Hakuta continue as follows:

> It is this necessity to reflect on language and language use across two languages that makes translation a metalinguistic skill, *par excellence*. (Caroll, 1978; Flesch, 1972; Fuchs, 1982 as cited in Malakoff and Hakuta, 1991, p. 150).

Another recent study by Someya (2010) also explains the process of translation where metalinguistic skills are utilized:

> The comprehension at the "Text-base Model" proceeds to be elaborated into the "Situation Model," referring to which translation is created with the addition of known-knowledge and inference. And this translation goes through "Monitoring" …this monitoring is a conscious process and requires "metalinguistic judgment" that determines the most appropriate words and phrases from possible multiple choices. (Someya, 2010, p. 4 translated by Ohata)

Research Questions

The current research explored the metalinguistic skills and awareness of L3-Japanese learners by observing their Japanese and English (L2) writings translated from their mother tongue (L1s). The following research questions were posited:

RQ1. How does the linguistic distance from L1 affect their L3-Japanese literacy?

RQ2. Is there evidence of linguistic/metalinguistic transfers from the learners' mother tongue and their L2 English? Did the learners demonstrate awareness of those transfers in creating Japanese texts?

3. Method

Research Design

This is a cross-sectional study. Subjects were foreign students who study and use Japanese in Japan (*i.e.* JSL) at the academic level. All participants were first asked to translate a chapter of a book (same amount and content) written in their mother tongue (ST: L1s) into English (TT: L2), and then into Japanese (TT: L3)[1]. In this study, the terms L1/L2/L3 followed the definitions used by Williams and Hammarberg (2009). That is, the terms do not necessarily indicate the learners' proficiency levels. They are simply used as labels for the three languages each participant speaks. However, the terms do indicate the order of language learning, which means all the participants had learned English before they started learning Japanese. Few of them claimed that they have more than one mother tongue, which is not considered as a factor in this study.

During translation, participants were allowed to use dictionaries for words and phrases but not for sentence-level structures. Functions such as auto-translation were prohibited. Malakoff and Hakuta (1991) maintains as follows regarding the translation strategies of language learning:

> A translation strategy is a learned strategy that helps improve performance; …the translation strategy cannot raise performance beyond an upper limit of performance determined by the interplay of metalinguistic skill and bilingual proficiency. However, within this limit, it can enhance performance. Adult bilinguals, because of their more developed linguistic abilities and metalinguistic awareness, have a greater range of strategies available to them — use of dictionary, paraphrase knowledge of morphological rules, reliance on cognates are a few examples. (p. 149)

Participants were also asked to mark/highlight the words and phrases which they looked up. The translation could be either literal (direct translation) or original (free translation). After the translation tasks, participants joined a one-to-one interview session held by the

1 Hereafter, ST: L1, TT: L2, and TT: L3 are used as abbreviations of "source text: L1," "target text: L2," and "target text: L3".

researcher and answered some questions related to their performance (the texts they created and the strategies they used).

For the purpose of analyzing the content of the translated texts, KH Coder, a text-mining software tool, was used to create co-occurrence networks. In the meantime, the text-mining was also performed on the professionally translated and officially published versions of the material to make comparison. The final analysis was based on the interview data and the KH Coder co-occurrence networks.

Procedure

The present study attempted to leverage Granger's (2015) newer version of Contrastive Interlanguage Analysis (CIA[2]) to uncover the linguistic and metalinguistic transfer observed in the translated texts (TT: L2 EN and TT: L3 JA)[2] which were written by Japanese learners from different L1 backgrounds. "Interlanguage," coined by Selinker (1972), is the type of language which language learners produce in the process of learning to reach the target language norm. Toury suggests that "this system enjoys an intermediate status between a mother tongue and a target language…and it reflects the interference of these two codes (that is, mother tongue and target language)" (Toury, 1979: 223). Although professional translators often argue that language used in translation (also called "translanguage") is a notion distinct from interlanguage (Al-Hassnawi, 2010), Toury says interlanguage is a linguistic phenomenon which occurs whenever and wherever one language is used in some contact with another, and one of the purest and most common situations of this type is "translation" (Toury, 1979, p. 224).

The first version of CIA methodology was presented in 1996 and was based on two types of comparison: 1. a comparison with native language, seen as the ultimate attainment of learning a foreign/second language; 2. a comparison of one sample of learner language with other samples of learner language, particularly from learners with different mother tongue backgrounds (Granger, 1996) (Figure 1). In the reappraisal, Granger renewed her theory as CIA[2] by adding the notion of "varieties" and "variables" to each branch of the dichotomy. Multiple RLV (Reference Language Varieties) indicates that there are different reference points where learner data can be set. For instance, the new CIA considers dialectal variables, such as English as a Lingua Franca, and diatypic variables which ensure text-type comparability that accommodates academic writing. Learners' mother tongue are the ILVs (Interlanguage Varieties) which have been most thoroughly investigated using CIA (Granger, 2015, p. 17).

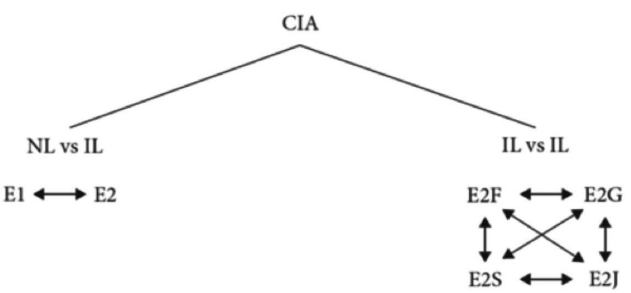

Fig 1. Contrastive Interlanguage Analysis

(Granger, 1996, p. 44)

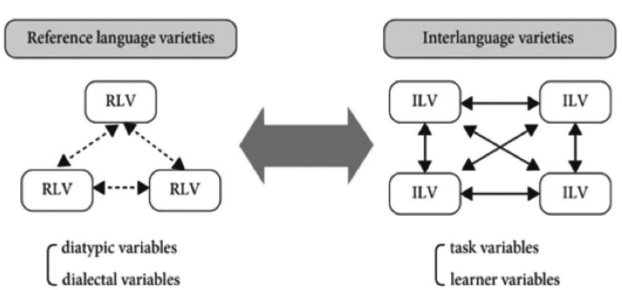

Fig 2. CIA[2]

(Granger, 2015, p. 17)

In this study, the above CIA[2] has been revised so as to be fit for the purpose of third-language Japanese acquisition analysis. The following procedures were

2 The following abbreviations are used in the analysis: target text written in L2 English = TT: L2 EN, target text written in L3 Japanese = TT: L3 JA.

implemented (bold arrows in Figure 3 and 4[3]): 1. comparisons of native language (officially published Japanese version) with learners' Japanese (TT: L3 JAs) from different mother tongue backgrounds; 2. a comparison between learners' English (TT: L2 ENs) and learners' Japanese (TT: L3 JAs) of different mother tongue backgrounds; 3. comparisons among interlanguage varieties of different mother tongue backgrounds. Dotted arrows indicate the comparisons which could be made for SLA research of learners' English.

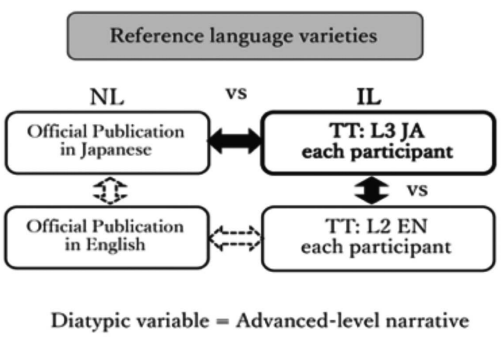

Fig 3. CIA revised for TLA — Reference language varieties
(Ohata, 2021)

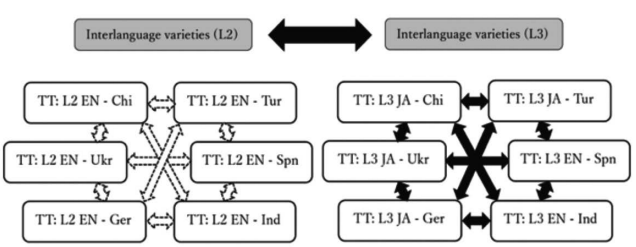

Fig 4. CIA revised for TLA — Interlanguage varieties
(Ohata, 2021)

As Granger herself acknowledges, some scholars argue that the CIA method, or the interlanguage pragmatics theory in SLA by itself, is viewed as part of "error analysis" and has trapped in "comparative fallacy" — the notion that the "work on the linguistic description of learners' languages can be seriously hindered or sidetracked by a concern with the target language" (Bley-Vroman, 1983: 2, Gass & Selinker, 2008; Ōzeki, 2016) However, these discussions have mostly been made from the viewpoint of SLA research, but not in the field of TLA where learners' linguistic production can be looked upon relatively in a positive light, as seen in the concept of plurilingualism. Besides, translation competence is not a measurement of how close the learner is to being a target language speaker. Translation clearly involves skills that native speakers do not naturally possess. Granger also emphasizes that CIA should be valid on the upper stages of acquisition which SLA research tend to lack in (Granger, 2015, p. 11).

Participants

The participants came from different national and first language (L1) backgrounds. There were 7 foreign graduate students who joined this research. Each one of them was asked to fill out a questionnaire before completing the translation tasks. Table 1 summarizes their years of schooling for L1/L2/L3 in the order of age from youngest to oldest.

Table 1. Participants' Language Learning Backgrounds: Years of Schooling (YS) and JLPT Level

Participant #	Age / Sex [Nationality]	L1 (Mother Tongue)	YS L1 (Age)	YS L2-English (Age)	YS L3-Japanese (Age) / JLPT
1	28 / F [Taiwan]	Mandarin Chinese	16 (3-18)	11 (10-21)	13 (19-31) / N1
2	30 / F [Ukraine]	Ukrainian	16 (3-18)	23 (7-30)	15 (15-30) / N1
3	31 / F [Taiwan]	Mandarin Chinese	15 (4-18)	12 (10-22)	9 (19-28) / N1
4	32 / F [Germany]	German	15 (6-20)	8 (12-20)	11 (22-32) / N2
5	33 / F [Turkey]	Turkish	13 (7-19)	25 (9-33)	15 (19-33) / N1
6	34 / M [Mexico]	Spanish	16 (5-20)	17 (5-22)	14 (19-32) / N1
7	36 / F [Indonesia]	Indonesian	14 (6-19)	8 (12-19)	6 (24, 29-31, 35-) / N1

At the time of survey, almost all the participants had passed JLPT N1 except for participant #4 from Germany. Clearly, all the participants were highly educated. Participants #2 and #6 were studying in master's program and the others were doctoral students at Tsukuba. Participants #2, #6, and #7 had had experience of working as a translator or an instructor for Japanese language

3 Mother tongue varieties are indicated as follows: Chinese = Chi/ Ukrainian = Ukr/ German = Ger/ Tur = Turkish/ Spanish = Spn/ Ind = Indonesian.

and literature in their home countries. As for living experiences, all the participants had lived in Japan for more than two years, but only #4, #5, and #7 had been in the country for more than 5 years. The longest time was participant #5 (6 years). This includes the times when they were on study-abroad programs previously.

Materials

Part of Chapter IV (two pages) of a well-known children's book, *The Little Prince* (Saint-Exupéry, 1943) was selected as a material to translate (Appendix A). This publication is one of the most translated books in the world, having been translated into more than 300 languages. There are several different versions and translations available for some languages. In the current study, each of the participants compared the versions and selected the ones they thought would be most convenient to translate. The reason for assigning Chapter IV of the book was that no prior knowledge was necessary to understand the content. The chapter explains how children's view of the world differs from that of adults. Especially, the first two pages of the chapter describe the examples of seemingly idiotic ethical views which humans start developing as they grow up. It was also expected that this type of content is effective for measuring readers' cognitive skills because it is made of relatively conceptual vocabulary and phrases. (Besides, there is even a field of study called "moral cognition.") Someya, Kawahara, and Yamamoto (2013) suggest that, in translation, we need to recover the "implied meaning" which is beyond the "linguistically embedded meaning" in order to accurately covey the intention expressed in the source-language text. That's when the metalinguistic skills are in demand (Someya et al., 2013, p.4 translated by Ohata). It is assumed that cognitively challenging reading materials would ask for the readers to exercise their metalinguistic skills even more in such a manner as to read between the lines and understand the context.

4. Results and Discussion

Table 2 is the list of tokens and types extracted from NL (official publication in Japanese), TT: L2 ENs (L2-English translated texts) and TT: L3 JAs (L3-Japanese translated texts) using KH Coder 3. Numbers for native English version (official publication in English) are provided and grayed-out. Obvious is that there are consistently more tokens and types extracted from each Japanese text than English text. It is also clear, from Table 2, that slightly less words are used in all the TT: L3 JAs than NL, except for the participant #3 from Taiwan who expressed the most careful and meticulous attention to word usage and vocabulary. She was a doctoral student in Modern Japanese literature. Also, the Indonesian participant (#7) commented, during the follow-up interview, that she had an impression that there is fewer words in Indonesian than in English. Interestingly, the numbers indicate that she used the least tokens and types among all the participants in both English and Japanese translations.

Table 2. Extraction of Words - KH Coder 3

KH Coder Pre-processing	Target Text		
Participant # [Native Language]	Tokens <L2 EN / L3 JA>	Types <L2 EN / L3 JA>	Sentences <L2 EN / L3 JA>
NL: official publication	479 / 564	187 / 197	27 / 25
1 [Mandarin Chinese]	414 / 504	169 / 197	28 / 25
2 [Ukrainian]	403 / 517	171 / 189	27 / 25
3 [Mandarin Chinese]	447 / 596	180 / 211	33 / 29
4 [German]	396 / 458	167 /182	28 / 30
5 [Turkish]	436 /476	197 /176	31 /25
6 [Spanish]	459 / 517	188 / 194	21 / 21
7 [Indonesian]	370 / 447	159 / 166	25 / 24

*Tokens = extracted words, the total number of words in the target text
*Types = word types in the text
*Words such as auxiliary verbs and particles are omitted.

Co-occurrence networks were created based on Table 2. First, comparisons between NL and TT: L3 JAs (Appendix B) were made to answer RQ1. Figure 5.1 is a co-occurrence network of NL based on "centrality." Centrality indicates "how central the role each word plays in the network" (Higuchi, 2017, p. 63). Words appear within the circles called "nodes." The bigger the nodes get, the more frequently the word occurs in the text. The "edges" (lines) show connections of words. The thicker the edges are, the stronger co-occurrence the words have. The closeness of nodes does not indicate

strong co-occurrence unless the nodes are connected by edges. Figure 5.2 shows a co-occurrence network based on "communities (sub-graphs)." Communities are used to represent parts of the network that are more closely associated with each other through color coding (Higuchi, 2017: 51-53). In the published Japanese version of *The Little Prince*, the most frequently used word in Chapter 4 is 大人 (adult), and the word 言う (to say) takes on the biggest role in the narrative. Indeed, "what adults say" about the world (grown-up views) is depicted. However, from figure 5.2, the adults also seem to be involved with a series of other actions such as 話す (to talk), 見る (to see), and 聞く (to listen). Figure 5.2 visualizes the storylines and context of the narrative more clearly.

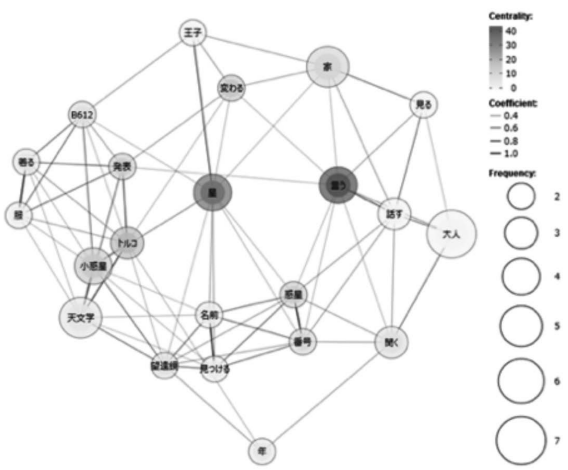

Fig 5.1. Co-occurrence Network of NL: Centrality

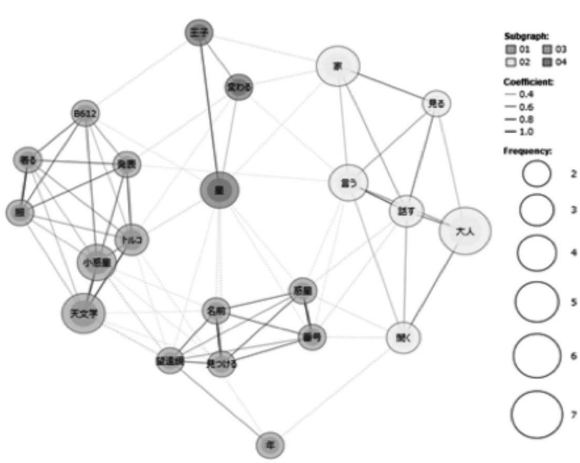

Fig 5.2. Co-occurrence Network of NL: Sub-graph

On the other hand, participants' networks (Appendix B) show that words are as equally randomized as figures 5.1 and 5.2 except participants #1 and #5. In the interviews, participant #1 expressed how difficult it was for her to understand the story itself. She said she felt the story was pointless and was not making sense at all even in her own mother tongue (Chinese). As for participant #7, she declared that she did not divide the chapter into paragraphs. Overall, the word 大人 was one of the either most frequently used or centralized words in all the participants' translation.

As aforementioned, the sub-graph networks provide more information on contextual understanding. Among the figures 5.10 through 5.16, only the networks of participants #3 and #4 are grouped into 4 different communities showing similar results to NL (Appendix C). This implies that although participant #4 is at the lowest Japanese proficiency-level (N2), reading and writing literacy can be supplemented and uplifted with the help of metalinguistic strategies such as using dictionaries, as previously suggested. Nodes without color (words on white backgrounds enclosed in black circles) indicate they are independent of any words or communities. This means data by participant #5, which consists only of colorless nodes positioned almost equally within the network, should be treated as invalid although they are strongly informative of the fact that paragraphs are the key feature when performing computerized text-mining. Although Higuchi (2017, p. 64) says "colors may change when you select a different community detection method," #5 clearly fails to provide the contextual aspects of the story. There is also similarity between the networks of participants #6 and #7, which are made of two connected communities. A possible reason for this is that participant #6 attempted to make the story more suitable as children's literature using simple phrases and structures whereas participant #7 used vocabulary and expressions translated from the Indonesian language which is presumably made up of less vocabulary.

With regard to L2 English translation (TT: L2 ENs), the most frequently and commonly used words among the participants were "he," "be," and "they." That is, the same pronouns and a verb were repeatedly used

regardless of their L1 backgrounds. Compared with TT: L3 JAs, English words were found to be more evenly scattered within the networks of all participants' results. Even the network of participant #1, who commented that she had no idea of the storyline, shows similar distribution of nodes to the other participants. Again, participant #5's data turned out to be invalid.

So far, because the contextual factors of reading and writing seem to be more informative of learners' translation literacy, for the observation of TT: L2 ENs, subgraphs (communities) were mainly reviewed (Appendix D). Generally, the nodes in the networks are connected, more or less, to other nodes, even between different communities as if the story flowed beyond paragraphs. However, participant #1's network (figure 6.1) is clearly made of multiple separate communities, which is interestingly happening in her TT: L3 JA text (figure 5.10) as well. Since this was the most noticeable distinction from the other participants' data, a comparison between participant #1 and #3 (Chinese speakers) was made based on a network data created from the official Chinese publication (Figure 6). It is obvious that the nodes are denser within communities than figures 5.1 and 5.2 of the official Japanese publication (NL).

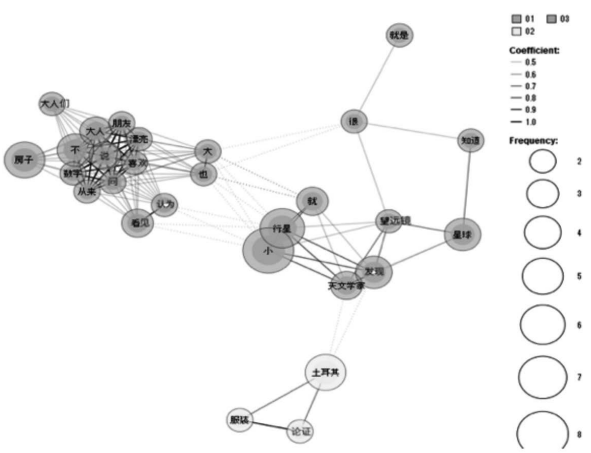

Fig 6. Co-occurrence Network of Chinese ST[4] : Sub-graph

The Chinese language is often said to be context-based. It is one of the isolating languages and one character represents one morpheme. In such a language, a sentence does not always consist of a subject and a verb, and oftentimes subjects are omitted and understood by the context. In the case of participant #1, problems in understanding the Japanese ST in her own mother language were observed. Upon interview, she particularly pointed out the difficulty of choosing proximal deictic expressions such as こ・そ・あ (this, that, that over there). However, she was assured that she paid enough attention to the contextual flow. The question is, how could such interference occur even though participant #3 did not experience it at all? Interestingly and coincidentally, these two participants were both from Taiwan, and their ages were different only by three years. They had learned Japanese in similar language learning and educational backgrounds compared with the other participants. The only prominent and possible distinction between them, which may be the contribution to the difference in the data, was the fact that participant #3 was a doctoral candidate in Japanese literature. It is assumed that, especially in terms of literature translation, the difference in their metalinguistic awareness affected their translation skills, making the communities within only participant #1's networks (TT: L3 JA / Figures 5.3 and 5.10) more condensed and congested as the Chinese ST.

5. Conclusion

Someya et al. (2013) maintains that transfer competence in translation reflects the plurilingualism which developed upon the geopolitical characteristics of Europe. This study attempted to answer two questions by observing linguistic and metalinguistic transfer of advanced L3-Japanese language learners who live in Japan.

The first question was regarding language learning backgrounds and linguistic distance between L1 and L3. At the advanced level of proficiency (JLPT N1 and N2), there was no evidence that linguistic distance influences learners' reading and writing literacy. On the contrary, it was suggested that a learner from a Chinese mother language background found the translation task to be more challenging. In addition, it was implied by the German participant that reading and writing literacy can be supplemented and uplifted with the help of met-

4 ST = source text

alinguistic strategies.

The second question was about linguistic and metalinguistic transfer from learners' mother tongue and L2 English. Again, no clear evidence was found with learners at the advanced level. One of the Chinese speakers' network data showed that her awareness of context in L1 may be transferring to her L2 and L3 literacy. However, it needs to be noted that this does not imply Japanese language learning is more cumbersome for Chinese speakers especially because of the orthographic similarities between Japanese and Chinese. Despite the order of translation assigned (L1 → L2 ⇒ L1 → L3), none of the participants felt that their Japanese translation performance was being affected by L2 English. In fact, as long as the analysis on the context is concerned, no correlations between L2 and L3 was observed.

This study has a number of limitations. First, the Japanese society is still not so linguistically and ethnically diverse as the European countries. Together with the discussion of what defines "native speakers," this leaves us with a question of whether the Japanese language could be considered as a third language within the frame of plurilingualism. Besides, there are more than one native language for some learners such as the Ukrainian and Indonesian participants in this study. The definition of L1, L2, and L3 as well as geographical and dialectal variations need to be reviewed. In addition, extra interview sessions with the participants based on the obtained network data may provide more reflective insights. Regarding the CIA methodology, it is originally a corpus research so the subject needs to be a big number of corpora, rather than a group of case studies. Further investigation is needed to prove the legitimacy of the CIA methodology used in case studies. Lastly, as Koda (2008, p. 7) mentions, "understanding transfer facilitation requires longitudinal research to examine how metalinguistic awareness in one language may explain change in the other language."

References

1) Alderson, J. C., Clapham, C. & Steel, D. (1997). Metalinguistic knowledge, language aptitude and language proficiency. *Language Teaching Research, 1* (2), 93-121.
2) Al-Hassnawi, A. (2010) Translanguage vs. Interlanguage: Exploration in Translation Strategies. *Translation Journal, 14* (3). Retrieved from https://translationjournal.net/journal/53translanguage.htm
3) Al-Kufaishy, A. (2004) Translation as a Learning and Teaching Strategy. *Babel, 50* (1), 45-59. doi:10.1075/babel.50.1.06alk
4) Al-Kufaishy, A (2006) A Pedagogic Model of Translating Expository Texts, *Babel, 52* (1), 1-16. doi:10.1075/babel.52.1.01alk
5) Bates, E., & MacWhinney, B. (1981). Second-language acquisition from a functionalist perspective: Pragmatic, semantic, and perceptual strategies. *Annals of the New York Academy of Sciences, 379* (1), 190-214. doi:10.1111/j.1749-6632.1981.tb42009.x
6) Berry, R. (2005). Making the most of metalanguage. *Language Awareness, 14*, 3-20. Retrieved from https://doi.org/10.1080/09658410508668817
7) Bialystok, E. (2007). Cognitive effects of bilingualism: How linguistic experience leads to cognitive change. *International Journal of Bilingual Education and Bilingualism, 10* (3), 210–223. Retrieved from https://doi.org/10.2167/beb441.0
8) Bley-Vroman, R. (1983). The comparative fallacy in interlanguage studies: The case of systematicity. *Language Learning, 33*, 1-17.
9) Cabrelli Amaro. J., In Flynn, S., & Rothman, J. (2012). *Third language acquisition in adulthood*. Amsterdam: John Benjamins.
10) Carroll, J. B. (1978). Linguistic abilities in translators and interpreters. In D. Gerver & H. W. Sinaiko (Eds.), Language interpretation and communication, New York: Plenum Press.
11) Cenoz, J., Hufeisen, B., & Jessner, U. (2001). *Cross-linguistic influence in third language acquisition: Psychological perspectives*. Clevedon. England: Multilingual Matters.
12) Clapham, C. (2001) The assessment of metalinguistic knowledge. In C. Elder, A. Brown, E. Grove, K. Hill, N. Iwashita, T. Lumley, T. Macnamara, & K. O'Loughlin (Eds), *Experimenting with Uncertainty: Essays in Honour of Alan Davies* (pp. 31-41). Cambridge: Cambridge University Press.
13) Cook, V. (2003). *Effects of the Second Language on the First*.
14) Corder, S. P. (1973). Introducing Applied Linguistics. Harmonds worth: Penguin.
15) Corder, S. P. (1983). A role for the mother tongue. In S. M. Gass & L. Selinker (Eds), *Language Transfer in Language Learning*. (pp. 18-31). Philadelphia, PA: John Benjamins North America
16) Cummins, J. (1979). *Cognitive/academic language proficiency, linguistic interdependence, the optimum age question and some other matters*. Working Papers on Bilingualism, 19, 121-129.
17) Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework*. (pp. 3-49). Los Angeles: National Dissemination and Assessment Center.
18) Cummins, J. (2001). *An introductory reader to the writings of Jim Cummins*. In Baker, C., & Hornberger, N. H. (Eds), Clevedon: Multilingual Matters Ltd.
19) de Saint-Exupéry, A., and Woods, K. (2018). *The Little Prince*. United States: Ancient Wisdom Publications.
20) de Saint-Exupéry, A., and Nishi, K. (2017). *Hoshi no ōjisama*

[The Little Prince]. Retrieved from http://www.kenkyusha.co.jp/uploads/suppl/id32745278/The_Little_Prince.pdf

21) Flesch, R. (1972). The pursuit of translation. In R. Flesch (Ed.), *The art of clear thinking*. New York: Macmillan.

22) Fuchs, C. (1982). *La Paraphrase* [The Paraphrase]. *Paris: Presse Universitaire de France*. Paris : Presses universitaires de France.

23) Gass, S. M., Selinker, L. (2008). *Second language acquisition: An introductory course* (3rd ed.). New York and London: Routledge.

24) Granger, S. (1996). From CA to CIA and back: An integrated approach to computerized bilingual and learner corpora. In K. Aijmer, B. Altenberg, & M. Johansson (Eds.), *Languages in Contrast*. Lund: Lund University Press, 37-51.

25) Granger, S. (2015). Contrastive interlanguage analysis: A reappraisal. *International Journal of Learner Corpus Research, 1* (1), 7-24. doi:10.1075/ijlcr.1.1.01gra

26) Hammarberg, B. (2009). *Processes in Third Language Acquisition*. Edinburgh University Press.

27) Higuchi, K. (2017). *Shakai chosa no tame no keiryō tekisuto bunseki: Naiyō bunseki no keishō to hatten o mezashite: KH Coder ofisharu bukku* [Quantitative Content Analysis for Social Research]. Tokyo: Nakanishiya Shuppan.

28) Ioup, G., & Weinberger, S. (1987). *Interlanguage phonology: The acquisition of a second language sound system*. Cambridge, MA: Newbury House Publishers.

29) Jessner, U. (2008). A DST-model of multilingualism and the role of metalinguistic awareness. *The Modern Language Journal, 92* (2). 270-283.

30) Jessner, U. (2017). Language Awareness in Multilinguals: Theoretical Trends. In Cenoz, J. Gorter, D. & May, S. (Eds.), *Language Awareness and Multilingualism*. Switzerland: Springer.

31) Kawahara, K., Someya, Y., & Yamamoto, N. (2013). *Eigo kyōiku niokeru TILT (Teaching and Interpreting in Language Teaching) no igi to ichizuke: CEFR ni yoru Aratana Eigoryoku no Teigi ni Kanren shit* [The significance and role of TILT in English education: regarding the new English proficiency proposed by CEFR]. *Gogaku kyōiku Expo 2013 Proceedings*, 27-30.

32) Kellerman, E. (1995). Crosslinguistic Influence: Transfer to Nowhere? *Annual Review of Applied Linguistics, 15*, 125-150. doi:10.1017/S0267190500002658

33) Koda, K. (2005). *Insights into Second Language Reading: A Cross-Linguistic Approach* (Cambridge Applied Linguistics). Cambridge: Cambridge University Press. doi:10.1017/CBO9781139524841

34) Koda, K. (2008). Impacts of prior literacy experience on second language learning to read. In Koda, K. & Zehler, M. (Eds.), *Learning to Read across Languages* (Cross-Linguistic Relationships in First- and Second- Literacy Development). (pp. 80–108). New York, NY: Routledge.

35) Komatsu, A. (2018). *Hon'yaku bun wo meguru hanashiai ni miru aidea no sōhatsu – Ehon to "tabe batta" no kankokugo yaku wo rē ni* - [A Study on Emergence of Ideas in Discussion on Translation of Picture Books : A Case study of Japanese Korean Translation of "Tobe Batta"]. *The Korean Association of Japanese Education*, *42* (0), 137-156. doi: http://dx.doi.org/10.21808/KJJE.42.09

36) Lado, R. (1957). *Linguistics across Cultures: Applied Linguistics and Language Teachers*. University of Michigan Press, Ann Arbor.

37) Ljudskanov, A. (1969). Traduction humaine et traduction mecanique [Human Translation and Mechanical Translation]. Paris: Dunod.

38) Malakoff, M., & Hakuta, K. (1991). Translation skill and metalinguistic awareness in bilinguals. In E. Bialystok (Ed.), *Language Processing in Bilingual Children* (pp. 141-166). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511620652.009

39) Mininni, G. (1981). On the need of psycholinguistic research on translation. *International Journal of Psycholinguistics, 8* (2, 22), 79–107.

40) Mitchell, R. & Myles, F. (1998). *Second Language Learning Theories*. London: Arnold.

41) Mizuno, M. (2000). *Chūkan gengo bunseki: Eigo kanshi shūtoku no kiseki* [Interlanguage analysis: The trace of the acquisition of English articles]. Tokyo: Kaitakusha Publishing Co., Ltd.

42) Nida, E.A. (1976). A Framework for the Analysis and Evaluation of Theories of Translation. In R.W. Brislin, (Ed.), *Translation Application and Research*. New York: Gardner Press.

43) Odlin, T. (1993). *Language transfer: Cross-linguistic influence in language learning.* Cambridge: Cambridge University Press.

44) Ōzeki, H. (2016). Corpus-based second language acquisition research. In Shibatani, M. & Kageyama, T. (Series Eds.), *Handbooks of Japanese Language and Linguistics: Vol. 10. Handbook of Japanese Applied Linguistics* (pp. 313-334). Berlin/Boston: De Gruyter Mouton.

45) Richards, J., Schmidt, R. W., & Takahashi, S. (2013). *Ronguman gengo kyōiku ōyō gengogaku yōgo jiten* [Longman Dictionary of Language Teaching and Applied Linguistics]. Tokyo: Nan'un-do.

46) Roehr, K. (2006). Metalinguistic knowledge and language ability in university-level L2 learners. *Applied Linguistics*, *29* (2), 173-199. https://doi.org/10.1093/applin/amm037

47) Sakoda, K. (2002). *Nihongo kyōiku ni ikasu daini gengo shūtoku kenkyū* [SLA Research for Japanese Language Education]. Tokyo: ALC Publishing.

48) Sasaki, Y. (1991). English and Japanese Interlanguage Comprehension Strategies: An Analysis Based on the Competition Model. *Applied Psycholinguistics, 12* (1), 47-73.

49) Shirai, Y. (1992). Conditions on Transfer: A Connectionist Approach. *Issues in Applied Linguistics, 3* (1), 91-120.

50) Singh, R., & Carroll, S. (1979). L1, L2, and L3. *Indian Journal of Applied Linguistics, 5*, 51-63.

51) Someya, Y. (2010) *Daigaku ni okeru hon'yaku kyōiku no ichizuke to sono mokuhyō* [The Teaching of Translation in the Context of College Education: Its Purpose and Rationale], *Gaikokugo kyōiku kenkyū, 3*, 73-102.

52) Takahashi, T. (1984). *A study on Lexico-semantic Transfer.* Unpublished doctoral dissertation, Columbia University.

53) Toury, G. (1979). Interlanguage and its Manifestations in Translation. *Meta, 24* (2), 223–231.

54) Zhang, D., Chin, C., & Li, L. (2017). Metalinguistic awareness in bilingual children's word reading: A cross-lagged panel study on

cross-linguistic transfer facilitation. *Applied Psycholinguistics, 38* (2), 395-426.

Appendix A

Text Samples excerpted from The Little Prince Chapter IV written by Antoine de Saint-Exépery

Japanese

こうして僕はとても重要な２つ目のことを知った。王子さまの故郷の星は、なんと一軒の家とほとんど変わらないくらいの大きさだ、ということだ。（中略）この小惑星を、1909 年にトルコのある天文学者が、望遠鏡で一度だけ観測したことがある。その天文学者は国際天文学学会で自分の発見についてすばらしい発表をした。ところが、そのとき彼がトルコ風の変わった服装をしていたというので、誰も彼の言うことを信じなかった。大人というのはそういうものだ…（中略）僕がこの惑星についてこんなに詳しく話したり、番号まで言うのは、大人たちのふるまい方のせいだ。新しい友だちができたと話しても、大人はいちばん大切なことは聞かない（中略）大人にはこう言ってやる必要がある。「２万ドルの家を見たよ」。すると大人たちは歓声を上げて、「なんてすばらしい家なのだろう！」と言うだろう。

Japanese translation by Kyoji Nishi, 2017, published by Kenkyusha.

English

I had thus learned a second fact of great importance: this was that the planet the little prince came from was scarcely any larger than a house! … This asteroid has only once been seen through the telescope. That was by a Turkish astronomer, in 1909. On making his discovery, the astronomer had presented it to the International Astronomical Congress, in a great demonstration. But he was in Turkish costume, and so nobody would believe what he said. Grown-ups are like that…If I have told you these details about the asteroid, and made a note of its number for you, it is on account of the grown-ups and their ways. When you tell them that you have made a new friend, they never ask you any questions about essential matters.…You would have to say to them: “I saw a house that cost $20,000.” Then they would exclaim: “Oh, what a pretty house that is!’

English translation by Katherine Woods, 2018, published by Ancient Wisdom Publications.

Appendix B

Co-occurrence networks created from TT: L3 JAs based on centrality

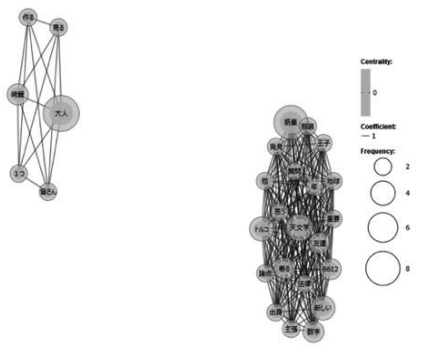

Fig 5.3. Participant #1

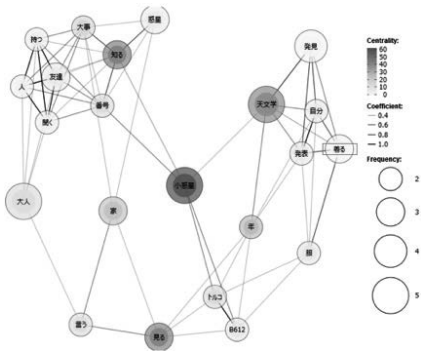

Fig 5.4. Participant #2

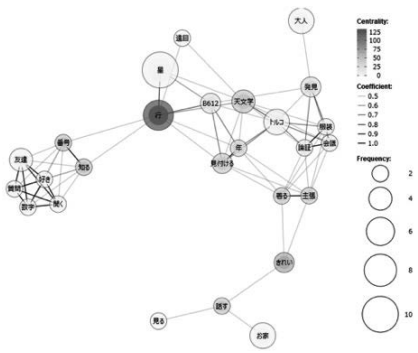

Fig 5.5. Participant #3

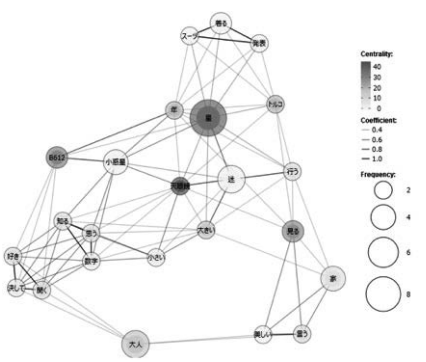

Fig 5.6. Participant #4

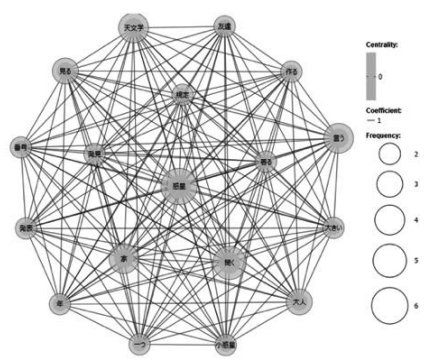

Fig 5.7. Participant #5

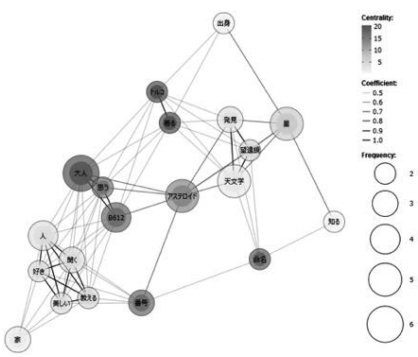

Fig. 5.8. Participant #6

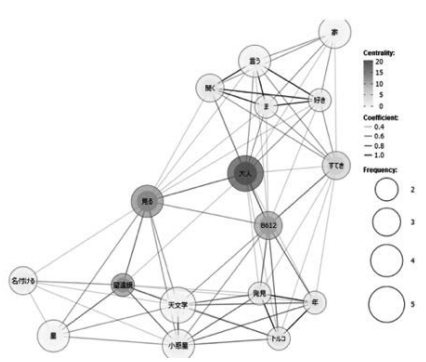

Fig 5.9 Participant #7

Appendix C

Co-occurrence networks created from TT: L3 JAs based on sub-graph

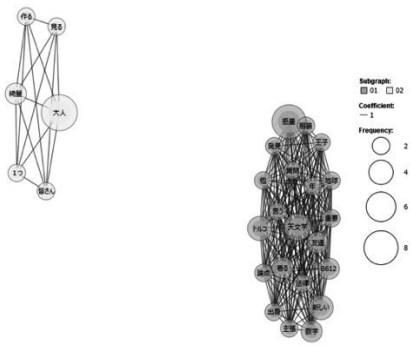

Fig 5.10. Participant #1

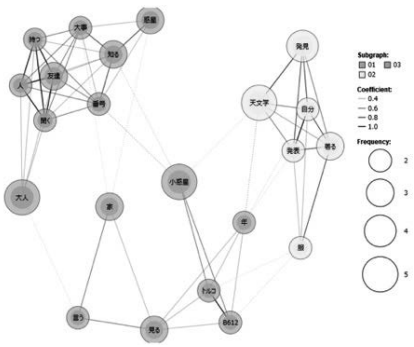

Fig 5.11. Participant #2

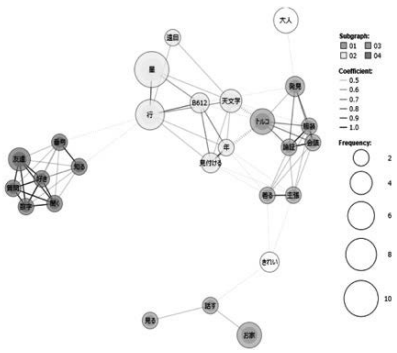

Fig 5.12. Participant #3

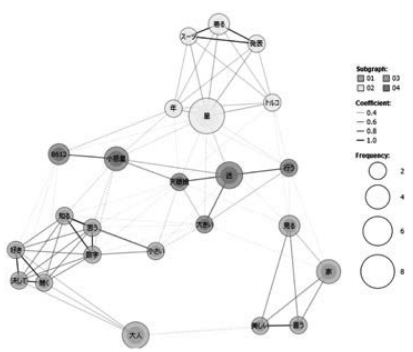

Fig 5.13. Participant #4

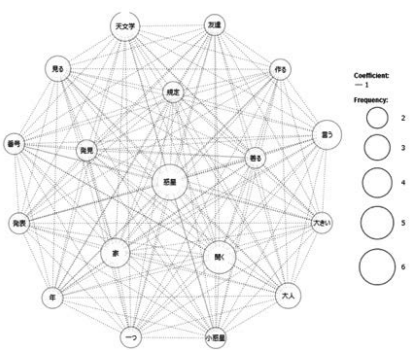

Fig 5.14. Participant #5

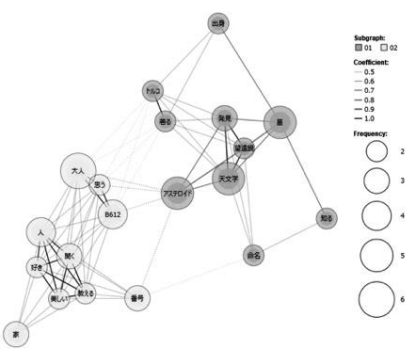

Fig 5.15. Participant #6

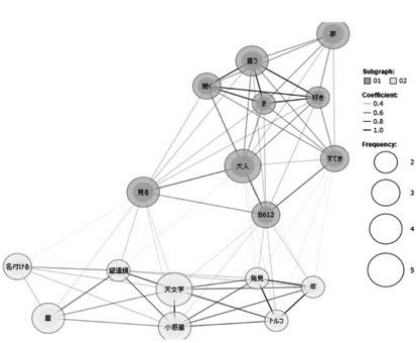

Fig 5.16. Participant #7

Appendix D

Co-occurrence networks created from TT: L2 ENs based on sub-graph

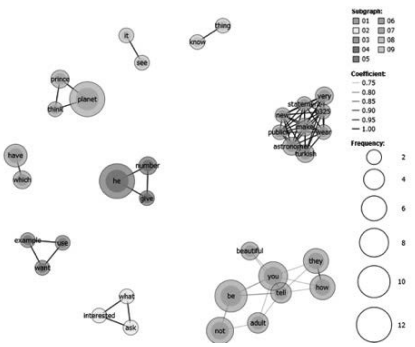

Fig 6.1. Participant #1

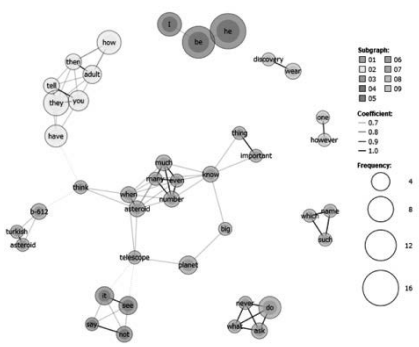

Fig 6.2. Participant #2

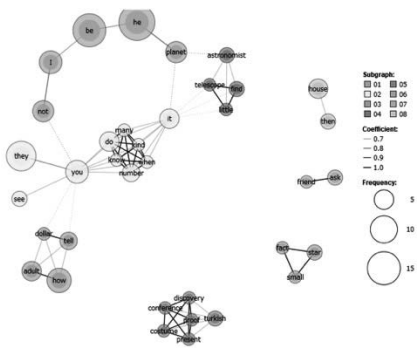

Fig 6.3. Participant #3

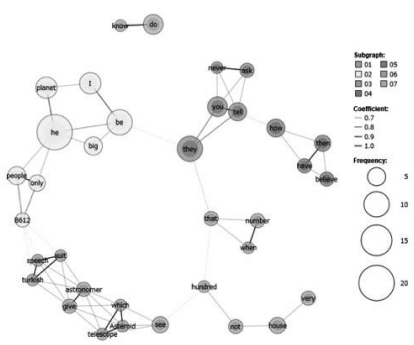

Fig 6.4. Participant #4

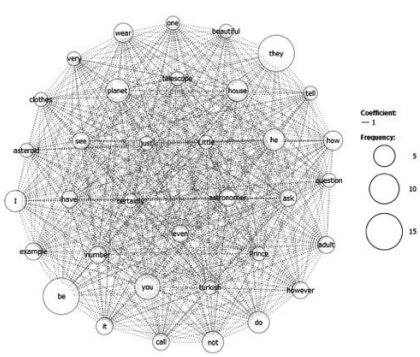

Fig 6.5. Participant #5

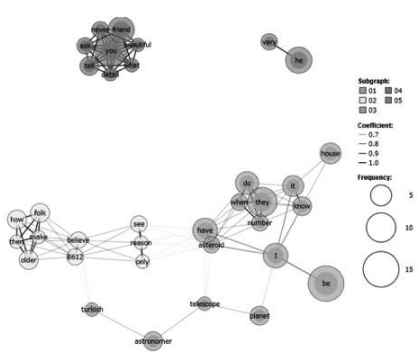

Fig 6.6. Participant #6

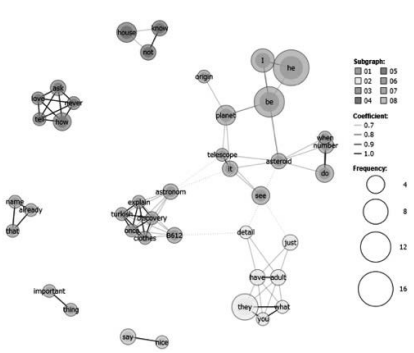

Fig 6.7. Participant #7