

The Effect of Collaboration on the Cohesion and Coherence of L2 Narrative Discourse between English NS and Korean L2 English Users.

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Abstract

This research looks at differences between how native speakers of English and Korean L2 English learners manage cohesive reference maintenance, as well as the effect of scaffolded interlocutor collaboration on the coherence and cohesion of extended L2 narrative discourse. Scaffolded and unscaffolded narratives were elicited from 10 Korean learners of English as an L2 and were compared against the narratives of 5 native speakers of English, to compare the grammatical means used to maintain coherent reference to discourse referents within and across clauses, as well as to see the effect that any scaffolding had on the L2 participant's ability to maintain coherence during performance. A link was found between the coherence of NS narrative discourse and accurate use of co-referential & distant anaphoric grammatical referential devices, and the presence of scaffolding was found to increase the accuracy of non-native speakers' use of these devices. The implication of these results is that scaffolding helps L2 learners to create and hold more accurate reference to discourse referents, and instances of unscaffolded narrative discourse present increased difficulty for the L2 speaker. Finally, as L2 learners have more difficulty managing accurate reference maintenance, the overall coherence of their discourse is reduced.

Key words: Coherence, Cohesion, Reference, Narratives, Discourse, Korean.

Introduction

According to Cribb (2003), ‘further research is needed into discourse coherence in non-native speech’ (2003, p.464). This research focuses on adult L2 English learners’ production of coherent and cohesive oral narratives. In particular, the effect of *collaboration* or *scaffolding* by native speaker interlocutors during the L2 learners’ production of the narratives will be a central variable of this research. It is hoped that by focusing on the difficulties faced by learners when producing extended non-scaffolded narrative discourse, a clear picture might be gained of the common L2 language learners’ experience of producing such complex linguistic events and the coherence and cohesion inherent within.

Review: Cohesion and Coherence in English

Cohesive devices and their role in coherence

Halliday & Hasan (1976) gave one of the first comprehensive overviews of cohesion, defining cohesion as something that occurs ‘where the interpretation of some element in the discourse is dependent on that of another’ (1976, p.4). Cohesion is then split by Halliday & Hasan into two categories, that of *grammatical* cohesion, and *lexical* cohesion, with grammatical cohesion including devices for *reference* (personals, demonstratives and comparatives), and lexical cohesion including devices for reiteration & substitution (after the *match* / after the *game*). Accurate use of these cohesive forms is one of the pre-requisites for coherent discourse, along with the need to maintain a clear sequence of temporality, aspect and causation. From this point onwards, this research will be concerned with referential cohesion and coherence – cohesive devices that refer to discourse entities.

Of interest to L2 discourse cohesion, the production of coherent and cohesive discourse is a feat considered difficult for second language learners, as shown in von Stutterheim (2003) who found that even advanced learners still have problems in applying cohesive forms in context. The primary reason for this difficulty is that while discourse pragmatic principles such as the marking of information in discourse are universal (principles such as the ‘given/new’ hypothesis, where discourse referents are introduced/maintained in discourse), ‘the *devices* available to mark the

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relevant distinctions *differ* across languages’ (Hickmann & Hendriks, 1999, pp.419-420). Tanskanen (2006) also notes that ‘cohesion may not work in absolutely identical ways in all languages, but the strategies of forming cohesive relations seem to display considerable similarity across languages (2006, p.38),’ using the examples of Enkvist (1975) in Swedish and Danes (1987) in Czech. Researchers of discourse cohesion and coherence therefore find it likely that typological differences between how different languages handle L1 cohesion may cause difficulty for instances of L2 cohesion.

Therefore, when considering the context of EFL, the coherence of any non-native discourse in English is likely to depend on the L2 users’ accurate management of English referential cohesive devices, the grammatical means of which will be the focus of this study.

What makes ‘coherent’ referential discourse?

Givon (1995) defines coherence as ‘the continuity or recurrence of some element(s) across a span (or spans) of text (1995, p.61).’ Given the possibility of variation in cohesive marking grammatically between different languages, an overall framework for comparing the differences in reference maintenance between any source language and English can be taken from Givon (1995, p.71) from his comparison of cohesive devices that signal *continuity/discontinuity* (or grounding) of referents in discourse. For cataphoric grounding in English (where new referents are identified as those that will be ‘important, topical and thus persistent in the subsequent discourse’) (Givon, 1995, p.65), indefinites are used. The indefinite articles (‘a/an’) and determiners such as ‘this’ are used in English to mark indefiniteness. For anaphoric grounding (where the referent is ‘retrieved’ from the mental discourse structure) (Givon, 1995, p.68), a definite expression would be used, such as a pronominal form, or a full NPs with the definite article ‘the’, as in English.

In English, the common pattern of grounding across co-referential clauses (where the antecedent of the cohesive device is found in the same or previous clause) would generally be of the form indefinite to pronoun for characters that have just been introduced into the discourse. For example:

‘A man entered. He went upstairs.’

Zero anaphora (the element of cohesion with the most activation) is typically only used between clauses with an additive conjunction in English or ‘lists’ of clauses where the referent has not changed and keeps the same semantic role:

‘A man entered and (∅) went upstairs.’

‘He turned, ∅ looked, ∅ screamed and ran’

Discontinuous or ‘distant’ reference (where the antecedent of the cohesive device is further ‘back’ than a single clause) might occur when a new referent is introduced into the discourse, and the initial referent must be ‘reactivated’ through a definite expression, marked by the definite article ‘the’ in this example:

‘A man entered. Another man entered. *The first man* said ‘hello’

Languages have a sliding scale of cohesive devices for discourse continuity (Gundel et al. 1993, Givon, 1995, Ariel, 2008) with ‘zero’ anaphora being the most ‘continuous’ method to refer to a referent, followed by pronouns (with unstressed pronouns considered more ‘continuous’ than stressed pronouns), then followed by nouns with definite articles, and finishing with full lexical nouns (including modifiers) respectively. Referential access of this kind can also work on a ‘frame based’ approach where our pragmatic world knowledge can come into play when reference is made, as with ‘part-whole’ or ‘possessor-possessed’ relations (ex: the house was a mess, **the roof** leaked – for this reference to be accessible, we should know that houses have roofs). These are known as ‘bridging descriptions’ (Clark, 1977) but are special cases of reference that generally go against the scales above and will not be discussed further in this paper.

The continuity of reference within and across clauses is highlighted as a way of measuring overall coherence, achieved through the accurate and appropriate management of co-referential and non-co-referential (distant) cohesive devices within a text. When accurately managed, chains of reference within the text will be properly maintained for the listener, who will be able to correctly follow the flow of information through use of the appropriate devices for retrieval of referential information.

Following Hickmann & Hendriks' (1999) methodology, a suitable method for the observation of cohesive reference maintenance and subsequent coherence is through the elicitation of narratives, a kind of discourse to which we will now turn our attention.

The Importance of Collaboration for Coherent and Cohesive Narratives

Narrative discourse is a complex verbal task that is perfect for the analysis of linguistic reference maintenance. Labov and Waletzky (1967) suggest that narratives contain a *referential* function that needs to be fixed in time according to *the principle of natural order*. Barthes (1977) also suggests that narratives contain a referential function, which is 'a seed that is sown in the narrative, planting an element that will come to fruition later – either on the same level or elsewhere on another level (1977, p.89).' Through observing L2 learners' narrative production, we can get a clear picture of how an L2 learner maintains this referential function over discourse. This approach is validated by Loschky and Bley-Vroman (1993) when looking at how languages approach cohesive article use, with their recommendation that "in creating tasks for developing knowledge of articles, the task designer ... should consider using narrative tasks for the definite/indefinite distinction" (p.133).

However, of importance to this research, Reismann (1993) claims Labov's (and others) model 'leaves out the relationship of teller and listener [...] a teller has a fundamental problem: how to convince a listener who was not there that something important happened (1993, p.20). Solving this problem may require something more than the linguistic skills of the speaker – fundamentally, a second party may well be involved in the production of the narrative. This *collaborative* aspect of narrative-making is of vital importance to the coherence of the finished product, and this aspect is the primary focus of this research.

As mentioned, researchers interested in cohesion and coherence view coherence as more than a linguistic 'text', in that a fully coherent text is a *collaborative* negotiation 'for the common ground of shared topicality, reference and thematic structure – thus toward a similar mental representation (Gernsbacher & Givon, 1995, p.vii).' This is also touched upon in Clark (1996) who mentions that language use 'is really a form of joint action (1996, p.3).' Tanskanen (2006) notes that: 'there are still notable gaps in our understanding of the effects on the use of

cohesion of the different contexts in which speaker, writers, listeners and readers operate and communicate (Tanskanen, 2006, p.2).’

For narratives, Clark & Wilkes Gibbs (1986) show that interactions between speaker and listener normally involve both participants and can take several turns to accomplish. Goodwin (1995), working under the framework of turn-taking proposed by Sacks, Schlegoff & Jefferson (1974), shows the common turn-taking pattern taken when a narrative is to be performed in Fig.1. (The blank lines intended to represent the telling of the extended narrative).

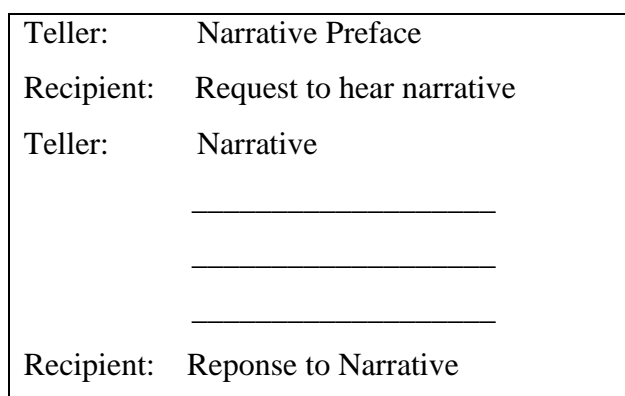


Fig.1. Narrative Turn-Taking Structure. From Goodwin (1995, p.126)

Taking this further, Goodwin is quick to note that ‘processes of interaction *within the turn at talk* have strong consequences for the flexible organisation and maintenance of coherence on a number of different levels.’ (1995, p.122). To Gibbs (1995), this comes back to the concept of grounding mentioned previously in terms of the collaborative process, in that ‘in conversation, the process of grounding a contribution divides conceptually into presentation and acceptance phases [...] in which the participants look for evidence that they have satisfactory mutual interpretation of the action. (1995, p.244).

Pellegrini and Galda (1990, pp.118-120), while observing experimenters who were asking children to perform narratives, devised a very extensive list of measures used by interlocutors to *scaffold* the narrative process. Examples of such measures include *asking for extensions, reinforcements, role clarifications, evaluations* and even *reprimands*, all made by the recipients during the child’s performance of the narratives. Linell (1998) calls this collaborative process ‘*dialogism*’ or ‘individuals in dialogue with partners and contexts’ (1998, p.8).

Tanskanen (2006) also proposes that ‘collaboration can be realised for example as feedback between participants in the form of completions, clarifying questions, or other types of acknowledging that the participants have understood what their fellow communicators were saying. (2006, p.24).

Thus, an experiment where the kind of interlocutor interactions suggested by Pellegrini & Galda (1990) are controlled for may shed light on the contribution such interactions make to the maintenance of cohesive devices and the subsequent coherence of a linguistic text as defined above. This leads the researcher to pose the following research questions:

Research Questions

From the literature reviewed above, this research will seek to answer the following questions related to the creation of coherence through cohesive devices, as well as the effect of collaboration on cohesion and coherence.

- 1) What kind of devices will the non-native speakers employ for cohesion and coherence during their performance of the narratives, compared to those of the native speakers?
- 2) What kind of variation can we find in the use of cohesion between scaffolded and unscaffolded instances of narration within and between users?
- 3) What is the relationship between the use of co-referential reference maintenance and distant non-co-referential reference maintenance between native and non-native speaker groups? How does this relationship affect the coherence of the text?

Hypotheses

In terms of grammatical referential cohesion, the native English speakers are likely to introduce characters into discourse using indefinite articles.

Ex:A man went into a house.

For definite co-referential reference, they are likely to use personal pronouns (such as he, she, they etc.) between adjacent clauses to describe the actions of the main protagonists in each

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narrative (as in the first example below), and for longer distance non-co-referential chains, are likely to re-introduce the referent through full NPs with definite articles (example 2 below, and following the findings of Hickmann & Hendriks, 1999).

Ex: 1) A man went into a house. *He* went upstairs, and then *he* ate dinner.

2) A man went into a house. A butler was there. *The* man ate dinner (not the butler).

In Korean, which lacks a grammatical article system, new mentions may take the numeral form *han* (in a use similar to the English numeral ‘one’ e.g. ‘one man’) as with the example below:

(New Mention)

Ex: **Han**-namja-ga chib-uro gatda.

One man house into went

Korean has personal pronouns marked for gender, but commonly for referents in co-referential contexts (where the topic of the reference has not been replaced by another, additional referent), *zero* anaphora are normally used. In terms of the preference for zero anaphora in Korean, this is related to the existence of the pro-drop/topic drop parameter for anaphora, and the positive setting of this parameter may have consequences on the coherence of referents in topic/subject/object position. Korean is known as a ‘pro-drop’ language, where reference to entities in certain discourse contexts are omissible when pragmatically inferable, as in Korean ‘it is stylistically more natural not to explicitly mention anaphors in subordinate clauses that are co-referential with nominal expressions in the main clause’ (Mitkov, Kim, Lee & Choi, 1994, p.23; see also Huang, 1984). Subject relationship within a sentence in Korean is determined by a suffix on the noun (Namja-**Ga**),

1) **(Co-referential zero anaphora)**

Ex: Namja-**ga** chib-uro gatda. \emptyset oui-chung-uro ola-ga jonyok-ul mookkotda
Man house into went. (zero) upstairs went (zero) dinner ate

Where Korean differs from English is that zero anaphora may be used *between* sentences to refer as with the example above, while in English, it may only be used within a sentence. (Crosthwaite, P. (2011). The Effect of Collaboration on the Cohesion and Coherence of L2 Narrative Discourse between English NS and Korean L2 English users. *Asian EFL Journal*. Vol.13, Issue 4.

sentence after a conjunctive while the same referent is in subject position or as part of a 'list' of clauses of the same type (he looked, ø turned, ø screamed and ran) . The discourse pragmatic distinction between the use of the subject marker vs. use of the topic marker are complex and lie outside the scope of this paper, yet it is enough to say at this stage that either subjects or topics may be omitted in Korean when pragmatically inferable. A discussion on this phenomenon can be found in Huang (2000), who claims that 'there are some grounds for believing that in a pragmatic language like Chinese, Japanese or Korean, when syntax and world knowledge clash, world knowledge frequently wins. By way of contrast, in a syntactic language like English, French and German, there is a conflict between syntax and world knowledge (2000, p.265).'

Distant definite co-referential expressions are sometimes maintained by the use of the demonstratives 'that' (*ku*) for the distant mentions given the lack of definite articles. This use can occur if the correct spatial relationship exists between the speaker and the referent, but this marking is optional rather than acting as an obligatory definiteness marker (as occurs in English).

(Distant mention)

Ex: **Han**-namja-ga chib-uro gatda **Han** Yeoja-ga kogi-ae issotda. **Ku**-namja jonyok-ul makkotda
One man house into went. One woman was there. That man ate dinner.

An additional complication for Korean L2 English learners may come from the complex honorific system for reference to person in Korean. A great deal of variety in the use of referring expressions in Korean is determined by the speaker's relationship to the discourse subject in question as well as the speaker's relationship to his audience. This is commonly evidenced in verb suffixes, with as many as 6 methods to express the English sentence 'John hit Bill' depending on whether the register is formal, polite, blunt, familiar, intimate or plain (Chang, 1982), but may also be realised on the noun phrase (as with the pronominal forms for 'I', '*na*' & '*cho*', with '*na*' being the common form, and '*cho*' the respectful form when in the company of someone of a higher social status). Such a complex referential system is not found in English, and in discourse with multiple referents of different ages or social positions, there may be confusion for Korean learners about how to label these referents in L2 English.

Given the clear differences between cohesive reference maintenance between English and Korean, one would expect that the Korean learners might struggle in terms of maintaining the
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main protagonists of each narrative in discourse in the same manner as that of native speakers, even though the discourse pragmatic principles the speaker utilises to do so are universal (Hickmann & Hendriks, 1999, pp.419-420).

At lower proficiencies, according to Givon (1995), the NNSs at early/beginner stages of English acquisition will take the form of a ‘slow, analytic pre-grammatical mode of discourse processing [that] is heavily vocabulary driven’ (Givon, 1995, p.78). For Givon, grammatical forms of coherence ‘evolved as a mechanism for speeding up the processing’ (Givon, 1995, p.78) of coherence, and what this would translate to in this study should be the use of vocabulary-driven reference in place of grammatical-driven reference in lower-level learners, who have not yet fully acquired the grammatical means to accurately maintain reference. This performance is not to be confused with *lexical* cohesion, as lower level learners would not likely have access to the amount of synonyms needed to perform the kind of substitution necessary for true lexical cohesion. What is more likely to occur is that inaccurate *bare* forms of referential phrase (where the grammatical marker is missing – ex: A man went into a house, man went upstairs) are likely to be found in the NNS data, and what is more, that the use of these bare forms will only lower the overall coherence of the narrative, as accurate reference maintenance will suffer from the lack of definiteness marking. At intermediate levels, over suppliance of articles and inappropriate pronominal mentions are expected, eventually falling in line with native speaker norms at higher levels following a ‘u’ shaped pattern of development.

In addition, due to the lack of linguistic means available to maintain a narrative in a second language, coupled with the added cognitive strain of doing so, it is expected that while NSs will be able to maintain both co-referential and distant reference to the main protagonists in each narrative accurately, the NNSs may jump from referent to referent depending on what they are able to comment on as they perform the narratives (a bottom-up approach). L2 coherence is divided by Anderson (1995) into *global* and *local* coherence within a text, where ‘there is [generally] local consistency but global inconsistency and where the text is produced in a bottom-up unplanned manner with flexible, shifting and negotiated perspectives’ (1995, p.2). By ‘bottom-up’, we mean that L2 learners (especially at lower proficiency levels), have difficulty drawing on contextual cues or world knowledge to aid them in the processing of text (a top-down approach), and instead can only focus on building text one-word-at-a-time, paying close attention to grammatical and phonological accuracy. This pattern was also characterised in Carroll & von Crosthwaite, P. (2011). The Effect of Collaboration on the Cohesion and Coherence of L2 Narrative Discourse between English NS and Korean L2 English users. *Asian EFL Journal*. Vol.13, Issue 4.

Stutterheim (2003), who found that L2 learners of lower proficiencies may ‘run into trouble since they do not construe sets of events as larger units that are linked’ (Carroll & von Stutterheim, 2003, p.394). As proficiency improves, Karmiloff-Smith (1981) found that English (and French) speakers use a top-down cognitive approach to personal reference for narratives, organised around a central character, *after* having initially started out with a bottom-up strategy for achieving this kind of reference. The L2 learner, constantly shifting the focus of reference on whatever they can that at the time, is less likely to structure reference to reflect both cohesive co-referential pronominal forms or ‘distant’, non-co-referential forms as often or as accurately as a native speaker, who is better able to use language effectively to hold referents in memory over both short co-referential and distant non-co-referential sequences of text.

Method

Participants

10 NNS participants were selected for this study from a private university in Pusan, South Korea in 2010. The participants were all freshman college students of 21 years of age who volunteered to participate without payment for the purposes of the research. They were all native Korean speakers learning English as a foreign language. The students were either English majors or were majoring in travel & tourism degrees that require a degree of English ability to complete, and had TOEIC scores of just above or below 250, having not taken any other standardized tests where their proficiency could be measured such as TOEFL or IELTS.

An additional 5 NS participants were selected to provide the NS data against which the NNS data would be compared, and 2 of them were from the U.K., 2 from the U.S.A., and one from New Zealand. They are all teachers of English at the university where this research was carried out, and all in their 30’s.

Stimuli

The stimuli for this experiment were two picture sequences taken from a popular comic series. The picture sequences were controlled for the length/topic of the narratives so that the results could be generalized among the spread of participants' responses. These particular pictures were chosen as they are meant to be read in sequence as a coherent narrative in their natural context. The sequences were edited to remove all character speech (except !, ? symbols) from the speech bubbles present in the pictures so that the narrators would avoid falling into 'reported speech' while telling the narratives, as it is possible that the narrator would shift strategies for reference depending on which perspective they took, as the finding of Carroll & von Stutterheim (2003) suggests that even advanced learners 'face a problem at the level of perspective taking [...] where the basis for the inappropriate use of certain linguistic forms lies (2003, p.393).' The participants were informed in the instructions for the task that they did not have to provide speech for the characters but were not explicitly told not to do so, allowing the participants the option to do so if they wished.

The narrative sequences were pre-tested for length on two native Korean speakers (who had IELTS 6.5 proficiency – 'competent' users). Each speaker took narrative 1 first, with one speaker allowed scaffolding, and the other allowed scaffolding only on the second narrative. Narrative 1 (unscaffolded) took 2:25 to complete on the pre-test, and Narrative 1 (scaffolded) took 2:52 to complete with two instances of scaffolding from a NS. Narrative 2 (unscaffolded) took 2:50 to complete, and narrative 2 (scaffolded) took 2:44 including three instances of scaffolding from a NS.

The picture sequences used were taken from the animated books *Tintin in America* (Herge, 1932) and *Tintin and the Seven Crystal Balls* (Herge, 1948). As the order of the vignettes was changed from the originals in the books, as well as due to the modification of the images, the publisher (Moulinsart, France), were not able to give permission to reproduce the images in this publication, and therefore written descriptions of the picture sequences will be provided in appendices 1 & 2.

Procedure

The participants were invited into the experiment room after regular class hours at a time arranged with the participants' co-operation. The participants were encouraged not to discuss with other classmates any information about the experiment in order to avoid revealing the

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nature of the picture sequences before elicitation. The picture sequences were stored on Powerpoint slides, and could change the slides to show the next/previous images in the sequence at any time during the experiment so that the students' ability to recall information would not be a factor in the experimental design. The full instructions to participants are shown in appendix 3. Participants were allowed some time to study the picture sequences before starting the narratives in order to reduce the cognitive load on the participant from retelling previously un-experienced events. They were given around three minutes to do this by the examiner but were not told in advance how much time they were to be given to avoid the pressure of time. They were also not told how long they should be narrating for, again to avoid any pressure from time constraints. The students did not have to make a comment on every picture in the sequence, although they were free to do so if they wished. The instructions to candidates were provided in English with accompanying Korean translation to ensure the participants' full understanding and co-operation. Identical conditions were imposed on the NSs' performance of the narratives.

In terms of the scaffolding used, a list of our interlocutor's permissible interactions is included in appendix 4, and is taken from Wilkes-Gibbs (1995) and Pellegrini and Galda (1990). In total, there were 143 instances of scaffolding for narrative 1 (avg. 28.6 per narrative) and 92 for narrative 2 (avg. 17.6 per narrative), which was not significantly different ($F=4.812$, $P=0.060$).

After the data had been collected, five other NSs (not previously used in the study) were selected to analyse the coherence of the NNS speakers' narratives on a 10-point Likert scale, with a score of 1 being described as 'totally incoherent' and a score of 10 described as 'totally coherent'. These scores were then collected and attempts were made to correlate the overall coherence rating of each narrative given in the Likert scale to the use of cohesive devices found in the narratives to see if any distinctions could be drawn about the use of these devices and the coherence of the narrative to a NS.

Analysis

Transcriptions and word counts were made of each narrative. Initially, there was concern that the NS narratives may have been substantially longer than those of the NNS narratives, but a

one-way ANOVA of the word lengths between the groups did not show a significant difference ($F= 1.548$, $P < 0.252$, mean = 202.6 words). For narrative 1, seven obligatory animate referents were selected (Tintin, Snowy the dog, the butler, the cat, Captain Haddock, a Mexican knife thrower and his Indian participant), and for narrative 2, six were selected (Tintin, Snowy the Dog, the taxi driver, the police, the man with the boomerang, and the doctors in the ambulance). Subsequent mentions of these referents within the narratives were noted and totalled. These mentions were coded as pronominals (zero, personal, relative), or nominals (bare, definite, demonstrative, possessive, indefinite) as with Hickmann & Hendriks (1999). Repetitions within the same clause by the NNS were not included in the total counts (as the NNSs tended to repeat themselves when a gap in fluency occurred) and direct repetitions made by the NNS as a result of the NS interlocutor mentioning that referent directly (as with the examples below) were also not included as these forms could have been considered as putting words directly into the participants' mouths. (I=Interlocutor, P= Participant):

Ex: I-*he* opens the door? P-*he* opens the door and Kevin rides the taxi [pause]

Ex: I-so who is he? What does he look like? *An Entertainer?* P-Yeah *an* entertainer, and he can throw?

Relative pronominals and demonstrative nominals were scarcely found in the data (only four instances between NS and NNS data each) and so were not included in the final analysis. This was surprising given the Korean tendency to use demonstratives to refer to given referents across adjoining sentences or longer distant anaphora as suggested in the hypothesis. I account for this trend post-poc by referring to Kang (2009) who claims that even at low levels, Korean learners were 'aware' of the typological differences regarding encoding of reference between their L1 and L2 English due to their classroom based learning experiences, and therefore made attempts to follow the referential strategy of the target language. A higher (yet still small) use of possessive nominals were found in the data, but ANOVA between the seven referents in narrative 1 showed their difference in use between NS and NNS data was not significant ($F=0.62$, $P < 0.242$). A similar pattern of use was found in narrative 2 for possessive nominals. The use of possessive nominals is quite different between within-same-clause co-reference (syntactic) and between adjacent clause co-reference (discourse-based), therefore these forms will not be discussed further in this paper. The remaining factors to be analysed in this research were those

of zero anaphora, personal pronominals, bare nominals, and nouns with definite and indefinite articles.

Each reference was additionally coded for anaphoric ‘distance’ with coding for ‘new’ referents (likely to have been made in error, linked semantically to a previously mentioned referent), as well as coding for co-referential expressions (where a referent in clause X was mentioned in clause X or X-1), and coding for non-co-referential expressions or ‘distant’ reference (where a referent in clause X was mentioned in clause X-2+). Examples of each kind of coding can be seen in table 1 below:

New Referent Code: Participant 2	Co-Referential Code: Participant 5	Distant Reference: Participant 7
<p>P-The man finds a cat (<i>initial mention</i>)</p> <p>I-OK, so the man goes to find the cat and [pause]</p> <p>P-Go house [...] a cat fight (<i>subsequent mention of previously introduced referent with indefinite article</i>)</p>	<p>P-One man (<i>initial mention</i>) has a pet and they (<i>co-referential</i>) go to a party, he (<i>co-referential</i>) said ‘where is the master’ to the waiter</p> <p>I-OK</p> <p>P-And his (<i>co-referential</i>) dog meet another dog</p>	<p>P- A man (<i>initial mention</i>) take a train? With his dog and arrived safe, he take a taxi?</p> <p>I-Taxi</p> <p>P-Taxi with his dog. And the driver has blind down</p> <p>I-He closes the blinds?</p> <p>P-yeah he closes the blinds. The man (<i>distant reference</i>) is very nervous and he arrived strange space.</p>

Table 1 : Examples of coding for references

ANOVAs were used to find the differences between the use of grammatical cohesive devices between NS and NNS data for narrative 1 and narrative 2, then additional ANOVA were performed to see whether the use of these devices was any different depending on whether scaffolding was provided for the NNSs for the first or second narrative. Repeated measures ANOVA was also used to measure any variation in anaphoric distance between NS and NNS (scaffolded or unscaffolded) data, so that the hypothesis regarding the co-referential/non-co-referential grounding of the main protagonists between the NS and NNS data could be tested.

Finally, the results of a 10-point Likert scale coherency judgement task performed by an additional five NSs (NSs who were not used in the experiments) on the NNS narratives were collated to see whether there was any correlation between the perceived coherence of the narrative by a NS and the use of cohesive devices for reference within that narrative, using a correlation matrix determined using SPSS.

Results

All data was collected in line with the methods of analysis mentioned above. With reference to the 3 research questions listed above:

- 1) What kind of devices will the non-native speakers employ for cohesion and coherence during their performance of the narratives compared to those of the native speakers?

With the exception of relative pronominals, demonstrative nominals and possessive nominals (due to their lack of use in the data as described above), the following is a table of the grammatical cohesive devices used to maintain reference to the animate referents chosen for each narrative. Table 2 shows the references used in narrative 1 and table 3 shows the references used in narrative 2.

	NS data (n=5)(total = 182 references)	NNS data (n=10)(total 233 references)
Zero	23 (12.64%)	5 (2.15%)
Personal	76 (41.76%)	71 (30.48%)
Bare	0 (0%)	58 (24.89%)
Definite	82 (45.05)	79 (33.90%)
Indefinite	1 (0.55%)	20 (8.58%)

Table 2 – Forms used to maintain reference in Narrative 1

	NS data (n=5)(total = 228 references)	NNS data (n=10)(total 336 references)
Zero	16 (7.01%)	11 (3.27%)
Personal	116 (50.87%)	143 (42.55%)
Bare	0 (0%)	69 (20.53%)
Definite	95 (41.66)	96 (28.57%)
Indefinite	0 (0%)	15 (4.46%)

Table 3 – Forms used to maintain reference in Narrative 2

For narrative 1, an ANOVA of the use of zero pronominal reference between NS and NNS groups for stories 1 and 2 showed significant differences (narrative 1 $F=26.297$, $P<0.001$,

narrative 2 $F= 9.512$, $P= 0.009$), suggesting that NSs made much more use of zero pronominal reference than the NNSs during their retelling of the narratives, which was surprising considering the hypothesis made regarding the use of zero anaphora in Korean as described above, given that the pro-drop parameter is set to + in Korean and – in English. This may be explained by the finding of Kang (2009) as given above, that the Koreans even at lower levels of proficiency were aware of the typological differences between their L1 and the target language, and so were careful not to use zero anaphora even in contexts where it is acceptable (within co-ordinate clauses, as found in English).

For the use of personal pronominal reference, a significant difference between NS and NNS groups was also found for Narrative 1 ($F=18.992$, $P<0.001$) but not for narrative 2 ($F=2.684$, $P=0.125$). For the use of definite reference, a significant difference was found for narrative 1 ($F=8.151$, $P<0.014$) but again not for narrative 2 ($F=3.645$, $P=0.79$). For the use of bare forms, the NSs did not use any bare forms at all, and when the use of bare forms by NNSs is taken into account, the difference is still statistically significant for both stories (Narrative 1 $F=8.208$, $P=0.013$, narrative 2 $F=4.744$, $P=0.048$). As bare forms are not found in English, their use in NNS data is harmful to the coherence of the overall narrative due to the missing definiteness marking requirement typically needed by NSs.

The NSs used indefinite forms to refer to a previously given referent only once, with the NNSs using this form (as with the bare forms) in error more often. However, for narrative 1, the use of these forms between NS and NNS was not deemed to be significantly different ($F=2.764$, $P=0.120$), with a similar result for narrative 2 ($F=3.421$, $P=0.087$). This is interesting as it suggests that despite the relatively low English abilities of the NNSs that participated in this experiment, the incorrect use of the indefinite article to reference previously given referents did not happen as often as was previously expected (again, see Kang 2009).

- 2) What kind of variation can we find in the use of grammatical anaphoric cohesion between scaffolded and unscaffolded instances of narration within and between users?

The difference between the word counts for scaffolded and unscaffolded forms was not seen to be significantly different ($F=0.320$, $P=0.578$). Table 4 below shows data on the use of grammatical cohesive devices between scaffolded and unscaffolded instances of narratives:

	Scaffolded NNS data (N=10) (Total 324 references)	Unscaffolded NNS data (N=10) (Total 243 references)
Zero	10 (3.08%)	6 (2.46%)
Personal	135 (41.66%)	79 (32.51%)
Bare	42 (12.96%)	55 (22.63%)
Definite	120 (37.03%)	85 (34.97%)
Indefinite	17 (5.24%)	18 (7.40%)

Table 4 – Forms used to maintain reference to the animate objects between scaffolded and unscaffolded stories within groups.

The difference between scaffolded and unscaffolded stories in terms of zero anaphora, was not calculated as significant ($F=1.455$, $P=0.262$). The use of personal pronominal forms was also not calculated as significant ($F=3.333$, $P=0.105$). The use of bare forms was also not calculated as significant ($F=2.664$, $P=0.141$). A similar pattern emerged for definite article forms ($F=3.634$, $P=0.093$), as well as for indefinite article forms ($F=0.008$, $P=0.932$). However, the raw frequencies show fewer bare nominals were used in the scaffolded narratives, and more definite article + noun constructions were also used in the scaffolded narratives.

Table 5 shows the data for the use of grammatical cohesive devices between those who took narrative 1 with scaffolding, against those who did not receive any scaffolding, while table 6 shows the data for the use of these devices between those who took narrative 2 with scaffolding against those who took narrative 2 unscaffolded.

	Scaffolded NNS narrative 1 (N=5) (Total 126 references)	Un scaffolded NNS narrative (N=5) (Total 107 references)
Zero	2 (1.58%)	3 (2.80%)
Personal	44 (34.92%)	27 (25.23%)
Bare	31 (24.60%)	27 (25.23%)
Definite	37 (29.36)	42 (39.25%)
Indefinite	12 (9.52%)	8 (7.47%)

Table 5 – Forms used to maintain reference to animate objects in narrative 1 between scaffolded and unscaffolded groups

	Scaffolded NNS data (N=5) (Total 198 references)	Un scaffolded NNS data (N=5) (Total 136 references)
Zero	8 (4.04%)	3 (2.20%)
Personal	91 (45.95%)	52 (38.25%)
Bare	11 (5.55%)	58 (42.64%)
Definite	83 (41.91)	13 (9.55%)
Indefinite	5 (2.52%)	10 (7.35%)

Table 6 – Forms used to maintain reference to animate objects in narrative 2 between scaffolded and unscaffolded groups

For narrative 1, the ANOVA between the zero nominal forms used showed that their use was not significantly different ($F=0.182$, $P=0.681$) between scaffolded or unscaffolded narratives. This was also the case for personal pronominals ($F=3.729$, $P=0.090$) and definites ($F=0.059$, $P=0.815$). For bare nominal forms, the difference of use between scaffolded and unscaffolded narratives was again seen as not significantly different ($F=0.073$, $P=0.794$) and this was also the case for indefinite forms ($F=0.264$, $P=0.621$).

For narrative 2, the ANOVA performed between the zero anaphora forms used again showed that their use was not significantly different between scaffolded and unscaffolded narratives ($F=3.125$, $P=0.115$), and this was also the case with personal pronominals ($F=1.855$, $P=0.210$) and indefinites ($F=0.769$, $P=0.406$).

However, significant differences were found in the narratives performed for narrative 2 between unscaffolded and scaffolded forms in participants' use of definite articles ($F=10.145$, $P=0.013$). In addition, there was also a significant difference found in participants' use of

inaccurate bare nominals between scaffolded and unscaffolded states ($F=8.258$, $P=0.021$). As explained above, bare forms are potentially the most damaging NNS contribution to the coherence of narratives for English NSs, so the impact of scaffolding (reducing the use of these forms by 37%) is particularly important for the maintenance of coherence here.

These findings would suggest that for narrative 2 at least, there is some relationship between the provision of scaffolding and the use of definites to create longer distance anaphora, and that the availability of scaffolding is useful in preventing inaccurate bare nominal forms being used to make reference. This hypothesis was supported by a repeated measures ANOVA using within group variables of definite and bare forms which was shown to be significant ($F=13.5$, $P=<0.001$). However, this result is perplexing in that differences were only found between scaffolded and unscaffolded narratives for narrative 2, but not narrative 1. Some possible explanations for this phenomenon are found in the discussion section of this paper.

3) What is the relationship between the use of co-referential reference maintenance and distant non-co-referential reference maintenance between native and non-native speaker groups? How does this relationship affect the coherence of the text?

During the coding of the transcriptions for referential form, additional coding was performed to ascertain the referential *distance* of each form used, as explained in the analysis section of this research. Coding was performed on each referential form used in the study, but the main focus of this research is on the use of personal pronominal co-referential anaphora, and the use of non-co-referential definite articles to signal longer distance anaphoric relationships typical of English NSs, within the narratives recorded. Table 7 below show the results for these forms provided *correctly* for the obligatory referents within each narrative.

	NS Narrative 1	NS Narrative 2	NS stories combined	NNS scaffolded (narrative 1)	NNS scaffolded (narrative 2)	NNS scaffolded combined	NNS unscaffolded (narrative 1)	NNS unscaffolded (narrative 2)	NNS unscaffolded combined
Use of co-referential personal pronoun	67	102	168	27	69	96	26	36	62
Use of non-co-referential definite article	46	59	105	20	50	70	16	4	20

Table 7 – participants' use of co-referential personal pronoun and non-co-referential (distant) definite markers for anaphoric reference.

There was no significant difference between the number of co-referential pronouns used between the NS's performance of stories 1 or 2 ($F=2.141$, $P=0.182$). However, when comparing individual narrative cohesion in the form of co-referential pronouns between NS and NNS, the difference between the NS and NNS was highly significant for narrative 1 ($F=14.862$, $P=0.002$). A similar pattern is found for narrative 2 ($F=4.870$, $P=0.046$) although it should be noted that the P value here suggests that this effect is much greater for the narratives produced for narrative 1 than for narrative 2. For the use of longer distant non-co-referential definite articles for cohesion, the NS use of this form was significantly higher than NNS use ($F=28.791$, $P=<0.001$) in narrative 1 as well as narrative 2 ($F=5.816$, $P=0.031$). This data suggests that these aspects of cohesion appear to be the main difference between how NS and NNS provide overall coherence within the narratives that were elicited for narrative 1 and narrative 2.

As for the effect of scaffolding on co-referential pronominal forms for narrative 1, there was not a significant difference between scaffolded vs. unscaffolded performance, nor was there for definite article forms. The same was true for narrative 2 for co-referential forms. However, for narrative 2, there was a highly significant difference between the correct use of definite non-co-referential cohesive devices between scaffolded and unscaffolded states ($F=27.842$, $P=<0.001$).

Clearly for this aspect of cohesion, the influence of scaffolding helps the participants to create longer chains of accurate cohesive structure over longer distances of maintained narrative for this particular narrative. Interlocutor interactions such as 'who' questions to establish reference certainly helped this total (ex: I-who breaks the bottles? P-the dog [pause] or ex: I-whose cycle? Is that his motorcycle? P-it's the policeman's motorcycle), but there were only a few (7) instances where this occurred, and when these were factored out of the analysis, there was still a significant statistical difference between their use in scaffolded and unscaffolded narratives ($F=27.528$, $P=<0.001$).

Discussion

From the results, clear differences between NS and NNS reference maintenance were found, in that NSs maintain discourse reference primarily with the accurate use of personal pronominals and definite articles between co-referential clauses, and non-co-referential clauses (over X+2 in anaphoric distance). This appears to be the main difference between NSs' performance of coherent and cohesive narratives and those of the NNSs, who were not able to supply native-like use of these forms in the right contexts. There is a strong possibility that this difference in performance is not caused by differences in the pragmatic ability to mark new and given information between and across clauses (which is said to be universal), but by *mismatches in the cohesive means to do so*.

The other implication of these results is that scaffolding helps L2 learners to create and hold *more accurate* reference to discourse referents, and that instances of unscaffolded narrative discourse present unnatural difficulty for the L2 speaker. This appears to be characterized by an inversely proportional relationship between the accurate use of the definite article to maintain long distant anaphoric reference between animate referents (typical of NSs), and the incorrect, inaccurate use of bare nominal forms (typical of NNSs) to maintain reference, as found in narrative 2. This suggests that for participants with a lower L2 proficiency, a reliance on a limited lexical vocabulary to maintain reference is employed in the face of a lack of consistent grammatical means to do so.

Despite the significant difference found between scaffolded and unscaffolded performances of the narratives in terms of definite non-coreferential (distant) cohesion in narrative 2, the results were disappointing in that the difference in the use of other cohesive devices between these two groups for both narrative 1 and 2 was not statistically significant. I attribute the differences here post-hoc to the distinction between *main* and *supporting* characters and the distribution of referential devices to maintain reference to them in discourse. Karmiloff-Smith (1985) showed an effect of referent type (main vs. supporting characters) with pronominal forms being used to introduce main characters and indefinites being used to introduce supporting characters, and any distinction between how referents are introduced in discourse may be also be evidenced in how those referents are maintained. In my opinion, while the number of referents in both stories was similar, it could be argued that the main/supporting status of some of the referents in narrative 1 is unclear – potentially Tintin, the dog, or the Mexican knife thrower may be considered as main characters, or Tintin may be seen as a secondary character, leaving the

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dog and the knife thrower as main characters. In narrative 2 however, Tintin and the dog are clearly main characters whose exploits continue throughout the events of the narrative, which I believe goes some way to explaining the differences in results between narratives 1 and 2.

In addition, the nature of the events that take place in a narrative is also a factor that may influence the coherence of any performance, as evidenced in Pu (1995), who in her research on Mandarin narratives claimed that ‘episodic organization of narrative production has psychological content: The story was hierarchically organized and remembered as a series of episodes. Subjects were highly sensitive to episode boundaries, regardless of how the picture sequence was segmented (Pu, 1995, p.298).’ In my opinion, narrative 2 seems to follow a more linear sequence of events that allows for greater use of extended co-reference, while narrative 1 seems to be divided into two quite distinct sections (the section with Snowy in the house, followed by the scene with the knife thrower). This factor may go some way to explain the lack of a significant result in narrative 1 for extended co-referential forms, in that the ‘scene’ changes meant that characters were not kept in a topical position that would allow for extended co-reference. Sensitivity to such boundaries in narratives was evidenced in Lee (1981), who attributed better recall results for narrative sequences where co-referential clauses were *contrastive* rather than *additive* (as described in Halliday & Hasan (1976) in terms of cohesive *conjunction*), which suggests that language users were performing higher-order processing on unexpected co-referential clauses rather than predictable ones.

Of interest to this research was data that suggested that there was a significant difference between the use of accurate longer-distance non-co-referential definite reference between scaffolded and unscaffolded instances of narrative performance *in favour of scaffolded narratives*, and that there was also a significant difference in the number of inaccurate bare nominal forms *used in unscaffolded narratives*. From this data we can conclude that the unscaffolded narratives made it harder for the participants to maintain accurate reference throughout the narratives, which made their narratives *less coherent*.

To test for this perceived lack of coherence, a correlation matrix was performed using SPSS to look at the interaction between the use of accurate co-referential personal pronominals, non-co-referential distant definite forms and the Likert scale scores of 5 NS participants who

analyzed the 20 NNS narratives and rated them for coherence. The results are shown in table 8 below:

		co-ref	definite	Likert
co-ref	Pearson Correlation	1	.677**	.505*
	Sig. (2-tailed)		.001	.023
	N	20	20	20
definite	Pearson Correlation	.677**	1	.583**
	Sig. (2-tailed)	.001		.007
	N	20	20	20
Likert	Pearson Correlation	.505*	.583**	1
	Sig. (2-tailed)	.023	.007	
	N	20	20	20

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 8: Results of correlation matrix between cohesive devices and coherency judgment.

As can be seen from the table, the accurate use of both co-referential and definite forms in the narratives correlate with the Likert-scale scores given for coherence by the NSs surveyed. This data strongly suggests that narratives with accurate co-referential and longer distance reference maintenance were rated as more coherent during the coherency judgment task. This correlation can be seen visually in the chart below:

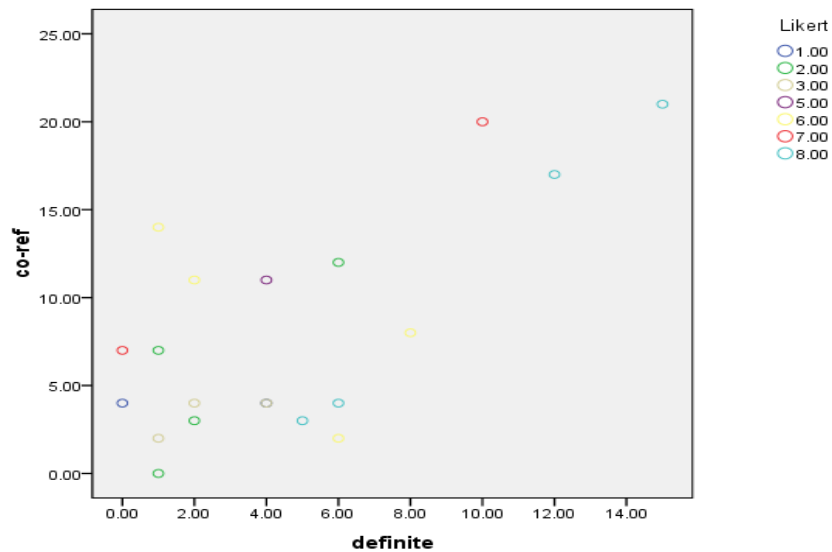


Figure 2 – Correlation Matrix for NNS use of accurate co-referential pronominal and distant definite reference against Likert scores

Limitations of the Study and Opportunities for Further Research

Due to time/availability constraints, I was unable to have more than five participants per group, and I am confident that with an expansion of the number of participants, it is likely that significant differences would eventually be found between scaffolded and unscaffolded narratives in this regard.

I am also aware that the lack of a significant difference in this area may have been due to the low overall English proficiency of the participants (average 250 on TOEIC), in that there may have been situations where scaffolding may have helped participants of higher proficiency achieve coherence, even if it did not have the desired effect in participants with lower proficiency. These are issues that I hope will be reviewed in further studies on this topic. In addition, the status of main/supporting characters in discourse will necessarily be controlled for in future research, as well as the linearity of the events in the narratives to ensure that one sequence of events is not substantially more disjointed than the other.

A final issue for this research was raised in Reismann (1993), who states:

It is always possible to narrate the same events in radically different ways, depending on the values and the interests of the narrator. There is no reason to assume that an individual's narrative will or should be entirely consistent from one setting to the next (Reismann, 1993, p.65).

I strongly agree that consistency within narratives would be something that is very hard to achieve, particularly if we consider the distinction between scaffolded and unscaffolded versions of the narratives used for this research. In addition, while the values and interests of the narrator certainly play a role in how the narrative is constructed and the path it takes, I feel that this effect goes both ways. I feel that while the role of the *scaffolder* is primarily to help bring about the successful negotiation of meaning necessary for the narrative to be coherent, the *aims* of the scaffolder (realized in the *form* of the scaffolding they choose to may employ during the speakers' performance) may play a large role in determining the course the speaker eventually takes. It would be potentially interesting to research the effect different interlocutors have on

the performance of a single narrative speaker, as well as the effect of having two or more interlocutors interacting when scaffolding a narrative.

Conclusion

In terms of the hypotheses laid out in this research, differences between how NS and NNS maintain cohesive reference maintenance in English have been found, and the more accurately the NNS maintains co-referential and distant reference through the use of these cohesive devices, the more *coherent* the final discourse is likely to be. This theory was supported by a coherency judgment task performed by NSs on the transcripts of the NNSs' narratives, which showed a strong correlation between NS interpretations of coherent discourse and the successful maintenance of accurate co-referential and non-co-referential reference. The accuracy of these kinds of reference can be supported by the presence of scaffolded collaborative input on the part of an interlocutor, which suggests that unscaffolded discourse is more challenging for the NNS when maintaining reference. However, the results gained from this study do not go far enough, and further study is required (with more participants) to investigate to what extent the influence of scaffolding has on accurate reference maintenance. Other potential sources of interest for further research include a possible variation in stimuli (picture sequences vs. open questions), the number of and intentions of the interlocutors during narrative performance, and the perspective that the speaker takes during the narrative production. Other source languages with differing grammatical cohesive devices should also be investigated, as well as learners of different L2 proficiencies, and these variables will be tackled by this researcher at a later date.

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Appendix 1- Description of Narrative 1 – Adapted from ‘Tintin and the Seven Crystal Balls’
(Herge, 1948).

Tintin approaches a mansion. He meets a butler at the door. Snowy the dog sees a cat and begins to chase it. Snowy slips on the floor as the butler is carrying some drinks on a tray, and the butler trips on the dog, falls, landing on one hand. Snowy jumps over the tray the butler is holding with his other hand, knocking the bottles off the tray. Snowy chases the cat upstairs, but is injured by the cat and comes back downstairs again. Tintin and Captain Haddock scold Snowy.

Tintin & the Captain head into a theatre, where a Mexican knife thrower and an Indian assistant are on stage. The Mexican throws a knife at the Indian, and the knife lands next to the Indian’s ear. More knives are thrown by the Mexican, all landing around the Indian. The Mexican gets a member of the audience to blindfold him. He throws a knife at the Indian, who is holding a melon that has been cut in half. The knife sinks into the melon. The Mexican turns to the crowd and bows. Tintin and the Captain applaud.

Appendix 2 – Description of Narrative 2 – Adapted from ‘Tintin in America’ (Herge, 1932).

Tintin and Snowy are on board a train. As they exit the train, a taxi and its driver are waiting for them. The taxi driver holds open the door for Tintin and Snowy. They get into the taxi, but as the taxi drives away, shutters come down over the windows, preventing any escape. As the car heads along the road, its tire bursts, and the taxi driver has to change the wheel. The taxi driver drives away, but Tintin and Snowy have escaped the taxi by cutting a hole in the floor of the taxi with a saw. As they walk along the road, they stop two police officers who are approaching on a

motorbike and sidecar. They all drive after the taxi together, and when they catch it, one of the officers pulls out a gun and points it the taxi driver. As the police arrest the driver, a gangster appears from behind a tree, and throws a boomerang, knocking out the taxi driver. He catches the boomerang, and speeds off on the police officers' bike. Tintin and Snowy and the police get into the taxi, and chase the gangster into a city. Tintin drives the taxi into another car, causing an accident. An ambulance arrives, and two doctors take Tintin into an ambulance, which drives away.

Appendix 3 Instructions to Participants

You will see a picture sequence and I would like you to tell me the narrative of what happened.

그림들을 보시고 무슨 일이 일어났는지 이야기를 해 주세요.

You will have some time to look at the whole narrative before you begin, and you can look at the pictures while you give the narrative, so don't worry about trying to remember what you saw in the pictures. Use the ← and → buttons on the keyboard to show the pictures.

시작하기 전에 전체 그림 볼 시간을 조금 드릴 테니, 그림들을 보시고 이야기를 해 주세요. 즉, 봤던 그림들을 기억 안 하셔도 됩니다.

키보드 ← 와 → 를 사용하여 그림을 보십시오.

There are blank speech bubbles in the pictures you see, but you do not have to make speech for the characters.

그림에 빈 대화창이 있으나 거기에 들어갈 대화를 끼워 맞추도록 안 하셔도 됩니다.

You may begin telling the narrative whenever you are ready.

자 그림 준비되시면 이야기 말할 준비를 해주세요.

Don't worry about mentioning every picture in the sequence if you cannot do so.

각각의 사진을 모두 설명 안 하셔도 됩니다.

After you have completed the narrative, you will see another, similar picture sequence. We will do the second narrative in the same way as the first.

이야기가 끝나고 또 다른 이야기 그림을 보시게 됩니다. 두 번째 그림 역시 첫 번째 스토리처럼 이야기 해주시면 됩니다.

In one of the stories, I might talk to you as you read the narrative. For the other narrative, I will be quiet and let you speak by yourself.

이 중 하나의 스토리는 이야기를 이어가는 도중에 선생님이 옆에서 도와줄 것 입니다. 하지만 나머지 이야기는 전체 스토리를 혼자서 말씀해 주셔야 합니다.

If you feel you cannot continue the experiment for any reason, please let me know and we can pause and begin again at another time.

만약 이야기를 하는 도중에 잠시 중단하고 싶으시면 선생님께 말씀하여 중지를 하시고 다시 시작하실 수 있습니다.

The experiment is being recorded on tape, and will only be used for the purposes of this experiment.

이 실험은 전부 녹음되며 녹음된 자료는 이 특정 리서치에만 이용됩니다.

Your names/identities will not be used in the publishing of this research.

당신의 이름이나 아이디는 절대 공개되지 않습니다.

Appendix 4 – Permissible Scaffolding for Interlocutor (Parts taken from Wilkes-Gibbs (1995), & Pellegrini and Galda (1990))

Lexical Completion	It's a... – It's a dog?
Phrasal Completion	He is.... – going into the house?
Sentence Completion	He is... - he is running away?
Extra move in Completion	It's a... - it's a dog – dog – right.
Continuation	He went up – and the dog went down.
Repetition	It's a dog – a dog?
Ask for extension	Could you tell me more about that
Clarification question	What do you mean by that?
Descriptive Question	What does it look like?
Evaluation	That's weird isn't it?
Filler	Hmmmmmmmm
Label	That's a _____
Label Question	What's that called?
Reinforcement	It's a dog. – Good
Relate to experience	Have you seen that before?
Role Clarification Question	Who is that? Who is the Robber?
Additive slot	The robbers ran AND
Causal Slot	The robbers ran BECAUSE
Event Slot	What happens now?

Temporal Slot	The bridge fell and THEN
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