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CONTENTS

The papers in this volume primarily grew out of the Second East Asian Linguistics Workshop held at UC Santa Barbara, May 1, 1993. This workshop was an occasion where East Asianists in Southern California gathered to exchange new ideas coming out of analyses heavily based on data. We hope the publication of these papers will serve to inform the rest of the linguistic community of the excitement which we feel in taking this approach as well as to stimulate further discussion among those interested in the issues covered in these papers.

We would like to thank the friends of both the Department of Linguistics, UCSB and the Department of East Asian Languages and Cultures, UCLA, and in particular Noriko Akatsuka, Pat Clancy, Ken Field, Margaret Field, Angela Garbutt, Pat Mayes, Toshi Nakayama, Sung-Ock Sohn, Marilyn Snowball, Jill Snyder, Ryoko Suzuki, Sandra Thompson, and Eri Yoshida for making the workshop as well as the publication of this volume possible.

May 1994
The editors

Grammaticization of the Saying Verb wa in Cantonese*

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Abstract

The concept SAY has generally been accepted as one of the most basic human activities in communication, thus being a common source notion for grammaticization across languages. Grammaticization is a kind of semantic change, giving rise to grammatical morphemes with either grammatical or pragmatic functions from lexical items in the course of time. In this study, we attempt to study the grammaticization of the saying verb wa in Cantonese, discussing how its various lexical, grammatical and discourse functions have come into being, as well as the directionality of various changes. The evolution of discourse function will be emphasized, not only because it is an unusual line of development for the saying verb, but it also involves the shift of position.

Starting as a saying verb, wa includes three kinds of development: (1) SEMANTIC CHANGE, giving rise to the cognitive meaning from the utterance meaning, (2) GRAMMATICAL CHANGE, evolving the complementizer function from the lexical verb, (3) PRAGMATIC CHANGE, developing the discourse function from the saying verb. While the first kind of change is cross-linguistically a common line of development and the second type is also evidenced in many languages, the third one is quite an unusual direction of change. As a matter of fact, together with the tonal change, the diachronic development of wa has been involved with the various aspects of grammar.

The discourse function of wa is morpho-syntactically realized as an utterance-final particle, which exclusively appears in WH-questions exclusively. Therefore, this functional change is further accompanied by the shift of position from utterance-medial to utterance-final. To account for the positional shift, it is speculated that the attribution of quotation, i.e. the agent plus the saying verb like 'you said' or 'she said', once appeared frequently in the postverbal position. When the agent is understood in context, it can thus be omitted and the saying verb itself starts to undergo grammaticization, becoming a particle in the end. This is highly plausible, because Cantonese speakers quite frequently alter the ordering of constituents. On the other hand, the particle wa can still be interpreted as the attribution in some situation. Yet, it is not the shortened form of the attribution, because it can co-occur with the particle wa within the same question, and it is ungrammatical to restore a postverbal attribution in that position. The discourse function of wa is to suggest REPETITION OF INFORMATION.

1. Introduction

The concept SAY has generally been accepted as one of the most basic human activities in communication, thus being a common source concept for grammaticization across languages (Saxena 1987, 1988). Grammaticization is a kind of semantic development which gives rise to the grammatical or pragmatic function from the lexical item in the course of time. The different saying verbs in Chinese languages also undergo grammaticization, yet to various degrees. The focal concern in study section is Cantonese.

The saying verb wa in Cantonese is polysemic, consisting of the cognitive meaning, the grammatical and the discourse functions. Morpho-syntactically, they are realized as lexical verb, complementizer, and particle respectively. We will discuss how these various lines of development have come into being, with special reference to the general tendencies of semantic change proposed by Traugott (1989, 1990). The evolvement of the discourse function will be emphasized, not only because it is cross-linguistically unusual, but it also involves the shift of position from utterance-medial to utterance-final.

In the following, the various synchronic meanings of the saying verb wa will first be examined in §3. Then the different kinds of change, as well as the directionality of various changes will be discussed in §4.

2. Corpus of data

Spontaneous conversations are important to explore the meanings of wa in present-day Cantonese, because they supply naturally occurring contexts with the speaker's actual linguistic behavior to identify the pragmatic function of this saying verb. The sources of data include: (1) TV programs about daily life (Chui 1988), (2) ten telephone conversations recorded from the public radio programs (Wong 1990).[1]

3. Polysemy of wa

This section will characterize the lexical, grammatical and discourse meanings of wa. Those idiomatic expressions consisting of wa, such as wa-si-wa 'by the way', wa-ji-nei 'whatever you say/do', ji-gam-wa 'nevertheless' and the rhetorical tag ha-wa are excluded from the discussion here.

3.1. Lexical meanings

3.1.1. Utterance verb

As an utterance verb in its original meaning, wa can take a direct object as illustrated by (1)[2] or a complement. Complements function as either a direct quotation as in (2) or an indirect quotation in (3).

(1) A: jeuibai yau di yan geidak lai m geidak
the worst there.be some people remember come NEG remember

bei chin le
give money PRT
'The worst is there are some people (who) remember to come, but (who) forget to pay.'

--> B: ha ngo ji nei **wa** bin go la
PRT 1.SG know 2.SG say who CL PRT
'I know who you (are) speaking of.' (TV)

(2) --> keui **wa** chao dou keui hok hang la ngo bei fan nei chao la
3.SG say care till 3.SG learn walk PRT 1.SG give again 2.SG care PRT
'He said,'(I'll) take care of him till (he) learns to walk. (Then) I('ll) give him back to you to take care." (RADIO)

(3) --> danhai nei **wa** nei go yut nei sinsang sin mou bei
but 2.SG say this CL month 2.SG husband just NEG give

gayung nei je
family expense 2.SG PRT
'But you said (it was) just this month (that) your husband didn't give you family expense'. (RADIO)

3.1.2. Cognitive verb

For a saying verb to evolve a cognitive meaning is a common direction of development, and having been well-studied cross-linguistically (Saxena 1987, 1988). This is further borne out in Cantonese. In (4), wa means 'to think'.

(4) --> ngo **wa** dou m ji hai m hai keui tao ga je
1.SG think all NEG know COP NEG COP 3.SG steal PRT PRT
'I think I don't know whether he stole (it) or not.' (TV)

3.2. Grammatical function--'complementizer'

The grammatical function that wa has developed into is a complementizer, which is the only one in present-day Cantonese. In spite of the fact that this line of development is also common across languages (Saxena 1987, 1988), the grammatical function of wa has not yet been generalized to all complement-taking verbs. Its distribution is highly restricted to certain utterance verbs such as gong 'to say' in (5), or mental verbs like dasyun 'to plan' in (6) and seung 'to want' in (7).

(5) --> keui jigei **gong wa** jeui jo ngo gaje bat nin
3.SG self say COMP pursue PRF 1.SG elder sister eight year
'He (him)self said that (he) has pursued my elder sister for eight years.' (RADIO)

(6) --> gam ne keui ne yao yao yao **dasyun wa** seung m gau la
so PRT 3.SG PRT PRF PRF PRF plan COMP want NEG teach PRT
'So, she has planned not to teach (any more).' (RADIO)

(7) --> yao m **seung wa** yingheung go jeungfu ge chintou
also NEG want COMP affect CL husband ASSC future
'(She) also does not want to affect (her) husband's future.' (RADIO)

3.3. Discourse Function

3.3.1. Particles in Cantonese

Matisoff (1991:387) claims that 'sentence-final emotive particles are particularly richly developed in tone languages, as mere intonation is less salient when every syllable has a distinctive 'melody' of its own'. This is supported by Cantonese (cf. Cheung 1972; Gao 1984; Kwok 1984; Luke 1988; Chui 1988), as well as other Chinese languages (Li and Thompson 1981, Shie 1991 for Mandarin; Chen 1989 for Taiwanese). For instance, the Cantonese lo in (8) indicates high certainty in assertion on the part of speaker B, but gwa in (9) suggests the opposite attitude of uncertainty.

(8) A: bunyesamgang nei heui bindou a
in the middle of the night 2.SG go where PRT
'Where (are) you going in the middle of the night?'

--> B: heui daipaidong mai siuye **lo**
go snack booth buy bed-time snack PRT
'Of course, to the snack booth to buy a bed-time snack.' (TV)

(9) ngo kyutding bei do leui go hak nei fujak ngo nam
1.SG decide give more two CL customer 2.SG responsible 1.SG think

--> nei m hui ling ngo satmong **gwa**
2.SG NEG will make 1.SG disappointed PRT
'I('ve) decided to give you two more customers. I think you will not disappoint me.' (TV)

3.3.2. Discourse function of wa--'repetition of information'

Unlike most of the Cantonese particles which mainly function to convey speaker's attitudes or states of mind at the moment of speaking, the discourse function of wa in the form of a particle in the utterance-final position is related to the flow of information between the speaker and the addressee--REPETITION OF INFORMATION. W a appearing exclusively in WH-questions indicates that the information the speaker asks for is what he/she has missed, and the addressee is thus requested to repeat what has been mentioned in the prior context.

Consider example (10). Speaker G has made a statement, but speaker V, for whatever reason, failed to receive the message. That is why speaker V raised the question for the missing information. The particle wa lets speaker G realize the question is directly referenced to his own previous utterance. Speaker G, under the assumptions of the Cooperative Principles (Grice 1975), is supposed to provide the missing information about car parking.[3]

(10) G: ga che ngo mingming pak jo haidou gama
CL car 1.SG obviously park PRF here PRT
'I have obviously parked my car here'

--> V: nei gong me **wa**
2.SG say what PRT
'What (did) you say?' (TV)

Since V might have missed any part of G's message, he can request G to repeat just a particular portion of the message with wa, like the missing information about the car itself as in (11) or about the parking situation in (12).

(11) G: ga che ngo mingming pak jo haidou gama
CL car 1.SG obviously park PRF here PRT
'I have obviously parked my car here'

--> V: matye mingming pak jo haidou **wa**
what obviously park PRF here PRT
'What has obviously been parked here, as you said?'

(12) G: ga che ngo mingming pak jo haidou gama
CL car 1.SG obviously park PRF here PRT
'I have obviously parked my car here'

--> V: ga che me **wa**
CL car what PRT
'What (happened) to the car, as you said?'

Furthermore, wa may not be constrained by the flow of information in the immediate context. In (13) K's and V's utterances were produced on different days, according to the script of the TV program, and numerous topic shifts had already taken place as a result of the fifty-nine turn takings in between. Nevertheless, speaker V could still require K to repeat the information he/she had mentioned on the previous day.

(13) K: yiga jikhai giu nei lo <L2 BBQ L2> yatbak man jek
now that is ask 2.SG pay BBQ one hundred dollar PRT
'That is, (we're) now asking you to pay one hundred dollars for the BBQ.'

((59 turn takings))

--> V: <L2 Winnie l2> a go <L2 BBQ L2> geido chin **wa**
Winnie PRT that BBQ how much money PRT
'Winnie, how much (should I pay for) that BBQ, as you said?' (TV)

4. Grammaticization of wa

Grammaticization is traditionally considered as a dynamic, unidirectional historical process whereby a lexical item becomes a grammatical morpheme and takes on a grammatical or pragmatic function. However, some recent studies like Hopper's (1979, 1982) and Herring's (1991) propose a pragmatic-based grammaticization instead. In other words, the pragmatic/interactive function is the source concept giving rise to other meanings, but not vice versa. Whether grammaticization is unidirectional or bi-directional, or whether pragmatics is the starting point or the endpoint of semantic change falls outside the domain of this study. Nevertheless, the development of wa seems to follow the traditional definition, because the verbal origin of the concept SAY, which refers to the basic human activity, should not be controversial.

Furthermore, due to the lack of historical spoken records that are particularly important to trace the development of pragmatic functions, language-internal argumentation cannot be established to reconstruct the stages of developing wa. I thus rely on cross-linguistic generalizations to discuss its various lines of development.

4.1. Traugott's general tendencies in semantic change

Traugott (1989, 1990) proposes three general tendencies of semantic change, which concern how the grammatical and pragmatic functions are evolved in the process of grammaticization. They are stated as follows (1989:34-35):

Tendency I: Meanings based in the external described situation > meanings based in the internal (evaluative / perceptual / cognitive) described situation.

Tendency II: Meanings based in the external or internal described situation > meanings based in the textual and metalinguistic situation.

Tendency III: Meanings tend to become increasingly based in the speaker's subjective belief state / attitude toward the proposition.

As the directionality of change is concerned, Traugott (1989:34) further claims that Tendency I can feed Tendency II and either one can feed Tendency III. In the following, the development of wa will be discussed with respect to these general tendencies.

4.2. Semantic change--from speech to cognition

Beginning as a saying verb as in (1) to (3), wa has developed a cognitive meaning such as (4). This is undoubtedly a unidirectional change in the same position with a metaphorical extension from the domain of speech to the domain of thought. The metaphor involved is SPEECH IS THOUGHT. Traugott's Tendency I is confirmed, because the internal state of cognition is developed from the external state of speech.

4.3. Grammatical change--from lexical meaning to grammatical function

As exemplified by (5) to (7), the lexical meaning of wa, whether it refers to speech or thought, has undergone a grammatical change to become a complementizer, a function clearly grounded in the textual situation to indicate the structural relation among constituents. Tendency II is thus borne out.

This kind of change has significant implications to the grammar of Cantonese, giving rise to the category of complementizer. Although the original verbal meaning of wa has been lost, the textual function is acquired.

4.4. Pragmatic change--from lexical meaning to discourse function

It is the quotative meaning of wa, rather than its grammatical function, which is more likely to be the source of the discourse particle wa, as indicated in (10) to (13). Both share the semantic property of SOMEBODY'S SPEECH, in that the saying verb functions to quote people's words, while the discourse particle is referenced to what the addressee has said in the previous context.

Moreover, for this discourse function to come into being is an unusual line of development. It is further accompanied by the phonological and morpho-syntactic changes. The original low-level tone of the verbal and complementizer wa has changed to the mid-rising tone of the particle function. In addition, there is also a shift of position from utterance-medial to utterance-final.

To account for the positional shift, it is speculated that the attribution of quotation, i.e. the agent plus the saying verb such as keui wa 'he said' in (2) or nei wa 'you said' in (3), once appeared frequently in the postverbal position. When the agent is understood in context, it can thus be omitted and the saying verb itself starts to undergo grammaticization, becoming a particle in the end. This is highly plausible, because Cantonese speakers quite frequently alter the ordering of constituents. For instance, in (2) and (3), it is very natural for the attributions to appear after the quoted messages, of course, with appropriate intonation or particles. The results of the word order change are indicated below:

(14) -->	chao	dou	keui	hok	hang	la	ngo	bei	fan	nei	chao	la
	care	till	3.SG	learn	walk	PRT	1.SG	give	again	2.SG	care	PRT

keui **wa** ke
3.SG say PRT
"(I'll) take care of him till (he) learns to walk. (Then) I('ll) give him back to you to take care,' he said.'

(15) danhai nei go yut nei sinsang sin mou bei gayung nei je
but this CL month 2.SG husband just NEG give family expense 2.SG PRT

--> nei **wa** ke
2.SG say PRT
'But (it was) just this month (that) your husband didn't give you family expense, (as) you said.'

Another piece of evidence is that the particle wa in WH-questions can still be interpreted as the attribution in those situations like (11), (12) and (13). Yet, it is not the shortened form of the attribution, because the attribution can co-occur with the particle wa within the same question, as evidenced by (10). Besides, it is ungrammatical to restore a postverbal attribution in the questions, as illustrated by (16) and (17). In short, the particle wa is likely to be evolved from the attribution of quotation, since the meaning has not yet been completely lost. However, its main function in present-day Cantonese is to indicate REPETITION OF INFORMATION, under the circumstances that the speaker has missed some information and requests the addressee to repeat.

*(16) --> V: matye mingming pak jo haidou **nei wa**
what obviously park PRF here 3.SG PRT
'What has obviously been parked here, as you said?'

*(17) --> V: <L2 Winnie l2> a go <L2 BBQ L2> geido chin
Winnie PRT that BBQ how much money

nei wa
3.SG PRT
'Winnie, how much (should I pay for) that BBQ, as you said?'

Without involving speaker's subjective attitude, the development of the particle wa also conforms to Traugott's Tendency II, because this discourse function grounded in the metalinguistic situation of actual communication is developed from the external state of speech. Although the evolved grammatical and discourse functions of wa can be subsumed under Tendency II, it seems more appropriate to treat them as separate directions of change in Cantonese. The complementizer wa is a function of grammar, whose source meaning is the lexical verb, whether it refers to utterance or cognitive interpretation. The particle wa, on the other hand, is a function grounded in the world of discourse, whose source meaning is particularly the quotation of speech.

5. Conclusions

Together with the tonal change manifested by the particle wa, the grammaticization of this saying verb has been involved with the different domains of grammar, as indicated in the following:

(a) Semantic change--the utterance meaning takes on a cognitive meaning.
(b) Grammatical change--the complementizer function has evolved.
(c) Pragmatic change--the discourse function comes into being.

Figure 1. indicates the schematic representation of these three changes taking part in the grammaticization of wa, and their relations to Traugott's tendencies of change.

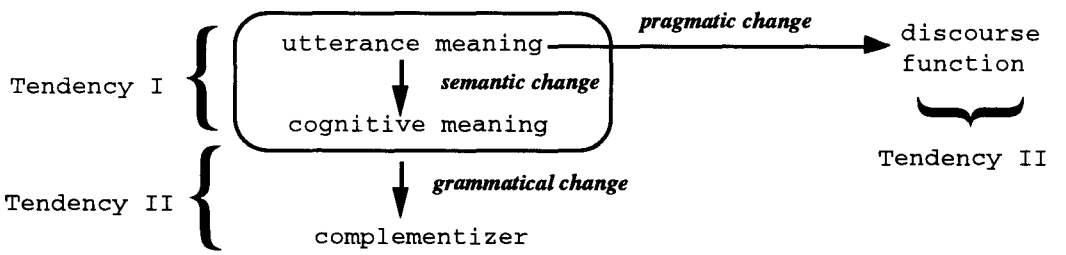

Figure 1. Grammaticization of *wa*

According to the definitions of the various tendencies in §4.1, only Tendency I and II are evidenced in the Cantonese case, because speaker's subjective attitude toward the propositions is not part of the meaning of wa. However, Tendency III is evidenced in the grammaticization of another saying verb kong in Taiwanese,[4] another major Chinese language.

In Taiwanese, besides evolving the cognitive meaning and the complementizer function from the utterance meaning, kong can also be realized as an utterance-final particle, appearing in declaratives and imperatives, rather than in questions (Chen 1989). Its function is to represent such kind of subjective attitude on the part of the speaker that what he/she mentions in an assertion or command is supposed to be obvious to the addressee. The following is an example of the particle kong:[5]

(18) A: I jít gí kong kah chin hó !
he Japanese speak very well
'He speaks Japanese very well.'

--> B: I tùi jit pún lâi ê **kong** !
he from Japan come EA
'Of course, he comes from Japan!'

The different discourse functions of wa and kong seem to suggest that their respective socio-cultural environments play a crucial role in developing a particular function to fulfill their own communicative needs. It is hoped that the present study can motivate future research on how the socio-cultural environment shapes the grammar of Cantonese in a way distinct from other Chinese languages.

Notes

* I wish to thank Tsuyoshi Ono for his valuable discussion on this work. I also thank Ken Field for editing the paper.

1 Examples from the TV programs are labeled as 'TV'; examples from the telephone conversations are labeled as 'RADIO'. Examples without labeling source at the end are constructed data.

2 Relevant items in examples are in bold; the lines where the items appear are marked by the arrow sign '-->'.

Grammatical abbreviations used in the present paper include:

1.SG	first person singular
2.SG	second person singular
3.SG	third person singular
ASSC	associative marker
CL	classifier
COMP	complementizer
COP	copular
EA	epistemic-attitudinal particles
NEG	negative marker
PRF	perfective marker
PRT	particle
SA	speech-act particle

3 The particle function of wa can be replaced and fulfilled by the use of rising intonation at the end of questions.

4 Taiwanese is the Southern Min dialect spoken in Taiwan.

5 Example (18) is example (72) in Chen's M.A. thesis. The transcription, glosses and literal translation follow the original.

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A Comparative Analysis of the Syllable Structures and Syllable Inventories of Dongxiang and Hui: The Effects of Language Contact*

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0. Introduction

The primary purpose of this paper is to present the effect of language contact on the Dongxiang syllable. The effect of language contact on the Dongxiang syllable manifests itself in two primary types of evidence. The first type of evidence is the effect on the basic structure of the Dongxiang syllable. This is manifested chiefly in the movement away from the typical Mongolian syllable type to the Mandarin Chinese syllable type. The second type of evidence is the effect on the Dongxiang syllable inventory. This is manifested in the overall similarity between the Dongxiang and Hui syllable inventories.

This paper will proceed in the following manner. First, I will briefly discuss some background information on the Dongxiang and Hui languages and lay out the language contact situation that is present there. Secondly, I will give a general account of comparative Mongolic syllable structure. Thirdly, I will give a detailed account of Dongxiang syllable structure and discuss how it defers from Mongolic as a whole. Fourthly, I will give a detailed account of Hui syllable structure and its similarities to Dongxiang. Fifthly, I will compare the Dongxiang and Hui syllable inventories and show that they overlap to an unusually large degree. Finally, I will use comparative Mongolic evidence to illustrate how the Dongxiang syllable structure might have evolved from the Mongolic type into the Mandarin Chinese type.

1. Background Information

Dongxiang is a Mongolic language. It has SOV word order with strictly suffixing, agglutinative morphology. Today, there are over 370,000 speakers of the Dongxiang language. They live in Dongxiang Autonomous County which is located in the arid mountain highlands of Gansu province in the northwestern region of the People's Republic of China.

The language of the Linxia Hui (Hui, hereafter), on the other hand, is a northwestern Mandarin Chinese dialect. This dialect is unusual in that it has only three contrastive tones, leans toward SOV word order, and has a fledgling case system. These characteristics can be attributed to interference with the Turkic and Mongolic languages of the Gansu/Qinghai border region, which includes Dongxiang. (See Li 1984 and Dwyer 1992 for more on Hui.)

A number of socio-historical factors contribute to language contact between the Hui and the Dongxiang. These include 1) Dongxiang Autonomous County's close proximity to Linxia (a major community of the Hui) and nearby Hui settlements; 2) the Hui outnumbering the Dongxiang by two to one - 485,366 to 237,879 respectively in 1982 (Ma Zhengliang 1988:7); 3) both the Hui and the Dongxiang people being Muslim and not ethnically identifying themselves with the Han Chinese; 4) the dominance of the Hui culture; and 5) the Hui and the Dongxiang interacting and intermarrying for perhaps centuries (Schwarz 1984: 99-100).

If we examine these factors more closely, we see first that the Dongxiang and the Hui are in close proximity. This is a prerequisite for contact. Secondly, we see that mutual identity and commonality are established through religious and ethnic lines (both being Muslim and non-Han). This promotes interaction and contact. Thirdly, an asymmetrical relationship with the Dongxiang is formed through the dominance of Hui culture and population. This results in the Dongxiang borrowing from the Hui language, and not vice-versa. Finally, the extended length of their interaction (likely hundreds of years) results in more intensive borrowing. The overall effect of these factors with respect to Dongxiang is that it has incorporated numerous lexical items from Hui (over 1500) and a number of phonological, morphological, and syntactic features as well. In this paper, I will be concentrating on one phonological feature that has been influenced to a large degree by contact with Hui, namely, syllable structure.

2. Comparative Mongolic Syllable Structure

I will be using the term "Mongolic" to refer to what has been previously called the Mongolian language family. This usage parallels the usage of the term 'Turkic". The term "Mongolic" eliminates any possible misunderstandings. I will be using the term "Mongolian" to designate a particular language of the Mongolic language family and not the family itself.

I want to look at six languages in the Mongolic language family and their respective syllable structures. These six languages are 1) Mongolian (the language spoken by the people of both Inner and Outer Mongolia); 2) Dagur (spoken in northeastern China near the eastern tip of Outer Mongolia); 3) Eastern Yugur; 4) Tu (sometimes referred to as Mongour); 5) Baonan; and 6) Dongxiang (sometimes referred to as Santa), the latter four being spoken in the Gansu/Qinghai border region in northwestern China.

Before I give a general overview of Mongolic syllable structure, I want to briefly review the major component parts of the syllable.

(1) Basic Syllable Structure

Example (1a) illustrates the traditional hierarchical viewpoint of the syllable. Example (1b) illustrates the autosegmental viewpoint. In both, the onset may consist of one or more consonants, the nucleus may consist of one or more syllabic elements, and the coda may consist of one or more consonants. The basic difference between these two is the rhyme found in (1a) but not in (1b). I will be thinking in terms of (1b), in this paper, since I have not yet found any phonological significance for the rhyme in Mongolic.

Syllable structure is language specific. In other words, each language has its own systematic limitations on which types of syllables are acceptable and which types are not. These limitations are best formalized in the maximal syllable template which shows a) the maximal allowable syllable; b) the syllable types that may be derived from the template; and c) the phonotactic limitations on particular segments.

2.1 Mongolian

The maximal syllable template for Mongolian is illustrated in example (2) below.

(2) Mongolian maximal syllable template (Derived from Daobu 1983)

$(C_1)V_1(V_2)(C_2)(C_3)$

C_1 = any consonant

if V_1 V_2 then V_1 V_2 = long vowel or complex vowel

C_2 = b, g, s, x, m, n, ŋ, l, r, (n^j, $ŋ^j$, l^j, r^j)

C_3 = b, d, g, t, s, ʃ, x, dʒ, tʃ, (d^j, g^j, x^j)

From this it is clear that consonant clusters are allowed, but that there are some restrictions on which consonants may appear in these clusters. Long vowels and complex vowels may also appear in the syllable nucleus.

2.2 Dagur

The maximal syllable template for Dagur is illustrated in example (3) below.

(3) Dagur maximal syllable template (Derived from Zhong Suchun 1982 and Enhebatu 1988)

$(C_1)V_1(V_2)(C_2)(C_3)$

C_1 = any consonant

if V_1 V_2 then V_1 V_2 = long vowel or complex vowel

C_2 = b, g (ɣ), m, n, l, r, j

C_3 = d, p, t, k, s, ʃ, dʒ, tʃ

Comparing (3) with the maximal syllable template for Mongolian in (2) above, it is evident that they are very similar. Both allow consonant clusters in the syllable coda and both allow long or complex vowels in the syllable nucleus. The major difference lies in the list of consonants which may appear in the coda.

2.3 Eastern Yugur

The maximal syllable template for Eastern Yugur is illustrated in example (4) below.

(4) Eastern Yugur maximal syllable template (Derived from Zhaonasitu 1981a)

$(C_1)(C_2)V_1(V_2)(C_3)$

if C_1 C_2 then C_1 = s, ʃ, χ, h, m, n, ŋ, ɬ, r

C_2 = b, d, g, ɢ, dʒ

if V_1 V_2 then V_1 V_2 = long vowel or complex vowel

C_3 = b, d, g, ɢ, s, ʃ, m, n, ŋ, l, r

Comparing (4) with (2) and (3) above, there is a clear distinction. We have just seen that consonant clusters are allowed in the syllable coda in Mongolian and Dagur, but in Eastern Yugur, the consonants clusters are only allowed in the onset. But comparing the list of consonants that may appear in the coda, they overlap to a considerable degree with those allowed in the coda for Mongolian and Dagur.

2.4 Tu (Mongour)

The maximal syllable template for Tu (or Mongour) is illustrated in example (5) below.

(5) Tu (Mongour) maximal syllable template (Derived from Zhaonasitu 1981b)

$(C_1)(C_2)V_1(V_2)(C_3)$

if C_1 C_2 then C_1 = s, ʂ, ɕ, x, m, n, ŋ, r

C_2 = b, d, g, ɢ, p, t, k, dz, dzʲ, dʑ, tʂ, tɕ

if V_1 V_2 then V_1 V_2 = long vowel or complex vowel

C_3 = b, d, g, ɢ, s, ɕ, ʂ, m, n, ŋ, l, r

If comparing (5) with (4), it is obvious that they are similar. Consonant clusters are allowed only in the onset. The consonants that may appear in these clusters are similar for C_1 but vary somewhat for C_2. The consonants that may appear in the coda are almost identical to those for Eastern Yugur.

2.5 Baonan

The maximal syllable template for Baonan is illustrated in example (6) below.

(6) Baonan maximal syllable template (Derived from Bu He and Liu Zhaoxiong 1982)

$(C_1)(C_2)V_1(V_2)(C_3)(C_4)$

if C_1 C_2 then C_1 = t, f, ʂ, χ, m, n, ŋ

C_2 = b, d, g, t, dzʲ, dʑ

if V_1 V_2 then V_1 V_2 = complex vowel

if only C_3 then C_3 = b, d, g, ɢ, s, ɕ, χ, tɕ, m, n, ŋ, l, r

if C_3 C_4 then C_3 = l, r

C_4 = tɕ

The Baonan maximal syllable template differs from those which we have examined previously in two ways.[1] First, there are no long vowels, only complex ones. And secondly, clusters are allowed in the coda, but only of a very limited type where /l/ or /r/ is the first member and /tɕ/ is the last member of the cluster. Moreover, /tɕ/ is a morpheme, thus a morpheme boundary is involved here where previously one was not, i.e. in Mongolian and Dagur. Otherwise, the list of consonants allowed in a simple coda are very similar to those we have seen before.

To summarize what we have encountered so far, Mongolian and Dagur allow consonant clusters in the coda (I consider Baonan borderline here since clusters arise in the coda from one specific morpheme) and Eastern Yugur, Tu, and Baonan allow consonant clusters in the onset. Is there a correlation for this split? In fact, Mongolian and Dagur are initial stress languages (that is, the first syllable of the word receives the stress) and Eastern Yugur, Tu, and Baonan are ultimate

stress languages (that is, the stress falls on the last syllable of the word). My hypothesis is that in the initial stress languages, an unstressed vowel may have been lost in the final syllable of a two syllable word resulting in a consonant cluster as in (7a).

(7a) Initial stress languages
'CVCvC > 'CVCC

(7b) Ultimate stress languages
Cv'CVC > 'CCVC

Conversely, in ultimate stress languages, an unstressed vowel may have been lost in the first syllable resulting in a consonant cluster as in (7b). However, this is leading us away from our main topic, but this question needs further investigation. If this hypothesis basically proves to be correct, then it may be an indication of how deep the stress dichotomy in Mongolic really is.

Now, let's look at Dongxiang syllable structure and see how much it differs from the rest of Mongolic.

3. Dongxiang Syllable Structure

The maximal syllable template for Dongxiang is illustrated in example (8) below.

(8) Dongxiang maximal syllable template (A)

$(C_1)(C_2)V_1(C_3)$

C_2 = j, w

C_3 = n, ŋ, j, w

Comparing (8) with the rest of Mongolic, it is clear that Dongxiang bears almost no resemblance to these. Consonant clusters *are* restricted to the onset (this is what one expects because Dongxiang is an ultimate stress language), *but* these clusters are limited to glides in the C_2 position. There are no long vowels and no complex vowels. The consonants that may appear in the coda are limited to nasals and glides. This differs dramatically from the rest of Mongolic.

Another way to represent the Dongxiang maximal syllable template is given in (9) where C is [+ consonantal]; G is [- consonantal, - syllabic]; V is [+ syllabic]; and N is [+ nasal].

(9) Dongxiang maximal syllable template (B)

$(C)(G)V(\begin{Bmatrix} G \\ N \end{Bmatrix})$

C = [+ consonantal], G = [- consonantal, - syllabic],
V = [+ syllabic], N = [+ nasal]

In other words, the maximal syllable type consists of a consonantal onset followed by a glide followed by the vocalic nucleus followed by a glide *or* a nasal in the coda. Only the vowel of the nucleus is obligatory. Everything else is optional. Example (10) below illustrates the possible syllable types that are derived from this maximal syllable template:

(10) Possible Dongxiang syllable types

V	CV	GV	CGV
VG	CVG	GVG	CGVG
VN	CVN	GVN	CGVN

Each of the twelve possibilities is illustrated in example (11) below. None of these words are Chinese loans. They are all indigenous to Mongolic. The relevant syllables are in bold type.

(11) Dongxiang syllable type examples:[2]

V	**ɑ**limɑ	'fruit'
VG	**ɑi**	'(interjection expressing agreement or affirmation)'
VN	**ən**dzə̧ʁə	'donkey'
CV	nɑŋ**gɑ**	'the Han nationality'
CVG	**səiʁɑŋ**	'beautiful, handsome'
CVN	mo**rɑn**	'river'
GV	**jə**suŋ	'nine'
GVG	ɑ**wəi**	'father'
GVN	**jɑŋ**	'what'
CGV	fu**giə**	'large, big'
CGVG	**kuɑi**suŋ	'navel'
CGVN	ki**əliən**	'speech, language'

It should also be noted here that I *am* simplifying the issue by claiming that all Dongxiang syllables fit into just these twelve types. In fact, there *are* words which seem to contradict the Dongxiang syllable structure which I have just outlined. However, I do not want to discuss these counterexamples at this point in the paper. I will return to this issue when I address the historical changes that may have led to the present situation in the Dongxiang syllable in section 6.

4. Hui Syllable Structure

Now let's look at the Hui maximal syllable template. This is found in example (13) below.

(13) Hui maximal syllable template

(C)(G)V($\begin{Bmatrix} G \\ N \end{Bmatrix}$)

C = [+ consonantal], G = [- consonantal, - syllabic],
V = [+ syllabic], N = [+ nasal]

Comparing example (13) with (9), one sees that the Hui and Dongxiang maximal syllable templates are, in fact, identical. Therefore, the twelve possible syllable types derived from example (13) for Hui are identical to Dongxiang as well. These twelve types are found in example (10) above. Each of these twelve possibilities is illustrated in example (14) below.

(14) Hui syllable type examples:[3, 4]

V	ɑ	24	'used before a kinship term or personal name'
VG	ou	24	'vomit'
VN			
CV	mɑ	44	'horse'
CVG	mei	24	'coal'
CVN	gɑŋ	24	'steel'
GV	jy	44	'rain'
GVG	jɑo	42	'to bite'
GVN	jiŋ	24	'hawk'
CGV	guo	24	'country'
CGVG	xuɑi	42	'bad'
CGVN	dʐuɑn	24	'expert'

From these initial encounters with the Dongxiang and Hui syllable, we see that they appear almost identical in structure. The obvious question is, why are Dongxiang and the Hui syllable structure identical? The answer is contact-induced language change. In section 6, we will look at the likely historical linguistic changes that led to the present situation in Dongxiang. But now, I want to discuss the similarities between the Dongxiang and Hui syllable inventories.

5. The Dongxiang and Hui Syllable Inventories

The main purpose of Tables (1)-(3) is to compare the Dongxiang and the Hui syllable inventories. The layout for these tables (commonly encountered in the presentation of Chinese syllable inventories) is based in part on The Pocket English-Chinese Dictionary: Table of the Combinations of the Initials and Finals. In the first column on the left hand side of each table are the initials for Dongxiang. Across the top are the finals. (Notice that initial does not equal onset and final does not equal syllable rhyme - in the traditional sense of the syllable - when the inventory is presented in this way). I have identified 457 syllables in Dongxiang so far. According to the Table of the Combinations of the Initials and Finals, there are 409 syllables in *Mandarin* Chinese. (This does not take tone into account). Since in Hui, the phones /d/ and /t/ are palatalized before /i/, 11 of the Mandarin syllables have merged with those beginning with /dʑ/ and /tɕ/ in Hui leaving 398 syllables. Unfortunately, my data for Hui is incomplete. Because of this, I have only been able to identify 294 or 74% of the 398 syllables that I would expect to find in Hui. This means that there are still 104 syllables that I have not yet identified in Hui. However, I want to emphasize that a large number of these syllables are, in fact, rare in Mandarin with sometimes only one or two characters representing each syllable. Therefore, with the data that I have, it is not surprising that I have not encountered every syllable. This *does not mean* that they do not exist in Hui. Therefore, I have chosen to compare the Dongxiang syllable inventory with the 398 syllable inventory that I would expect to find in Hui. Although this is not altogether satisfying, it is the best I can do at this time.

Example (15) is a key to Tables (1)-(3) and should clarify what I am trying to illustrate in these tables.

(15) Key to the Dongxiang syllable inventory tables[5]

dzi̱	syllable in both Dongxiang and Hui
ʁɑ	syllable only in Dongxiang
\\\	syllable only in Hui
	syllable in neither Hui nor Dongxiang

The first square, with the syllable 'dzi̱', shows a syllable found in *both* Dongxiang and Hui (notice that it is not shaded); the second square, with the syllable 'ʁɑ', shows a syllable found *only* in Dongxiang (notice

	a	o	ə	-i	ɚ	ai	əi	au	əu	an	ən	on	aŋ	əŋ	oŋ
∅	a	o	ə		ɚ	ai	\\\	\\\	\\\	an	ən		aŋ	əŋ	oŋ
j	ja	[[jau]]	jə					jau	jəu	jan			jaŋ		
w	wa	wo	[[o]]			wai	wəi			wan	wən		waŋ	\\\	
b	ba	bo	bə			bai	bəi	bau		ban	bən		baŋ	bəŋ	
p	pa	po	pə			pai	pəi	pau	\\\	pan	pən		paŋ	pəŋ	
m	ma	mo	mə			mai	məi	mau	\\\	man	mən		maŋ	məŋ	moŋ
f	fa	\\\	fə				fəi		\\\	fan	fən		faŋ	fəŋ	
d	da	do	də			dai	dəi	dau	dəu	dan	dən		daŋ	dəŋ	doŋ
t	ta	to	tə			tai	təi	tau	təu	tan			taŋ	təŋ	toŋ
n	na	no	nə			nai	nəi	nau	nəu	nan	nən	non	naŋ	nəŋ	
l	la	lo	lə			lai	ləi	lau	ləu	lan			laŋ	\\\	loŋ
r	ɾa	ɾo	ɾə						ɾəu	ɾan	ɾən		ɾaŋ	ɾəŋ	ɾoŋ
dz	dza	dzo	dzə	dzi		dzai	dzəi	dzau	dzəu	dzan	\\\		dzaŋ	\\\	
(ts)	[[sa]]	tso	(sə)	[[si]]		tsai		[[sau]]	(səu)	[[san]]	(sən)		tsaŋ	(səŋ)	
s	sa	so	sə	si		sai	səi	sau	səu	san	\\\		saŋ	səŋ	[soŋ]
dʐ	dʐa	dʐo	dʐə	dʐi		dʐai	\\\	dʐau	dʐəu	dʐan	dʐən		dʐaŋ	dʐəŋ	
tʂ	tʂa	tʂo	tʂə	tʂi		tʂai		tʂau	tʂəu	tʂan	tʂən		tʂaŋ	tʂəŋ	
ʂ	ʂa	ʂo	ʂə	ʂi		\\\	ʂəi	ʂau	ʂəu	ʂan	ʂən		ʂaŋ	ʂəŋ	
ʐ		\\\	ʐə	ʐi				\\\	ʐəu	ʐan	ʐən		ʐaŋ	ʐəŋ	
dɕ															
tɕ															
ɕ															
g	ga	go	gə			gai	\\\	gau	gəu	gan	gən	gon	gaŋ	gəŋ	goŋ
k	ka	ko	kə			kai	\\\	kau	kəu	\\\	\\\		kaŋ	\\\	
x	xa	xo	xə			xai	xəi	xau	xəu	xan	xən		xaŋ	xəŋ	xoŋ
ɢ	ɢa	ɢo	ɢə				ɢəi			ɢan			ɢaŋ		ɢoŋ
q	qa	qo				qai	qəi			qan			qaŋ		
ʁ	ʁa	ʁo	ʁə				ʁəi		ʁəu	ʁan	ʁən		ʁaŋ	ʁəŋ	ʁoŋ
h	ha	ho	hə		hɚ					han	hən		haŋ		hoŋ

Table 1
Dongxiang Syllable Inventory
(With Reference to the Hui Syllable Inventory)

	i	iɑ	iɑu	iə	iu	iɑn	iən	in	iɑŋ	iŋ	iuŋ
∅	i							in		iŋ	
j	ji							jin		jiŋ	
w	wi										
b	bi		biɑu	biə		biɑn		bin		biŋ	
p	pi	piɑ	piɑu	\\\		piɑn		pin		piŋ	
m	mi		miɑu	miə	\\\	miɑn	miən	min		miŋ	
f											
d											
t											
n	ni	niɑ	niɑu	niə	niu	niɑn	niən	nin	niɑŋ	niŋ	
l	li	liɑ	liɑu	liə	liu	liɑn	liən	lin	liɑŋ	liŋ	
r	ri										
dz											
(ts)											
s											
dz̩											
tʂ											
ʂ											
z̩											
dʑ	dʑi	dʑiɑ	dʑiɑu	dʑiə	dʑiu	[[dʑiən]]	dʑiən	dʑin	dʑiɑŋ	dʑiŋ	\\\
tɕ	tɕi	\\\	tɕiɑu	tɕiə	tɕiu	[[tɕiən]]	tɕiən	tɕin	tɕiɑŋ	tɕiŋ	\\\
ɕ	ɕi	ɕiɑ	ɕiɑu	ɕiə	ɕiu	[[ɕiən]]	ɕiən	ɕin	ɕiɑŋ	ɕiŋ	\\\
g	gi			giə			giən				
k	ki			kiə			kiən				
x											
G	Gi										
q											
ʁ	ʁi										
h											

Table 2
Dongxiang Syllable Inventory
(With Reference to the Hui Syllable Inventory)

	u	ua	uai	ui	uan	un	uŋ	uaŋ	ɯ	ɯn	ɯŋ
∅	u			ui		un					
j	[ju]				juan		\\\				
w	wu										
b	bu					bun					
p	pu								pɯ		
m	mu						muŋ				
f	fu					[fun]	fuŋ				
d	du			dui	duan	dun	duŋ				
t	tu			tui	tuan	\\\	tuŋ		tɯ		
n	nu				\\\		\\\				
l	lu				luan	lun	luŋ				
r	ru	rua			[ruan]	run	ruŋ				
dz	dzu			dzui	dzuan	dzun	dzuŋ				
(ts)	[[tsu]]			[[sui]]	[[suan]]	[[sun]]	[[suŋ]]				
s	su			sui	suan	sun	suŋ				
dẓ	dẓu	dẓua	\\\	dẓui	dẓuan	dẓun	dẓuŋ	dẓuaŋ			
tʂ	tʂu	tʂua	\\\	tʂui	tʂuan	tʂun	tʂuŋ	tʂuaŋ			
ʂ	ʂu	ʂua	ʂuai	ʂui	ʂuan	ʂun	ʂuŋ	ʂuaŋ			
ẓ	ẓu	\\\		\\\	ẓuan	ẓun	ẓuŋ	ẓuaŋ			
dʑ											
tɕ											
ɕ											
g	gu	gua	guai	gui	guan	gun	guŋ	guaŋ			
k	ku	kua	kuai	kui	kuan	kun	kuŋ	kuaŋ	kɯ		
x	xu	xua	xuai	xui	xuan	xun	xuŋ	xuaŋ			
ɢ	ɢu	ɢua		ɢui			ɢuŋ		ɢɯ		ɢɯŋ
q	qu		quai	qui					qɯ		
ʁ	ʁu	[ʁua]		ʁui		ʁun	ʁuŋ		ʁɯ	ʁɯn	
h						hun	huŋ				

Table 3
Dongxiang Syllable Inventory
(With Reference to the Hui Syllable Inventory)

that it is lightly shaded); the third square, with three slashes in it, shows a syllable found only in Hui (one identifies which syllable this is by locating its position in the table); the fourth square (notice that it is darkly shaded) shows a syllable found in neither Hui nor Dongxiang.

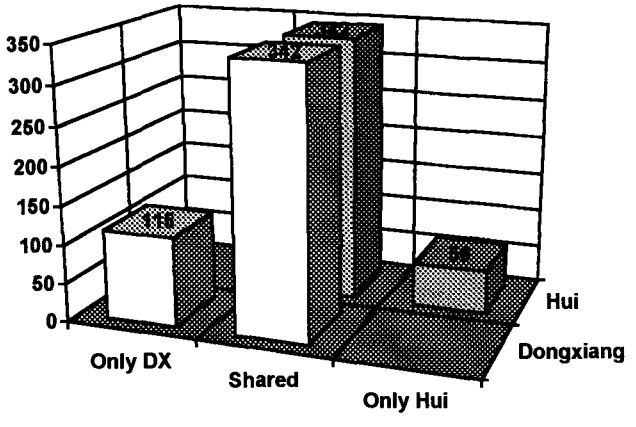
Example (16) contains a table of syllables found only in Hui but not in Dongxiang which are not included in the previous tables. Notice that these contain either front-rounded vowels are glides.

(16) Other Hui Syllables not found in Dongxiang

	ü	üe	üan	ün
j	\\\	\\\	\\\	\\\
n	\\\	\\\		
l	\\\	\\\		
dʑ	\\\	\\\	\\\	\\\
tɕ	\\\	\\\	\\\	\\\
ɕ	\\\	\\\	\\\	\\\

The results of this comparison are illustrated in the graph in (17) below.

(17) Common Syllables in the Dongxiang and Hui Syllable Inventories



The syllable inventories of Dongxiang and Hui share 342 syllables. Only 56 of the 398 syllables in the Chinese syllable inventory or 14% are not shared by Dongxiang. Of these, 20 out of the 56 which are not shared or 36% contain front-rounded vowels or glides which are not found in the Dongxiang phonemic inventory. 115 of the 457 syllables in the Dongxiang syllable inventory or 25% are

not shared by Hui. Most of these syllables contain segments that are not found in the Hui phonemic inventory, for example, the uvular series /q/, /ɢ/, and /ʁ/.

The number of syllables that are shared by Hui and Dongxiang is not the only interesting fact. What is also interesting is that the "holes" so to speak overlap as well. For example, look at the 9th column in Table 2. There are only 5 syllables, but they are all shared. But there are 24 "holes" shared as well.

Although I have never encountered a study of this type before, the results are striking. Especially when one considers that Hui and Dongxiang are members of completely different language families, Sino-Tibetan and Altaic respectively. The fact that this is a result of language contact is not controversial, in my opinion. But what I find particularly noteworthy is the *extent* of the merger between the Dongxiang and Hui syllable inventories. The indigenous and non-indigenous lexical items conform to the Dongxiang/Hui shared syllable structure. And the syllables that are shared are found in indigenous and non-indigenous words alike.

6. Comparative Mongolic Evidence

The fact that the present situation arose through contact-induced language change, in my opinion, is uncontroversial. Some of the socio-historical factors that contribute to language contact between the Dongxiang and the Hui are discussed in section 1 above.

In this section, I want to look at comparative Mongolic evidence and show the likely 'avenues of change' that Dongxiang took from the Mongolic syllable structure type to the Mandarin Chinese syllable type.

Example (18) is a summary of the consonants that may appear in the syllable coda in Mongolic, as we discussed earlier in examples (2) through (6) above.

(18) Summary of consonants that may appear in the syllable coda in Mongolic

Mongolian	b	d	g			t		s		ʃ	x	dʒ	tʃ	m	n	ŋ	l	r	
Dagur	b	d	g		p	t	k	s		ʃ		dʒ	tʃ	m	n		l	r	j
Yugur	b	d	g	ɢ				s		ʃ				m	n	ŋ	l	r	
Tu	b	d	g	ɢ				s	ɕ	ʂ				m	n	ŋ	l	r	
Baonan	b	d	g	ɢ				s	ɕ		χ		tɕ	m	n	ŋ	l	r	

Of these, we can see that b, d, g, s, m, n, l, and r are common to Mongolic. In addition, ʂ and ŋ occur in 4 out of the 5 languages surveyed here. These are listed in (19) below.

(19) b, d, g, s, (ʂ), m, n, (ŋ), l, r

It is these consonants that I will concentrate on now. But first, because I want to emphasize the developments and changes in the syllable coda that brought Dongxiang to its present state, I will eliminate /n/ and /ŋ/ from the following discussion because they are still allowed in the Dongxiang syllable coda. That leaves us with eight consonants: b, d, g, s, ʂ, m, l, r.

In the comparative examples that follow, I will be including another language not previously discussed, namely written or Script Mongolian (abbreviated as Script in the examples). This written language, still used in Inner Mongolia today[6] dates back to the 12th or 13th century. Modern languages that employ this script have not modified it. Therefore Script Mongolian retains many archaic qualities and is a good indicator of what Middle Mongolian might have been like.

Example (20) gives some comparative data from Mongolic for /b/.[7]

(20)

		b ⇒ ∅						b ⇒ ŋ
GLOSS	a)	**'leaf'**	b)	**'button'**	c)	**'to lie down'**	d)	**'salt'**
Script		nabči(n)		tobči		kebte-		dabusu(n)
Mongolian		nɛbtʃ		dɔbtʃ		gəbtəŋ		dabs
Dagur		lartʃ		twartʃ		kərt-		--
Yugur		ɬabdʒəg		tobtʃə		--		daabsən
Tu		labdʑə		teɕdʑə		kədee-		dabsə
Baonan		labtɕyŋ		tabtɕiə		--		dabsuŋ
Dongxiang		lɑtʂəŋ		tədzi		kidʑiə-		dɑŋsuŋ

We can see that in Dongxiang, the consonant /b/ has been deleted in (20a) through (c) and in (20d) the /b/ has changed to /ŋ/. Both of these changes allow these words to conform to Dongxiang syllable structure.

I have only been able to find one clear example of what might have happened to /d/ in Dongxiang when it was in the syllable coda, illustrated in (21) below.

(21)

	d ⇒ tɕi
GLOSS	**'thick'**
Script	hödken
Mongolian	otgõ
Dagur	urkun
Yugur	høɾdgøn
Tu	ʂdogoon
Baonan	dəgɑŋ
Dongxiang	otɕiʁɑŋ

One can see *in Dongxiang* that an /i/ has been inserted at some point so that this word conforms to Dongxiang syllable structure. At what time the

consonant /d/ became voiceless is unclear but it was subsequently palatalized as are all Dongxiang /t/s and /d/s before an /i/.

Example (22a) through (d) illustrate how /g/ or /ɣ/, or what may have been /ɢ/, was deleted in syllable coda position in Dongxiang.

(22)

		g ⇒ ∅							gs ⇒ ʁ
GLOSS	a)	**'time'**	b)	**'cane'**	c)	**'spring (of water)**	d)	**'knee'**	e) **'buttock'**
Script		čaɣ		tayaɣ		bulaɣ		ebüdüg	bögse(n)
Mongolian		tʃag		tajĭg		bʊlăg		obdŏg	boxs
Dagur		--		tajig		bulaar		--	burs
Yugur		tʃəg		tiaɢ		bulaɢ		wədəg	--
Tu		tɕaɢ		tiaɢ		bulaɢ		vudəg	--
Baonan		--		--		bulaɢ, balaɢ		ebdəg	boɢor
Dongxiang		tʂɑ		təijɑ		bula		odəu	boʁo

Example (22e) shows that an /s/ was deleted after a /g/ (which later became /ʁ/) allowing it to become the onset of the next syllable, thus not violating Dongxiang syllable structure.

Example (23a) and (b) show how /i/ has been inserted after /s/ making /s/ the onset of another syllable and in (23c) it shows the same thing except that /s/ has become /ʂ/. Notice the Eastern Yugur word for tiger in (23b). Since it allows /s/ in the coda, but not consonant clusters, an /ə/ has been inserted between /r/ and /s/ so that it conforms to Yugur syllable structure.

(23)

		s ⇒ si			s ⇒ ʂi
GLOSS	a)	**'to wear'**	b)	**'tiger'**	c) **'to twist, wring'**
Script		emüs-		bars	muski-
Mongolian		omsŏn		bar	muʃgăn
Dagur		əms-		--	morki-
Yugur		məs-		barəs	--
Tu		musə-		bas	muʂgə-
Baonan		musi-		bas	miɕigə-
Dongxiang		misi-		bɑsi	muʂiʁi-

In regards to /ʂ/ in the coda, one can refer to (23c) above where /ʂ/ has been derived from /s/.

In example (24) we see that what happened to /m/ when it occurred in the coda is much more complicated. By far the most common type of change is illustrated in (24a) and (b) where /m/ has become /n/ or /ŋ/. But one can also find instances where /m/ has been deleted as in (24c) and where /u/ has been inserted so /m/ is the onset of the following syllable as in (24d).

(24)		m ⇒ n		m ⇒ ŋ		m ⇒ ∅		m ⇒ mu		mb ⇒ mb
GLOSS	a)	**'disease'**	b)	**'comb'**	c)	**'step'**	d)	**'to taste'**	e)	**'to swim'**
Script		gem		sam		alqum		amsa-		umba-
Mongolian		gəm		sannə, sand		alxăm		amšan		umbăn
Dagur		gəm		sam		alkud		ant-		χompaa-
Yugur		gem		sam		solwəm, arəm		amsa-		umba-
Tu		--		sam		xalgu		amsa-		xumba-
Baonan		gəm		sam		χalguŋ		--		mba-
Dongxiang		giən		sɑŋ		hɑŋku		ɑmusɑ-		unbɑ-, umbɑ-

Example (24e) is interesting because the pronunciation /umbɑ-/ does occur and seems to be in free variation with /unbɑ-/ in Dongxiang. If one were to analyze this synchronically, one would say that /m/ is merely an allophone of /n/ which occurs before /b/ and this would be perfectly correct. But if we look at it diachronically, we see that /unbɑ-/ must be the *more recent* of the two. So the pronunciation /umbɑ-/ may well be on its way out and has thus been retained from an earlier stage.

In example (25a) through (c), we see that /l/ has become /n/ or /ŋ/ in syllable coda position and in (25d) and (e) we see that /l/ has been deleted in the same position.

(25)		l ⇒ n		l ⇒ ŋ				l ⇒ ∅		
GLOSS	a)	**'foot, leg'**	b)	**'fire'**	c)	**'to step'**	d)	**'pillar'**	e)	**'left side**
Script		köl		ɣal		halqu-		tulɣaɣuri		soluɣaị
Mongolian		xol		gal		alxăn		tɔlgɔɔr		sɔlgœœ
Dagur		kulj		galj		alku-		twaaləg		saulgui
Yugur		køl		gal		algə-		tulga		soloʁui
Tu		kol		gal		xalgu-		tulga		solguai
Baonan		kual		χal		xalgə-		tolga		--
Dongxiang		kuɑn		qɑŋ		hɑŋku-		tuxua		soʁi

In example (26a) through (c) we see that /r/ has been deleted in syllable coda position. In (26d) we see that /r/ has become /n/, and in (26e) we see that /u/ has been inserted so that /r/ is the onset of the following syllable.

(26)		r ⇒ ∅						r ⇒ n		r ⇒ ru
GLOSS	a)	**'hand, arm'**	b)	**'yurt, house'**	c)	**'to deliver'**	d)	**'wife of an elder brother'**	e)	**'day before yesterday'**
Script		ɣar		ger		kürge-		bergen		uřjidur
Mongolian		gar		gər		xurgəŋ		bərgə		ɔrdʒdăr
Dagur		garj		gərj		kurgəə-		bərgeŋ		--
Yugur		gar		ger		kørgø-		biirge		urdʒydur
Tu		gar		ger		kurgee-		bergen		rdʑudur
Baonan		χar		gər		kurgə-		urgaŋ		ndʑiudər
Dongxiang		qɑ		giə		quʁo-		bɑnʁɑn		urudʑudu

I mentioned early on that there are some syllables that seem to contradict Dongxiang syllable structure as I have presented it so far. These include those syllables with /m/ in the coda (discussed above) and those with /r/ in the coda. Example (27) lists some of these words which are possible exceptions.

(27) Some words with /r/ in the coda

a) ɢuɾɢɑ ~ ɢuɾiɢɑ	'Adam's apple'
b) biəmɑr ~ biə'mɑrɪ	'illness'
c) ɢuɑr ~ ɢuɑ	'two'
d) mɑrtɑ- ~ mɑtɑ-	'to forget'
e) giər ədʐən	'head of household'
f) mɑgɑr mɑgɑr	'used to call sheep'
g) dər dər	'used to call horses'
h) dʐir dʐir	'sound of a brook'

In (27a) and (b), there appears to be an alternate pronunciation. In fact, my informant considered both (27a) and (b) to be 3 syllable words, which means they are not counterexamples at all if considered so. (27b) is in fact a Persian borrowing. (27c) and (d) are common alternate pronunciations. Evidence for the presence of an /r/ in Middle Mongolian can be found by looking at Script Mongolian. Thus it seems that these counterexamples are, in fact, doublets and the more recent pronunciation is r-less. (27e) is an interesting example. /giər/ meaning house has retained its original /r/ (see example (26b) above), but this phrase seems to have been lexicalized, and in addition, the following word /ədʐən/ meaning 'host' begins with a vowel, thus allowing the /r/ to be the onset of the following syllable in normal speech. (27f) and (g) are both sounds used to call animals and (27h) is onomatopoeic. Syllables found in these types of lexical items are known to be more peripheral in nature.

It appears that /r/ is one of the final consonants, originally allowed in the coda, to go through the change from the Mongolic type to the Chinese type of syllable structure. It is also known that in some Mandarin dialects, suffixation of a retroflex /r/ is common. This may be a factor in delaying its subsequent loss. Because its loss is more recent, there are still doublets found in Dongxiang with syllable coda /r/s.

In summary, it is very clear that Dongxiang originally had a syllable structure similar to that of other Mongolic languages. But due to language contact, those consonants originally allowed in coda position have gone through specific changes. We saw that one of the most common changes was loss of the consonant altogether. We also saw, that among the sonorants /m/, /l/, and /r/, they were just

as likely to change to /n/ or /ŋ/ as they were to be lost. Another common phenomena was the insertion of a vowel, either /i/ or /u/, after the consonant so that the consonant in question could be syllabified as its own syllable. The result of all these changes is that Dongxiang and Hui syllable structure are today almost identical.

7. Conclusion

This study raises a number of interesting and important questions. First, since Dongxiang and Baonan both have had extensive contact with Hui, why is it that Dongxiang syllable structure has been influenced to a greater degree than Baonan? In other words, why has Baonan retained the Mongolian type of syllable structure while Dongxiang has evolved into the Mandarin Chinese syllable type? Both have vocabularies that consist of nearly 50% Hui loans. Rather than relying on exclusively linguistic factors, the answer to this question probably lies in the socio-historical factors present in the Dongxiang/Hui and Baonan/Hui situations. Therefore, a comparison of the socio-historical factors present in the Dongxiang/Hui and Baonan/Hui situations might yield interesting results. Further research is needed on this topic.

Other questions that might be raised include methodological ones. Such as, in comparing syllable inventories, what does one constitute as being 'equal'. For instance, there are a number of Hui borrowings in Dongxiang where [y] is pronounced as [i]. The word 'umbrella' in Hui Chinese is pronounced /yusɑn/, but in Dongxiang it has been borrowed as /isɑn/. The high front rounded vowel [y] in Chinese has lost its rounding in Dongxiang and is pronounced as a high front vowel [i]. So does the first syllable of the word for 'umbrella' in Dongxiang and Hui constitute equal syllables? I have discounted these syllables as being equal (see example (16)). But one could argue that they are equal, because the only difference is the feature [± round].

Many questions such as these await further research and debate, but I hope to see more studies on comparative syllable inventories in the future. These kinds of studies could provide valuable evidence for language contact that has been largely overlooked to date.

Notes

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Data for Dongxiang was collected in Gansu Province, The People's Republic of China, during field trips in 1990 and 1991. In addition, data from Liu Zhaoxiong 1981, Bu He 1983, and Bu He 1986 has been used. Data for Hui was also collected during these field trips but data collected by Charles N. Li on Hui has proved invaluable.

1. The sources on Baonan disagree to some extent. This disagreement is primarily due to the existence of two different dialects - one which has been influenced chiefly by Hui (described for the most part in Bu He and Liu Zhaoxiong 1982) and one which has been influenced chiefly by Tibetan (described for the most part in Chen Naixiong 1987). I have elected to use Bu He and Liu Zhaoxiong 1982 because it is a part of the series in which most of the other syllable structure data for this paper has been drawn.

Chen Naixiong 1987 disagrees in whether 1) Baonan has long vowels or not; and 2) the list of consonants found in C_1 C_2 clusters. However, these dialectal differences do not affect the results of this study to any large degree.

2. It should be noted that the IPA transcription system that I employ here *does not* distinguish between what appear to be sequences of vowels and what actually are glide/vowel, vowel/glide, and glide/vowel/glide combinations. In fact, according to my analysis, there are no complex vowels in Dongxiang. In other words, all syllable nuclei consist of only one simple vowel. Any other segments transcribed as vowels in a sequence of vowels are actually glides. I have elected to transcribe Dongxiang in this way because of its ease of readability and its traditional usage in the Chinese literature written on Dongxiang. Thus, even though a word is transcribed as (12a), kuɑisuŋ, meaning 'navel' (see example (11) above), I am analyzing it as (12b).

(12a) kuɑisuŋ (12b) kwɑysuŋ 'navel'

3. Notice that there is a gaping hole for VN type syllables. Many of these have /n/ onsets in Hui, for example /ɑn/ which means peace is pronounced /nɑn/ in Hui and is the same /nɑn/ found in the name Baonan. I am still working on identifying some words of this syllable type in Hui.

4. Just as in the Dongxiang examples, the transcription system that I have elected to use here is IPA, and does not distinguish between what appear to be sequences of vowels and what actually are glide/vowel, vowel/glide, and glide/vowel/glide combinations. As in Dongxiang, there are no complex vowel nuclei in Hui, only simple vowel nuclei.

5. Other conventions:

a) a single square-bracketed syllable, e.g. the syllable [soŋ] in Table 1 (last column, row 15), represents an **alternative pronunciation** of another syllable type. These represent isolated examples.

b) a double square-bracketed syllable, e.g. the syllable [[jɑu]] in Table 1 (column 2, row 2), is a **cross-reference to the alternative pronunciation or transcription** of that syllable. So in the square where one would expect /jo/, we are cross-referenced to [[jɑu]] instead.

c) a syllable in parentheses (used only with the initial /ts/), e.g. the syllable (sə) in Table 1 (column 3, row 14), indicates the **adapted pronunciation without verification** of that syllable. So in the square where one would expect /tsə/, we see that the adapted pronunciation is (sə), but no examples of borrowed words from Hui with this syllable have been found so far.

6. I have heard rumors that it has been recently reintroduced in Outer Mongolia.

7. Data for these comparative examples are drawn, for the most part, from Kuribayashi 1989.

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A Comparative Study of Self-Repair in English and Japanese Conversation*

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1.0 Introduction

My aim of this study is to report some of the findings that have resulted from a preliminary observation of repair in English and Japanese conversation.

The phenomena subsumed under the term "repair" in this study are defined as any instance in which the speaker stops in some way in the course of producing an utterance, and then repeats or replaces some part or all of it. If utterances in talk are constructed through syntax, and repair manipulates the relative ordering of elements in utterances under construction, explorations in the mechanisms of repair must be of relevance to the study of syntax (see Schegloff, 1979; Fox and Jasperson, to appear).

Given the relevance and significance of repair for syntax, one obvious next question to be asked is: Is repair organized differently in languages that have different syntactic structures?[1] If so, how do syntactic differences affect the organization of repair? In order to answer these questions, we need to undertake a comparative study of repair in languages with different syntactic structures. As far as I am aware, however, few studies have been done on repair in languages other than English (see Moerman, 1977, for a study on repair in Tai). And to the best of my knowledge, no study has explored the relationships between the organization of repair and syntactic structures in languages other than English. My initial task for this study, therefore, is to attempt a syntactic investigation of repair in Japanese conversation, and then compare the results from the analysis of Japanese repair with those from English repair. As a basis of cross-linguistic comparison, I will use the framework of Fox and Jasperson's (to appear) analysis of repair in English conversation.

Japanese is genetically and areally distinct from English, and its morpho-syntactic structures exhibit considerable differences from those of English. The following are several parameters in morpho-syntactic differences that I consider relevant to the present study: 1) Japanese is a verb-final language (at least in its unmarked sentence form),[2] and allows relatively flexible word order compared to English, which is a fairly rigid SVO language; 2) Japanese verbs exhibit agglutinative morphology, while English has relatively sparse verbal morphology; 3) the use of zero-anaphora is pervasive in Japanese, whereas English does not make much use of it (instead, unstressed pronouns are quite frequently used); and 4) some features of Japanese word formation such as frequent compounding (nominal and verbal) and the presence of classifiers in numeral expressions seem relevant to the organization of repair in Japanese.

In the following sections, we will see how these differences between English and Japanese affect the organization of repair in the two languages.

1.1 Data

For the Japanese part of this study, I culled 225 examples of repair from transcripts of naturally-occurring, spontaneous Japanese conversations (both face-to-face and telephone conversations).

As for English, I used the data that Fox and Jasperson collected for their study; 500 examples of repair culled from naturally-occurring English conversations.[3]

1.2 Methodological preliminaries

1.2.1 *First position self-repair*

I confine the present study to dealing with "first position self-repair." Self-repair, in contrast to other-repair, is repair which is produced by the speaker of the "repairable" (Schegloff, Jefferson and Sacks, 1977). The term "first position repair" describes repair which takes place within the same turn-constructional unit (TCU) as the repairable. The following are the examples of first position self-repair:[4]

(1) ^D: [Why don't y-*] **why don't- we** just do bee right now.

(2) H: *ano* [*koten-**] *ko- .hh* ***kokugo*** *no sensee na ra* ...
well classics Japanese GEN teacher COP if
"Well, if (you) are a teacher of [the classics] **Japanese**, ..."

Throughout the paper, an asterisk (*) in examples marks where self-repair is initiated. The segment in brackets is the repairable, and bold-face letters indicate the repairing segment. For the Japanese examples, I have occasionally used brackets and bold-face letters in the free translation when it is useful to give a sense of the repair that takes place in the original Japanese utterances. (Parenthesized words in the translation indicate elements that are not overtly expressed but are understood from context.) We must note, however, that it is impossible to translate the exact operation of repair from one language into another. Therefore, the translation lines without brackets or bold-face letters are meant to be an interpretation of the utterance after repair has been completed.

1.2.2 *Coding*

Following Fox and Jasperson (to appear), I coded instances of repair in terms of two syntactic parameters; (a) the syntactic constituent being constructed at the point of repair initiation (e.g. repair initiated during/after the verb, repair initiated during/after NP's, etc.); (b) the syntactic organization of the repair (e.g. just repeating the repairable, replacing it with something else, or abandoning the entire structure of the preceding clause; see the discussion below).

Obviously, several problems are immediately raised concerning such coding. First, as Fox and Jasperson note at the beginning of their study, we cannot assume from the outset that repair is organized in terms of syntactic categories. Since repair always occurs in complex interactional environments, it is quite plausible to assume that other factors do affect the organization of repair.[5] However, it does not mean that syntactic factors are irrelevant to the organization of repair. In fact, Fox and

Jasperson (to appear) found some interesting relationships between syntactic categories and the organization of repair.

Second, the issue of cross-linguistic comparability poses serious problems for the present study, as is always the case with any cross-linguistic study. One obvious problem concerning the syntactic coding mentioned above is the comparability of syntactic categories; that is, the syntactic categories used for the analysis of English are not always applicable for the analysis of Japanese.

For instance, for repair initiated during/after NP's, the English data are coded according to the syntactic roles of the NP at the initiation site (the subject or the object), whereas the coding of the Japanese data for this category is not differentiated as such. The reason for this difference in the treatment of NP's in the two languages is as follows. In English, the status of NP's as subjects (nominative) or objects (accusative) can be determined by their position relative to the verb, and there is no overt marking on NP's themselves to indicate their syntactic relations. In other words, such NP's have relatively fixed positions in a clause; the subject NP usually occurs before the verb and the object NP tends to occur after the verb. Since positions in a clause may sometimes correspond to positions in a turn at talk, and positions in a turn can be relevant to the organization of repair (see Schegloff, 1987), the difference between the subject NP and the object NP has potential significance to a syntactic study of repair. Because of this fact, Fox and Jasperson (to appear) distinguish subject NP's and object NP's as different sites of repair initiation. In Japanese, on the other hand, no NP's seem to have a fixed position in a clause. Although NP's tend to occur before the verb, relative ordering among them is flexible, especially in conversation. Frequent omission of contextually-understandable NP's in Japanese also makes it nearly impossible to predict the ordering of NP's in a clause. If syntactic roles of NP's have no implications for the positions of the NP's in a clause, it makes no sense to distinguish NP's with different syntactic roles as separate repair-initiation sites. In fact, at the preliminary stage of this study, I found no significant difference among the instances of repair initiated during/after NP's in different syntactic roles. Therefore I made no distinction in my treatment of NP's as repair initiation sites in Japanese. At the same time, I have kept the distinction that Fox and Jasperson (to appear) made for English NP's, because the syntactic roles of NP's are closely tied to their positions in the clause in English, and thus deserve separate treatments.

The third problem concerns the difference in the organization of repair due to the morphological differences in the two languages. Based on the patterns found in English repair, Fox and Jasperson (to appear) set up the following 6 types, according to which they classify their data: (A) repair is initiated at a word, and that word is recycled by itself; (B) repair is initiated at a word, that word is replaced by a single item; (C) repair is initiated at a word, and some part of the turn leading up to that word is recycled, including the word at which the repair was initiated; (D) repair is initiated at a word, and some part of the turn leading up to that word is repeated, with a replacement word for the repairable; (E) repair is initiated at a word, and that word is repeated but placed within a modified syntactic frame; (F) repair is initiated at a word, and the TCU including that word is aborted, and a new TCU is begun.

For the purpose of cross-linguistic comparison, I first attempted to classify the Japanese data according to these 6 types. As I proceeded, however, I encountered a number of examples that did not fit any of the types set up for English. One of the

sources of this problem is that the types for English repair are word- or phrase-oriented, whereas some instances of repair in Japanese occur on a morphological basis. Take a look at such an example:

(3) K: *ja* *nanji* *goro* *ni* *kurida*[*shi-**] ***soo****?*
then what.time about TEMP go.out
"Then about what time (shall we) go out?"

In this example, speaker K replaces only the inflectional ending of the verb with another. The citation form of the verb used by K is *kurida-su* , which has the "conclusive" ending *-su* .[6] The first form that K uttered in the example (*kurida-shi*) has the "adverbial" ending *-shi* . The adverbial endings of Japanese verbs may or may not be followed by certain kinds of auxiliaries and/or particles, but in the context of example (3), the ending *shi-* was very likely to be followed by some auxiliaries and/or particles. However, K just cut off the verb and replaced *shi-* with the "cohortative" ending *-soo* . This type of morpheme-by-morpheme replacement cannot be subsumed under any of the types A - F for English.

To take into account these differences in the organization of repair between English and Japanese, I have used a different, but similar, set of types, which is based on Fox and Jasperson's Type A - F; the main difference is that I have set up the morphological types as well as the word types:[7]

Word Types

Type 1a	recycle word
Type 2a	replace word
Type 3a	recycle prior phrase, including word
Type 4a	recycle prior phrase, replace word
Type 5a	add new element(s) in prior phrase, recycle word
Type 6a	change in syntactic framework
Type 7a	abandon structure, start new structure

Morphological Types

Type 1b	recycle morpheme
Type 2b	replace morpheme
Type 3b	recycle prior morpheme(s), including the morpheme at the initiation
Type 4b	recycle prior morpheme(s), replace the morpheme at the initiation
Type 5b	add new element(s) in prior morpheme(s), recycle morpheme
Type 6b	change morphological framework
Type 7b	abandon structure

I have added Type 5a (addition of some new element(s) prior the word at the initiation) besides the other 6 types that I adopted from Fox and Jasperson (to appear), because a considerable number of instances of Japanese repair exhibit this pattern.

The new set of types still does not exhaust all possible types of repair in the two languages, and some of the morphological types (e.g. Type 7b) may turn out to be impossible by definition. But the fact that the great majority of the instances in my data fall into one of these types provides a good motivation to pursue the comparison along these lines.

2.0 Comparison

2.1 Comparison of basic types

2.1.1 *Comparison of repair initiated during construction of the verb*

Let us first discuss the patterns exhibited by repair initiated during formulation of the verb complex. For English, "verb complex" refers not only to main verbs but also to "auxiliary + main verb" combinations. For Japanese, it consists of a verb root plus an inflectional ending, optionally followed by one or more auxiliary suffixes and/or particle(s).

Type 1a (recycle word) occurs in both languages. In English, however, this type of verb-only recycling is not frequent, and it never occurs in turn-initial position:

(4) ^K: I looked at the book once and I [didn't*] (0.2) **didn't** open it then.

In Japanese, on the other hand, verb-only recycling is fairly common, and it does occur in turn-initial position:

(5) K: *honto: ippai tabeta no?*
really a.lot eat:PST PLT
"Really? Did (you) eat a lot?"
M: [*tabe-**] ***tabete*** *nai.*
eat eat NEG
"(I) didn't [eat] **eat**.

In (5), M recycles only the verb stem *tabe-* in turn-initial position.

Type 1b (recycle morpheme) is not found in my data.

Type 2a (replace word) occurs only in English; my sample of Japanese repair contains no example of verb-by-verb replacement.

(6) ^C: which- (in math) is .hh generally [lit-*] **written** 2 root 2

Type 2b repair (replace morpheme) is presented in (3) above, which is reproduced below for convenience:

(7) K: *//ja nanji goro ni kurida*[*shi-**] ***soo?***
then what.time about TEMP go.out
"Then about what time (shall we) go out?"

Although I found only one example of this type, the presence of such a morpheme-by-morpheme replacement could mark a significant difference in the organization of repair between English and Japanese.

Type 3a (recycle phrase) shows another remarkable difference between the two languages. In English, this type of recycling is extremely common, and typically, the recycle goes back to the beginning of the subject NP of the verb at which the repair was initiated, as in (8):

(8) B: .hhh And then we had- <u>th</u>ey had trouble. [They ha-*] **they have** no place for our cla:ss.

The Japanese data provide no examples of recycling of this type.

Type 3b (recycle prior morpheme(s), including morpheme at initiation) is exemplified below:

(9) M: *honde atashi mo sono ato sugu* [*denwashi-**] ***denwashite***
and I also that after soon call call
mo yokattan da kedo ...
also good:PST:COMP COP but
"and I could have called (her) soon after that, but ..."

In (9), the compound verb *denwa-suru* "make a phone call" (lit. "telephone-do") is recycled. This example could be classified as Type 1a, because the whole word is recycled. However, since the verb consists of two parts, and the recycle covers not only the verbal part (*suru*) but also the preceding nominal part (*denwa*), I treat this example as Type 3b.[8]

Type 4a (recycle prior phrase, replace word) occurs in both languages, but I find only one example of this type in my Japanese sample:

(10) ^K: Now, [I want to simp-*] **I want to break it down** further than that, right?

(11) I: *dannasan no hoo ga ne:* [*byooin o* (.) *ta- mo-**]
husband GEN side GEN PTL hospital ACC
byooin o kee'ee shitete *...*
hospital ACC running do:STAT
"The husband's side runs a hospital ..."

In (11), I cuts off her utterance after she attempted twice to produce some kind of verb. I then recycles the object NP together with the accusative marker *o* , and produces a verb that seems to replace the ones that she attempted earlier.

Type 4b (recycle prior morpheme(s), replace morpheme at initiation) is not found in my data.

Type 5a (add new element(s) in prior phrase, recycle word) is exemplified as follows:

(12) K: *nn* [*yukkuri shaberi-*] >*nanka* < //***yukkuri arukinagara***
uhm leisurely chat well leisurely while.walking
shaberitai *mitaina koto o.*
chat:want like thing ACC
"uhm (she) said something like (she) wants to [chat leisurely] **chat leisurely while walking**."

The reader should not be misled by the translations in these examples. In (12), repair is initiated during the verb *shaberu* "chat," and then a new element, *arukinagara* "while walking," is inserted **before** the recycled verb. In the translation, however, the new element is added **after** the recycled verb+adverb, and therefore does not reflect the crucial characteristic of the repair in the original.

Type 5b repair (add new element(s) in prior morpheme(s), recycle morpheme) is not found in my data.

A few words about Type 6a and 6b are in order. Most examples of Type 6a repair (change in syntactic framework) reported in Fox and Jasperson (to appear) are cases in which the repairable first produced as a main clause is recycled and placed within an embedded clause by being preceded by a new main-clause subject+verb. For the sake of convenience for the argument, I present here an example of Type 6a repair initiated after the subject NP in English:

(13) N: 'n that made me feel good [he-*] **I guess he** sees some pretty bad ca:ses

This type of repair may also be characterized as concerning a change in evidentiality of a proposition. In (13), by adding *I guess* before the repairable, the speaker attributes the source of his statement to his "guess." In the following example, in which the speaker adds the epistemic modal auxiliary *should* before the verb, the sheer statement of a proposition is changed into an expression of the speaker's assessment of the probability of the truth of the proposition:

(14) ^K: Well [that ma-*] **that should make** this a lot easier, shouldn't it?

Japanese syntax, however, does not seem to provide a repair type comparable to Type 6a in English. First, main clauses follow embedded clauses in Japanese, and thus the speaker does not have to repair his/her utterance to change a main clause into an embedded clause. Second, evidentiality can be marked by certain kinds of auxiliaries, final particles, sentential adverbs, etc., but none of these markers seems to change the "syntactic framework" of the repairable, even if they are added through repair. These considerations therefore lead us to become suspicious of the existence of Type 6a as well as Type 6b in Japanese.

Type 7a (abandon structure, start new structure) is fairly common in both languages:

(15) H: And [I haf-*] (.) my class starts at two:

(16) K: ... *ano:* (0.3) [*doo shiyoo: toka i-**] *sore ga yukichan*
well how do QUOT s(ay) that NOM Yukichan
wa sugoku (.) *shimpai shiteyatta.*
TOP terribly worry do:STAT:PST
"Well, ['What should (I) do?' (she) sa-] Yukichan was terribly worried about that."

2.1.2 *Comparison of repair initiated after the verb*

It is sometimes difficult in Japanese to determine when a verb complex really ends because of the possibility of suffixing a number of elements (e.g. inflectional ending, auxiliaries, particles) to the root of the verb. In addition, "after the verb" can sometimes (but not always) mean "after the end of a TCU" in Japanese, because the verb complex often comes at the end of a clause. These facts may account for the relative paucity of clear examples of repair at this site of initiation in Japanese.

Type 1a (recycle word): The English sample provides only one example of verb-only recycling. The example exhibits a precise overlap at the verb, which seems to have motivated the speaker to repeat the verb in the clear:

(17) B: And I went to buy a book the other day I //[went*] .hh **went** down to NYU to get it because it's the only place that car//ries the book.
A: (Mm)
A: Mmm

As seen from this excerpt, verb-only recycling occurs not in a turn-initial position.

In Japanese, on the other hand, verb-only recycling does occur in a turn-initial position:

(18) K: *dakedo* [*iku* *] ***iku*** *to* *iwanaide* *itte* *asoko* *ni*
but go go QUOT say:NEG go there LOC
tometemorau *no* *wa* *warui* *ka* *na*
be.lodged COMP TOP bad Q PTL
"But does it trouble (them) if (we) go there without saying, "we'll [come] **come**," and (ask them) to let (us) stay with them?"

Type 1b (recycle morpheme): No example.

Type 2a (replace word): This type occurs in English, but not in Japanese:

(19) M: ..in reality I'd just [go:ne*] (0.2) **went** up //'n talked to them to ( ).
S: Did Sandy 'n Germaine go to that?

As in the examples of repair initiated during the verb, verb-only replacement is not found in my Japanese sample.

Type 2b (replace morpheme): I find no example of morpheme-only replacement.

Type 3a (recycle prior phrase, including word): This is the most common type at this initiation site in English. In this type, the speaker always recycles either the whole TCU that contains the repairable (as in 20), or a finite clause within that TCU (as in 21):

(20) ^A: [What if you put*] (4.6) **what if you put** double quotes around

(21) ^D: Cause I tutored for a class last semester [that had*] (0.7) uhm (0.7) **that had** a multiple choice

Contrary to the abundance of this type in English, I find no instance of Type 3a in my Japanese data.

Type 3b (recycle prior morpheme(s), including morpheme at initiation): No example.

Type 4a (recycle prior phrase, replace word): Again, examples of this type of repair occur only in English:

(22) ^M: ...taking physics 302. [I didn't have-*] (0.4) **I had** 301, but I had it a long time ago at Arizona State.

Type 4b (recycle prior morpheme(s), replace morpheme at initiation): More than half of the examples of repair at this initiation site in Japanese are classified as this type:

(23) K: *sore motte* (0.4) *burabura* (0.6) *//u::n* [*suru-**] (.) ***shiyoo*** *ka*
that hold roam uhm do do:will Q
na.
PTL
"(We)'ll hang around holding that."
H: *SOo ya ne.*
so COP PTL
"Yeah."

In (23), K changes the inflectional ending of the verb *su-ru* "do"; the repairable consists of the root of the verb *su-* and the conclusive or attributive ending *-ru* .[9] K then recycles the verb root and replaces *-ru* with the cohortative ending *-yoo* . (When the root of the verb *su-ru* is followed by the cohorative ending, it takes the form of *shi-* rather than *su-*.)

Type 5a (add new element(s) in prior phrase, recycle word): This type is exemplified as follows:

(24) H: *nanka* [*mita-**] (1.1) *an* ***nankoka mita*** *toko* *atte*
well see:PST um some see:PST place exist
"Well, I [saw], um, **saw some** places ..."

Again, the translation does not give the sense of the repair here. The utterance in (24) contains a so-called relative clause; *toko* "place" is the head noun, and what precedes it is the relative clause modifying that noun. (In Japanese, the relative clause precedes the head noun, and no relative marker is used between the head noun and the relative clause.) Within a relative clause, the verb must come at the end; that is, the verb in a relative clause immediately precedes the head noun. In (24), after H has produced the verb, which was supposed to be the last word in the relative clause, he cuts off the utterance, produces a quantifier, and recycles the verb.

Type 5b (add new element(s) in prior morpheme(s), recycle morpheme): No example.

Type 6a (change in syntactic framework): As discussed in the previous section, only English provides instances of this type:

(25) ^D: ...for instance- [you might have*], in this case you don't, but **let's say you might have** the mass, of one of these things on both sides

Type 7a (abandon structure, start new structure): An English example of this type is seen below:

(26) H: .hh [I went-*] (0.2) Alright like I get off at work at one,=
N: =uh hu:h,

I have no example of this type in the Japanese sample. The reason seems to be that since the verb often comes at the end of a clause, starting a new structure after the verb is unlikely to be seen as an instance of repair, but rather as a new clause produced after another.

2.1.3 *Comparison of repair initiated during and after an NP*

Type 1a (recycle word) occurs in both languages, irrespective of the syntactic roles of the NP at repair initiation:

(27) B: in this building- we finally got [a-*] .hhh **a** roo:m today in- in the leh- a lecture hall,

(28) T: ... *mukoo no [sutahhu-*] **sutahhu** mo sa: yuushuu.*
the.other.party GEN staff staff also PTL excellent
"... Their [staff] **staff** is also excellent."

Type 1b (recycle morpheme) is not found in my data.

Type 2a (replace word) is seen in both languages. However, this type is rare for repair initiated during the object NP in English.

(29) H: .hh And [tshe-*] **this girl**'s fixed up onna da- a blind da:te.

(30) H: *dakara:: ma nakoodosan ga [ryoo-*] **hutari***
so well middleman NOM bo(th) two.people
shookai shita ato ni:
introduction do:PST after TEMP
"So, after the middleman introduced [bo(th)] **the two** ..."

More than half of the instances of this type in Japanese occur in a turn-initial position.

Type 2b (replace morpheme) is exemplified below:

(31) H: *[nan-*] **yon**kai- yonkai shoobu o nikai yatta*
what four:time four:time match ACC two:time do:PST
no ka na.
COMP Q PTL
"(We) did two matches of [how many] **four** games, four games."

I treat (31) as an example of Type 2b because the repairable is interpretable as the first part of the "numeral+classifier" expression. (In this case, the repairable *nan* "how many" (lit. "what") designates an unidentifiable number.) According to this interpretation, the speaker replaces the numeral part of the "numeral+classifier" cluster with another numeral, namely *yon* "four." All the examples of this type that I find in my data are concerned with replacement of a numeral with another in the "numeral+classifier" expression.

Type 3a repair (recycle phrase) in English exhibits constraints on the organization of the repairing segment according to the site of repair initiation. An example from English in which this type of repair is initiated during the subject NP is seen below:

(32) B: [And this-*] **an::: this** guy for linguistics lass- laughs at his own: jo:kes (h)y'know

However, the English data provide no example of this type for repair initiated **after** the subject NP; that is, after completing the subject NP, no English speaker recycled the subject together with some preceding elements, e.g. discourse markers.

The following is an example of Type 3a repair initiated during the object NP in English:

(33) K: Plus once [he got- (0.8) some*] uhm (1.3) **he got some** battery acid on: (0.2) on his trunk or something.

Interestingly enough, as Fox and Jasperson (to appear) note, when this type of recycling is initiated during the object NP, the recycle goes back either to the beginning of the object NP or to the beginning of the whole clause, but it never goes to the beginning of the verb.

In my Japanese data, I found no examples of Type 3a repair initiated during/after an NP.

Type 3b repair (recycle morphemes) is found only in the "numeral+classifier" expression; all the examples of this type are recycling of the "numeral+classifier" cluster:

(34) T: *kyoo* (0.2) *kono jikan ni,* [*sanji* *] ***sanji***
today this time TEMP three:o'clock three:o'clock
juugohun ni
fifteen:minute TEMP
"at the same time as today, at [three] **three** fifteen"

Again, this type may be classified as Type 1a (recycle word).

Type 4a (recycle phrase, replace word) shows a similar distribution as Type 3a; that is, instances of this type are found for repair initiated during the subject NP, as in (35), but not for repair initiated after the subject NP:

(35) ^G: So [the syst-*] u- eh- y'know **the program** would- (.) would fork, Nexus would- (0.1) pause, and- and wait,

For repair initiated during the object NP, the following example illustrates Type 4a:

(36) A: Oh [I have the-*] **I have one** class in the evening.

In Japanese, I have only one example of this type, shown below:

(37) T: [*hantaigawa no koom-* *] *ano: seemon ka koomon*
the.other.side GEN school:gate well main:gate or school:gate
ka higashimon ka nishimon ka wasureta kedo ***hantaigawa***
or east:gate or west:gate or forget:PST but the.other.side

no mon *kara ...*
GEN gate from
"(from) [the other side's school g(ate)], well, I forgot if it was the main gate or school gate or east gate or west gate, but from **the other side's gate** ..."

In (37), T cuts off his utterance in the middle of the NP *koomon* "school gate." After a relatively long segment inserted between the repairable and the repairing segment, he recycles *hantaigawa no* "the other side's" and replaces *koomon* with *mon* "gate."

Type 4b (recycle prior morpheme(s), replace morpheme at initiation) is exemplified as follows:

(38) Y: *>dakara<* [*boku* *] ***bokuRA*** (.) *no sedai tte ...*
so I I:PL(=we) GEN generation QUOT
"So [my] **our** generation is ..."

In this example, Y first produces the first-person singular pronoun *boku* . Then he recycles it and puts the plural suffix *-ra* at the end to produce the first-person plural pronoun *boku-ra* . In a sense, the speaker replaces zero morpheme for the singular form with *-ra* for the plural. Therefore, I treat (38) as an instance of Type 4b.

Type 5a (add new element(s) in prior phrase, recycle word) can be seen below:

(39) K: *amerika ni iru* [*j-* *] ***nihon josee*** *mo tsuyoku naru.*
America LOC be w(oman) Japanese woman also strong become
"[W-] **Japanese women** staying in America also become strong."

In (39), K cuts off the noun *josee* "woman" after the first affricate, and then adds another noun, *nihon* "Japanese," which modifies the noun at the initiation.

Type 5b repair (add new element(s) in prior morpheme(s), recycle morpheme) is exemplified by the following example:

(40) M: [*jii-* *] ***ojiisan*** *toka obaasan toka ...*
old.man HON:old.man etc. HON:old.woman etc.
"Old man and old woman ..."

In (40), after cutting off *jiisan* "old man" in the middle, M adds the honorific prefix *o-* and recycles the noun.

Type 6a (change syntactic framework) is again restricted to English repair. This type occurs for repair initiated during/after the subject NP, as in (41), but not for repair during the object NP:

(41) A: Don said get something hot'n spicy and [this- *] **they said this** was and it isn't.

Type 7a (abandon structure) is common in both languages, regardless of the syntactic roles of the NP at the site of repair initiation:

(42)^D: The prob-* is it a multiple choice?

(43) H: *u:::::n ma otoosan wa maa sono* (.) *oto-* * *akirakani*
uhm well father TOP well uhm bro(ther) clearly
otoosan ni ya keDO::
father alike COP but
"Uhm, well (her) father is*, clearly (she) resembles (her) father, but"

2.2 Comparison of repair initiated non-adjacent to the repairable

Although it has not been stated explicitly, the examples that I have discussed so far are instances of "adjacent repair," in which repair is initiated at the site of the repairable. In this section, I will examine instances of "non-adjacent repair," in which repair is initiated after the speaker has to some extent passed the site the repairable.

The fact that non-adjacent repair is not initiated during or immediately after the repairable makes it more difficult for the recipient to identify the exact item being repaired. Therefore, as Fox and Jasperson (to appear) point out, speakers carefully design the organization of non-adjacent repair to help the recipient identify the repairable. This "recipient-designed" structure of non-adjacent repair is observed in both languages, as follows:

(44) ^J: Because that is true. If you have the [natural log] of a number e-* or **absolute value** of a number ex, .hh it's ex if ex is (0.4) positive."

(45) K: ... *dakara amerika ni* [*iku*] *nihon josee** *amerika ni*
so America LOC go Japanese woman America LOC
iru *j- nihon josee mo tsuyoku naru*
be Japanese woman also strong become
"So, Japanese women who [go] to America, Japanese women who [are] in America also become strong."

In both examples, what the speakers do after the repair initiation is to reproduce exactly the same syntactic format as that of the preceding phrase, and insert the repairing item in the very slot that corresponds to the one occupied by the repairable in the preceding phrase. In (44), the speaker repeats the format of "NP of a number ex" and then replaces *natural log* with *absolute value* in the NP slot. In (45), K replicates the format of "America LOC Verb Japanese woman," and replaces the verb *iku* "go" with *iru* "be, stay." These two Japanese verbs happen to have similar phonological forms as well.

Fox and Jasperson (to appear) also note that replacement of the repairable with the non-adjacent repairing segment is assisted by the fact that the repairing segment usually belongs to the same class of words as the repairable. In (44), both *natural log* and *absolute value* refer to "standard mathematical number concepts that represent a value arrived at by performing some operation on a prior number." In (45), both *iku* and *iru* are verbs that take a noun marked by the locative *ni* . Replacing the repairable with a same-class item is another recipient-designed strategy for non-adjacent repair.

In some instances of non-adjacent repair, the speaker produces an overt acknowledgment of upcoming repair. Consider the following examples:

(46) ^J: like- the tangent is the [adjacent] over the-* oops, I mean to say
//**opposite** .hh
P: Opposite over adjacent, ha

(47) Y: *soregurai* [*deeta*] *haitte-* deeta chigau na* ***joohoo*** *ga*
that.much data enter data wrong PTL information NOM
ne:: DEAAAntte atsumerareru.
PTL an.awful.lot collect:PASS
"Such an amount of data is in (the computer), no, it's not 'data', an awful lot of information is collected."

In (46), after cutting off the emerging utterance, the speaker J overtly acknowledges, by saying *oops* , that something was wrong with the preceding utterance and prefaces the repairing segment with *I mean to say* . In (47), the speaker Y repeats the repairable in a clause in which he overtly acknowledges that that is not the word he wanted (*deeta chigau na* "no, it's not 'data'"), and replaces the word with another. Although this kind of overt acknowledgment of repair only occurs with non-adjacent repair in the English data, it is more pervasively found in the Japanese data, not only with non-adjacent repair but also adjacent repair and non-first position self/other-repair.[10]

3.0 Discussion

In the following sections, I discuss the findings from the comparison in the previous sections, and attempt to provide possible explanations for them.

3.1 Differences

I will first focus on the differences in the organization of repair found in the two languages. There seems to be at least two major sources of those differences; one is the morphological differences between English and Japanese, and the other is the syntactic (espicially word-order) differences of the two languages.

3.1.1 *Differences based on the morphological differences*

One of the differences in the organization of repair based on the morphological differences between the two languages is that, as I mentioned in 1.2.2, some instances of Japanese repair are morphologically-oriented, while such instances are not found in English. This difference seems to be explained by the following morphological characteristics of Japanese.

First, Japanese has more complex verbal morphology than English; not only verbs but also adjectives and auxiliaries are suffixed with inflectional endings, which in turn may or may not be suffixed by certain kinds of auxiliaries and/or particles. Since such suffixation is essentially agglutinative, each morpheme is in most cases straightforwardly segmentable, and repair is sometimes oriented to such a segmented bound morpheme.

Second, compounding (both nominal and verbal) is fairly common in Japanese, and repair may operate on one constituting element in a compound word.

Third, since Japanese employs classifiers, we find a large number of numeral expressions in the form of "numeral+classifier." Since such expressions consist of a compound of two or more morphemes, repair may concern only one or some of them.

Now, the data of the morphological-type repair in Japanese presented in the previous section exhibit an intriguing distribution.

First, I find no example of Type 1b (morpheme-only recycling) in my data; in other words, there is no instance in which the speaker recycles a bound morpheme, such as # *kurida*[*soo**] ***-soo*** (# marks an invented example), in which only the cohortative ending of the verb would be recycled.

Second, Type 3b (recycling of morphemes) is rare. All the examples of this type in my data involve the recycling of a word that consists of two morphemes, e.g. compound words and numeral expressions. I find no examples in which the recycle goes back to the middle of a word where there happens to be a morpheme boundary; for instance, there is no example in my data in which the speaker recycles only the last two morphemes in a word that consists of three morphemes.

Since Type 1b and Type 3b concern recycling of the same element(s), the scarcity of these two types may indicate that the morphological types tend to be utilized when repair involves replacement or addition. Although I do not have enough evidence, I am tempted to speculate from this observation that instances of repair may not be uniform; for instance, those involving recycling and those involving replacement may be motivated by different factors, and that the morphological types may be employed only for the latter kind of repair, i.e. instances involving replacement or addition.

3.1.2 *Differences based on the syntactic (word-order) differences*

I will now turn to the differences in the organization of repair based on the syntactic (word-order) differences between the two languages.

First, as I argued in 2.1.1, Type 6a repair is not found in Japanese, because 1) main clauses follow embedded clauses, and thus repair does not have to occur when the speaker changes a clause that he/she has already started into an embedded clause; 2) adding evidentiality markers (e.g. sentential adverbs, final particles, auxiliaries, etc.) does not change the syntactic framework of the original clause.

Second, verbs seem to be closely tied to their subject in English, while they seem to be more independent in Japanese. As we have seen, when repair is initiated during or after the verb in English, it is extremely common that the recycle goes back to the subject of the verb. In Japanese, on the other hand, the recycle tends to remain within the verb at which repair is initiated. This difference could be a consequence of the following structural characteristics of English and Japanese.

Since English has a relatively rigid word order (SVO), and the subject is obligatory in the finite clause, it is very frequent that the verb is immediately preceded by the subject. In addition, subjects of many clauses in conversational English are unstressed pronouns, which can, in a sense, be viewed as clustering around a verb that carries more important information in the clause (see Myhill, 1988). These facts could suggest that the English subject tends to be closely tied to the verb in the clause, and thus that the cluster of "subject+verb" is recycled so frequently in English repair. As for Japanese, because of the extensive use of zero-

anaphora and relatively flexible word order, verbs may be immediately preceded by NP's with virtually any syntactic roles, and thus seem to have no fixed connection with a particular argument in the clause. This could be one of the factors responsible for the tendency of Japanese verbs to be recycled independently of other constituents in the clause.

Third, nouns also seem to be structurally tied to other constituents in the clause in English, whereas they seem to be more independent in Japanese. In English, some instances of repair initiated during an object NP show a recycle back to the beginning of the whole clause. In Japanese, on the other hand, most cases of repair initiated during or after a noun go only to the beginning of the noun at which the repair was initiated. Even when repair does go further back, it always remains within the NP to which the noun at the initiation belongs. The only example of phrasal recycling initiated during/after a noun in my data recycles a preceding noun plus the genitive *no* , which together modify the noun at the initiation site. Thus, the recycled preceding noun and the noun at the initiation are within the same NP.

The differences in the organization of repair discussed in this subsection could suggest that in English, constituents in the clause seem to have "tighter" structural relationships with each other, while in Japanese, constituents in a clause may be more independent.

3.2 Similarities

Since repair always occurs in interactional environments in both languages, there must be some similarities in the organization of repair which result from the fact that speakers need to cope with interactional pressures.

Since repair forces the recipient to "calculate" what is being repaired by what in order for him/her to understand the final product of the speaker's utterance, the speaker must carefully design the organization of repair so that the recipient correctly "calculates" repair as successfully as possible.

One obvious strategy for achieving this goal is to design the repairing segment so as not to be hearable as the continuation of what precedes it. In all the examples from both languages cited in this paper, the repairing segment is not hearable as continuing the preceding utterance.

Another obvious similarity found in both languages is that the segment following the site of repair initiation is always syntactically coherent. I have no example in which, when the recipient replaces the repairable with the repairing segment, the resultant clause is syntactically ill-formed.

A similarity is also found in the organization of non-adjacent repair, as I discussed in 2.2. Since what is going to be repaired may be far away at the time of repair initiation, non-adjacent repair poses more difficulty to the recipient in understanding what exactly is being repaired by what. Thus the speaker employs such devices as replication of exactly the same syntactic format, replacement of the repairable with an item from the same word-class, and/or overt acknowledgment of upcoming repair.

4.0 Conclusion

Since repair is such a complex phenomenon and our knowledge of the mechanisms of repair is still limited, interpretations of the results of the present

study cannot help being speculative. (Also, the size of the data is not large enough, especially for Japanese.) Nevertheless, we have seen some interesting correlations between the morpho-syntactic differences and differences in the organization of repair in the two languages. At the same time, we have seen some similarities in the "recipient-design" of the repair organization which deals with interactional pressures. The fact that even a small preliminary study like the present one has obtained such intriguing findings shows that future investigation of repair in a wider range of languages will be undoubtedly fruitful. To conclude this paper, I will sketch possible future studies on repair in different languages.

The present study suggests that syntactic differences such as word order affect the organization of repair in some important ways. Therefore, one type of language that we should definitely investigate next is verb-initial languages, to which neither English nor Japanese belongs. Since verbs seem to play a significant role in the clause, e.g. in projecting the type and the number of arguments, it is worth examining how the presence of the verb in the clause-initial position affects the organization of repair. To go one step further, if the initial verb carries some markings for its arguments (head-marking), it will be intriguing to see whether repair is organized with respect to such markings. Can the speaker repair the markings before producing the arguments? Is the verb always recycled when the speaker replaces one argument with another which requires a different marking on the verb? Is marking-by-marking replacement possible?

In addition to differences in word order, the present study suggests that the flexibility of word order as well as the optionality of arguments seem to be relevant to repair organization. Such parameters should also be considered in future research.

Another type of language that should be studied with regard to repair is polysynthetic languages. Since most instances of repair found in English and Japanese are organized in terms of words (with some exceptions of morphologically-oriented repair in Japanese), a study of repair in a polysynthetic language may reveal a completely different picture of repair organization. Questions that could be raised are: Are all instances of repair in a polysythetic language morphologically-oriented? If so, do all morpheme boundaries equally serve as a place to which the recycle goes back? If there is any morpheme boundary from which the speaker never starts the recycling, why does it behave that way?

Future research on repair in diverse languages may demonstrate that the phenomena currently subsumed under the rubric of repair in fact consist of different sets of phenomena with different motivations. Speakers of other languages may use other devices to achieve a certain goal for which English speakers may use repair. One place to look at is turn-initial positions, where English speakers sometimes use recycling to obtain the floor (Schegloff, 1987). Do speakers of other languages recycle their utterance for the same purpose? If not, what do they do?

As I mentioned above, understanding the mechanisms of repair requires by far a wider and deeper knowledge in various domains than what is currently available to us. Nonetheless, we are sure that further study on the relationships between such interactional phenomena as repair and the structures of languages will make a substantial contribution to understanding the relationship of grammar and interaction.

NOTES

* I would like to thank Barbara Fox, Tsuyoshi Ono, Sandy Thompson, and Bob Jasperson for thier helpful comments on an earlier version of this paper. I am also grateful to Ryoko Suzuki and Tsuyoshi Ono for the use of their transcripts for the present study. In some cases I have modified the spelling of segments according to the transcription conventions employed in this study.

[1] By the term "syntactic structures" I mean what is typically referred to as "morpho-syntactic structures."

[2] Ono and Suzuki (1992) argue that it is often observed in conversation that some elements are expressed after the predicate, and that in some cases such a non-canonical word order is under the process of grammaticalization.

[3] Among the 500 examples, 300 examples are collected from transcripts of spontaneous conversations, and 200 examples are from face-to-face tutoring sessions. Utterances taken from the tutoring sessions are preceded by ^ in the examples cited in this paper. For the details about the data from the tutoring sessions, see Fox and Jasperson (to appear).

[4] The following abbreviations are used in the interlinear (pseudo-)morphemic translations for the Japanese data: ACC (accusative), COMP (complementizer), COP (copula), GEN (genitive), HON (honorific), LOC (locative), NEG (negative), NOM (nominative), PL (plural), PLT (particle), POL (polite), PST (past), Q (question particle), QUOT (quotative), STAT (stative), TEMP (temporal), TOP (topic marker).

[5] One such factor investigated by Schegloff (1987) is turn organization.

[6] The terms for inflectional endings are taken from Shibatani (1990).

[7] Since I found no examples of morphologically-oriented repair in English, the morphological types only concern Japanese repair. The term "morpheme" in the definition of the morphological types refers to bound morphemes such as inflectional endings of the verb, elements in compound words, and classifiers in numeral expressions. I did not treat particles as bound morphemes, but rather as independent words. This treatment, however, may turn out to be arbitrary.

[8] Another possible analysis of (9) is to classify it as an instance of Type 3a. This analysis is based on the view that *denwa-suru* is not so much a compound verb as two independent words, i.e., an object NP and the verb with the omission of the object particle *o* after the object NP. If we take this view, (9) will be an instance of O+V recycling. The reason why I prefer the morphological analysis is that compounding of the form "NP+*suru* " is very productive in Japanese, and thus the expression *denwa-suru* seems to have become fixed enough to be felt as one word.

[9] The conclusive ending and the attributive ending of Japanese verbs have an identical form. The difference is that the attributive ending is followed by a nominal, while the conclusive ending is not.

[10] One such device frequently used in Japanese conversation is*te yuu ka* "or I mean/or I would say" or its variants. The following is an instance in which*to yu ka* (a variant of *te yuu ka*) is used to initiate adjacent repair:

H: *soko mo kekkoo* [*yoka-**] >*to yu ka* < ***Oishikatta*** ...
there also pretty good:P(ST) I.mean delicious:PST
"that (restaurant) was also goo-, I mean, delicious..."

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APPENDIX (NOTATIONAL CONVENTIONS IN TRANSCRIPTS)

The following notational conventions are used in the transcripts.

//	point at which the current utterance is overlapped by the next utterance produced by another speaker.
(0.0)	length of silence in tenths of a second.
(.)	micropause
<u>underlining</u>	relatively high pitch
CAPS	relatively high volume
::	lengthened syllable
-	glottal stop self-editing marker
=	"latched" utterances, without no usual beat of silence between them
?	rising intonation
.	falling intonation
,	continuing intonation
( )	unintelligible stretch
hh	audible outbreath
.hh	audible inbreath
(hh)	laughter within a word
> <	increase in tempo, as in a rush-through

Pause as a window on the mind and the grammar --- evidence from Spoken Chinese Discourse

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Thinking is form.

---A sign at the Museum of Contemporary Art in Los Angeles

Midwestern Americans, who may find themselves interrupted in conversations with easterns, become aggressive interrupters when they talk to Athabaskan Indians, who expect much longer pauses. Many Americans find themselves interrupting when they talk to Scandinavians, but Swedes and Norwegians are perceived as interrupting by the longer-pausing Finns, who are themselves divided by regional differences with regard to length of pauses and rate of speaking....

D. Tannen (1990:201-202)

1 Introduction

Writing and speech have different natural histories, serve different purposes and their exact relationships have been a matter of some controversy. Historically, the dominant view has been that written language is primary and spoken language is an imperfect copy of it. This view derives in part from the assumption, now controversial, that writing is the attempt to represent speech and in part from the prestige and authority which has often been given to written works (Chafe 1985; Chafe and Tannen 1987).

On the other hand, linguists, until very recently, had subscribed, uncritically, it now seems, to the view that spoken language is primary and "writing is merely a way of recording language by means of visible marks" (Bloomfield 1933:21). Olson (1993:2) has argued, plausibly, that writing systems provide the concepts and categories for thinking about the structure of speech rather than the reverse and that awareness of linguistic structure is a product of a writing system, not a precondition for its development (see also Householder 1971, Derrida 1976).

The importance of writing regained ascendancy in the sixties and seventies as a number of scholars in various fields began to explore ideas about how literacy may have altered human cognition to make modern scientific thinking possible, often called the "literacy thesis" (Goody and Watt 1968, Havelock 1963, Ong 1967, Goody 1977, Havelock 1976, Ong 1977). According to these researchers, shifts from magic to science, or from the "pre-logical" to the more and more "rational" state of consciousness, or from Levi-Stauss "savage" mind to domesticated thought can be explained as shifts from orality to various stages of literacy. Knowledge in literate societies is seen as facts and insights preserved in written records, whereas in oral culture, formulaic expressions (sayings, clichés, proverbs and so on) are the repository of received wisdom. Ong (1977) observes

that in oral tradition, thought is exquisitely elaborated through a stitching together of formulaic language which he calls ' rhapsodic' and in literate tradition, thought is analytic, sequential and linear. He also makes the interesting point that truth in oral tradition resides in common-sense reference to experience, whereas in literate tradition, it resides in logical or coherent argument and that it is the oral sense of truth that comes naturally.

Olson (1977, 1986, 1987) attributes to literacy the development of explicit, autonomous prose, the ability to distinguish data from interpretation, and the growth of metalanguage, all of which are held to be essential to systematic thought (see Halverson 1991 for a dissenting view).

During the last decade, a number of scholars in various fields have been looking at differences between spoken and written language, trying to establish more clearly just what the differences between them are, and to identify the reasons for these differences (Chafe 1983, 1985; Chafe and Tannen 1987; Halliday 1989). It is commonplace that writing, the constituent structure of a paragraph or a sentence is indicated by punctuation. A written paragraph is comprised of sentences which are separated by a major punctuation mark (a period, a question mark or an exclamation mark); within sentences, clauses and smaller elements are separated by a comma.

Speech differs from writing in the ubiquitous presence of pauses--silence between chunks of speech. Much of the constituent structure of a discourse remains a mystery, however, at least in the case of spoken Chinese. Pauses in speech are affected by the syntactic structure of an utterance, by the discourse organization of utterances and by the process of speech production: the searching for lexical and phrasal targets and the planning of utterances.

2 Spoken Chinese

Much recent work in discourse research has shown that spoken language can be studied in terms of the basic unit of speech production, the 'intonation unit', which is a brief spurt of vocalization in the speaker's focus of consciousness under a single coherent intonation contour and is typically initiated with a brief pause or hesitation that lasts anywhere from a fraction of a second to several seconds and terminated with some kind of clause-final intonation contour (Chafe 1987:22). IUs are classified by Chafe (1987) into five types: clauses, pieces of clauses, orientation for clauses, clausal disfluencies and expressions of agreement or understanding found in conversation. Thus sometimes IUs can be smaller in size than clauses, though they are typically realized as clauses. By way of illustration, the following is a series of intonation units produced by a female speaker of a Ghost text:

(1) a. ...(.9) (H) ranhou=,_
b. ... ta jiu=,_
c. ...(.9) qianfangbaiji zhan zhe nage= lingmei.\
d. ... xiwang ta qu zhao ta nupengyou tan.\
e. ... (H) nage=,_
f. ... nage lingmei shoubuliao,_
g. jiu=,_

h. ... shoubuliao ta darao.\
i. .. jiu qu=,_
j. ... bang ta= chumian=,_
k. ... zhao ta de nupengyou.\
l. ... (H) danshi,/
m. ... ta nu- nupengyou jiu shi=,_
n. ... (TSK) jiu shi=,_
o. ... ^genebn bu xiangxin shuo you=,_
p. ... zheyangzi shuo,_
q. .. ren si hou,_
r. .. hai you huenpo liu sai shijian de zhe zhong=,_
s. ...(.8) zhe zhong qingxing cuenzai.\

Spoken Chinese appears to be produced in approximately 1.5 second spurts of IUs. In the fragment above, each line represents an IU on which the speaker is focusing her consciousness at a particular moment (Chafe 1980, 1987). There is a difference between the comma intonation signaled by the non-falling pitch at the end of (b) and the period intonation that is signaled by the falling pitch at the end of (c). Comma indicates a class of intonation contours whose transitional continuity is understood as continuing and period indicates a class of intonation contour whose transitional continuity is understood as final in a given language.

Combinations of intonation units are clustered into successively larger units of clauses, topic chains and paragraphs. A topic chain is a stretch of discourse consisting of two or more clauses sharing the same topic and corresponds roughly to the extended sentence in the sense of Chafe (1980). A paragraph as a discourse unit can be justified by paragraph closure and thematic unity. Paragraph boundaries often occur at points of major shifts in scene, time, space, world, character configuration, or event structure, which require the speaker to orient himself and thus often result in greater processing difficulty, signaled by hesitations, false starts, or longer pauses.

Line (a) marks the beginning of what I take to be the first paragraph of the fragment. A capital H in single parentheses (H) indicates audible inhalation. In conversation, it is often used as a signal that one is about to take a turn at speaking (Sacks et al. 1974, cited in Du Bois et al. 1993). In my data, (H)s often appeared, significantly, at the initial boundary of a paragraph, as in (a) here, or of a topic chain, as in (e) or (l).

Just over half of the IUs in this fragment end with an equal sign (=). This indicates that the preceding segment is lengthened prosodically. Prosodic lengthening frequently occurs at the end of an IU and suggests that the speaker is encountering some encoding difficulty, the nature of which is determined in part by the category of the lengthened word in question and in part by the location of that word in an utterance.

All of the IUs above, with the exception of (g) are preceded by silent pauses (SPs). The shortest of the SPs, indicated here by two dots (..) is very short, barely perceptible and is about 0.2 seconds in duration. Pauses of less than 0.2 seconds are purely phonational gaps (Boomer 1965). Long pause, indicated by the three dots (...) in the transcript, is noticeable and about 0.3 to 0.6 seconds,

inclusive, in duration. More distal pauses are indicated by three dots followed by a number in parentheses specifying the actual discourse, as in (a) and (c).

Two other types of pause, one of which is exhibited in the fragment above, can be identified: filled pauses (FPs), indicated by *uh*, *eh* or *uhm* and verbal fillers (VFs), exemplified by *jiushi* in (m) and (n). VFs are used as verbal markers of hesitating. Some of the traditionally recognized connective words (e.g. *ranhou*, *na*) were also used to signal hesitating, but I have excluded them from this category in order to single them out for special attention in section 7.

A pause is introduced at the onset of an utterance to enable planning to occur or at the end of an utterance for the speaker to plan for the next speech unit. In monologues a pause may be introduced when the speaker is conceptualizing an idea, formulating a syntactic frame or making a lexical decision. In conversation, a speaker may pause to yield his or her turn; s/he may also use a filled pause to hold a turn. The timing and placement of pauses convey significant information about conversational style characteristic of a speaker or a people, as the opening quote of the paper shows.

Pauses then are both linguistically and psychologically important. On the linguistic hand, they can be shown to shed light on the nature of constituent structure; on the psychological hand, they offer an oblique insight into mental processing involved in the production of utterances. Given the roles played by pausing in speech production and perception, it is perhaps surprising that it has not attracted more attention from discourse analysts[1].

In this paper I offer a detailed analysis of the location at which pauses fall within utterance sequences in order to determine whether the different types of pause are fundamentally different strategies of speech planning and to better understand how grammatical structure of Chinese is shaped and become 'sedimented' through repeated use in discourse (cf. Hopper 1987). Specifically, two research problems are addressed. First, what are the functional properties of various types of pause in different utterance locations? Second, what can we learn from pausing behavior about the grammaticization of word order and constituent structure in Chinese?

3 The data

The data for this study consisted of five pear-film narrative texts, three narrative texts based on the film Ghost and a conversational extract among four-adult native speakers of Mandarin Chinese lasting over thirty-eight minutes. The pear film itself was 15 minute long and the speakers were asked to narrate the story shortly after the presentation of the film. By contrast, Ghost was a full-length film, lasting 127 minutes and the three speakers were told to recount the story in the fall of 1991, over one year after they had seen the film.

All of the texts had been transcribed based on conventions given in Du Bois et al. (1993). Important details of the data are set out in Table 1a.

Table 1a. Some important details of the data

data type \ text	*P1*	*P2*	*P3*	*P4*	*P5*	*G1*	*G2*	*G3*	*Conv*	*mean*
duration (in sec)	53	125	52	176	407	301	444	448	2326	
clause	32	58	19	67	146	61	113	83	NA	
IU	49	91	29	123	306	245	284	335	2021	
duration per IU (in sec)	1.08	1.37	1.79	1.43	1.33	1.23	1.56	1.34	1.15	1.36
word per IU	3.8	3.8	4.58	3.93	3.16	3.1	2.84	3.29	3.1	3.51
words per pause unit	4.23	4.67	6.32	5.03	3.49	3.55	2.98	3.44	3.27	4.1
words per min	200	166	153	162	144	151	109	147	161	155

Much of the data in Table 1 is self-explanatory, but a number of facts stand out and merit special comments. First, the average size of the intonation unit in spoken Chinese narratives was 3.56 words, that in the conversation was 3.1 words and these combined together yield a mean of 3.51 words. There was much variation across speakers, texts (pear vs. Ghost) and registers (narrative vs. conversation). Separately, the mean length for pear stories was 3.85 words, and for Ghost stories 3.07 words per intonation unit. The median length was 2.63 words per IU for the conversation, 2.17 words for Ghost stories and 3.26 words for pear stories.

Table 1b provides the frequencies of lengths of IUs (in words) in both conversational and non-conversational texts (pear and Ghost stories).

Table 1b. Frequency table of lengths of IUs

length of IU (in words)	Relative frequency of IU in text	
	conversation	non-conversation
1	0.13	0.199
2	0.25	0.203
3	0.20	0.196
4	0.15	0.140
5	0.12	0.132
6	0.09	0.088
7	0.03	0.035
8+	0.02	0.024

A bar chart for the non-conversational data in Table 1b is constructed in Fig.1. It is clear that no particular value dominated the data. Because the bar chart skews to the left, there is no typical value of the set. We conclude that there is no single modal value for the length of IUs in Chinese non-conversational data. The modal value for the conversational data, on the other hand, appears to be 2.

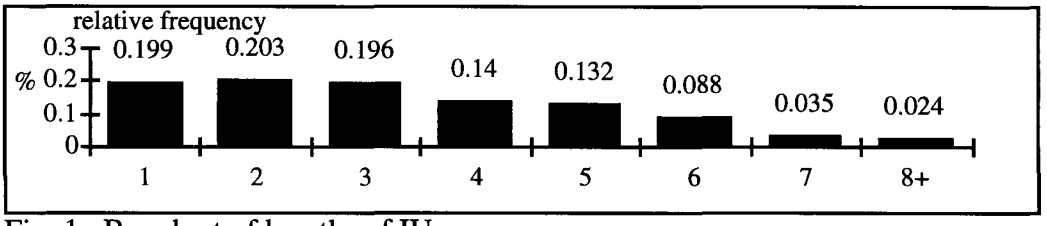

Fig. 1. Bar chart of lengths of IUs

Chafe (to appear) has noted that the average size of substantive (as opposed to reactive) IUs in English is 4.84 words, with a modal length of four. Chafe has proposed in a number of papers (see Chafe 1987; to appear) that there are important cognitive or interactional constraints for the length of IUs in any language. One such constraint is the one new idea constraint. That is, each IU contains at most one new piece of information. We will see later in this study that this constraint explains much of the realization of syntax in our data and, as a corollary, the average length of IUs.

Words per pause unit can be arrived at by noting the fact that some two IUs were produced in separate intonation contours, but there was no perceptible pause between them. Words per pause unit are thus necessarily longer than words per IU.

Since words per IU vary from speaker to speaker and from text to text, words per minute by the speakers must also vary. As expected, the mean length of words per minute in the pear texts, at 165 words, was much longer than that for the Ghost texts, at 136 words. Table 1a suggests that the modal length of words per minute in Chinese is 160-165 words, since that is the more typical value in the set.

What the data in Table 1a suggest, then, is that speakers of Chinese roll off the tongue approximately 160 words per minute, pause about every 3.5 words to plan for the next utterance and speak in approximately 1.5 second spurts of intonation units, which appears not to have a modal value, at least in the non-conversational texts[2].

4 Frequency of pauses and verbal fillers

The frequencies of silent pauses (SPs), filled pauses (FPs) and verbal fillers (VFs) showed a large variation across the nine texts, as set out in Table 2. Table 2 shows that SPs dominated, accounting for 95.6% of all pauses and fillers, followed by combinations of SPs and FPs, in that order, in a distant second at just 3%[3]. Since FPs by themselves very rarely occurred, and since SPs can be shown to serve a variety of discourse functions (see below), one can hardly claim, as does Stenström (1990:217), that the fact that FPs were far less frequent than SPs may be an indication that SPs serve typically as juncture pauses, while FPs primarily indicate hesitation. What appears to be at work here is that it is the combinations of SPs and FPs, not FPs alone, that indicate hesitating in spoken Chinese discourse, though that was not even the preferred strategy for the speakers of the texts under study. The preferred strategy for hesitating was to use

SPs, especially long SPs, since the latter type of pause was much more frequent, in both narrative and conversation, as Table 2 shows.

Table 2. Distribution of SPs, FPs and VFs in nine texts

pause type \ text	*P1*	*P2*	*P3*	*P4*	*P5*	*G1*	*G2*	*G3*	*Conv*	*total*
SP	41	56	21	84	210	214	225	301	1570	2722
%	100	88.9	100	92.3	78.3	97.7	91.1	96.2	99.2	95.6
FP	0	0	0	1	0	0	0	0	2	3
%										0.1
VF	0	1	0	0	0	0	0	1	2	4
%										0.14
SP+FP	0	4	0	6	58	2	8	0	9	87
%					21.6					3
SP+VF	0	3	0	0	0	3	8	15	0	29
%							3.4	4.7		1
FP+VF	0	0	0	0	0	0	0	0	0	0
%										
total	41	64	21	91	268	219	241	317	1583	2845
SP per IU	0.84	0.69	0.72	0.74	0.87	0.89	0.87	0.93	NA	0.82

It is worth pointing out that in the conversation text, where 99.2% of the pauses were SPs, one would have expected a far stronger showing of FPs to signal turn initiating or turn holding, which, however, was not the case. Inspection of the text shows that the speakers compensated for the absence of FPs by the frequent use of utterance-final particles to signal turn yielding. Indeed, in 2021 IUs, a total of 438 final particles were used, 213 of which were taken by the interlocutors as turn yielders.

We now turn our attention to VFs. These are basically just two VFs in the data: *nage* and *jiushi=* (or *jiushishuo=*). As pointed out earlier, some of the connective words linking intonation units also served, literally, as verbal fillers, namely, as verbal markers of hesitating, e.g. *ranhou*, *na(me)*. There are important functional differences between the two sets of words, however. First, the two VFs can in no way be interpreted as providing a linkage between intonation units as a way of understanding the association that may exist between ideas. The VFs are just verbal fillers, pure and simple, to mark points of hesitating in the discourse. Secondly, while the VFs usually occurred following a comma intonation and signaled that the speaker was experiencing some encoding difficulty casting about for a noun or a noun phrase target, in the case of *nage*, or for a lexical verb or a verb phrase target, in the case of *jiushi*. True connective words typically occurred following the closure of a period intonation, suggesting that the speaker was pausing to plan for a new utterance. In example (1), intonation unit (n) instantiates the use of the verbal filler *jiushi=*. In the earlier unit (m), it occurred as part of an IU and signaled the start of a search for a predicate expression. But the search was not immediately successful, as indicated by the (TSK) in (n), a sign of annoyance or frustration, as well as a sign of re-planning.

An analysis of the 29 occurrences of the VFs in the data shows that 93.1% of the occurrences occurred following a common intonation, and that 86.2% of them were followed by some kind of noun phrase or verb phrase expression in the following IU. In the remaining 13.8% of the occurrences, the speakers either abandoned what they had projected to say (2 occurrences) or proceeded to complete their utterance with a full clause (1 occurrence).

VFs and connective words thus are associated with different pausing behaviors and perform distinct discourse functions. They occur at different points in intonation contour and suggest a difference in the size of speech unit being planned for. However, connective words do not form a homogeneous class. In section 6 below, we will look into the differing roles played by the connective words both as paragraph introducers and as topic chain introducers.

Intonation units found in spoken language manifest the flow of ideas, while clauses manifest the flow of language the way ideas are verbalized. Ideas, in themselves, are successive activations of small amounts of information, which can be expressed in terms of a starting point and added information, a subject and a predicate, a clause (Chafe 1988:4). Between the activation of ideas and the motor articulation is the central act of formulating what one intends to say. Concurrently with the act of formulating, there is a pause that is indicative of the act of central planning. In other words, speech must be suspended to enable planning to occur. But the amount of anticipatory planning and concurrent planning is severely limited. We can easily appreciate the severity of the limitation by noting that 82% of the IUs in the data were preceded by some type of pause (Table 2) and that less than 10% of the IUs were realized as full clauses (see below). A question now arises as to whether there might be a gradual reduction in processing difficulty and thus in pausing as the discourse proceeds. One would surely expect this to be the case, since as the discourse wears on, there would be a reduction in inter-personal stress and in the uncertainty about lexical choices. To find out, I compared the pausing behavior in the first and second half of the P5 text. Results of the analysis are set out in the next section.

5 Pausing as a function of temporal structure?

A striking feature of the P5 text was a much higher incidence of combinations of SPs and FPs in comparison with other texts. An analysis of these occurrences and SPs revealed that there was an across-the-board fall in both types of pause in the second half of the text and that the fall was most apparent in combinations of SPs and FPs (henceforth SP+FP), as set out in Table 3 below.

Table 3. Percentage distribution of pauses in P5

P-type \ text location	*1st half*	*2nd half*
SP (short)	53.2% (25)	46.8% (22)
SP (med)	53.8% (97)	46.2% (83)
SP (long)	58.5% (24)	41.5% (17)
SF+FP	72.4% (42)	27.6% (16)

Solely on the strength of the evidence of the P5 text, it might be suggested that a reduction in both SPs and SP+FP in the second half of the narrative is probably related to a gradual reduction in some encoding difficulty being experienced and a reduction in the uncertainty between the two parties in the narrative situation (narrator and the listener) (Brotherton 1979:200; cf. Maclay and Osgood 1959). The hypothesis of a gradual reduction in encoding difficulty seems then to make perfect sense, since as lexical choices are made and established in short-term and long-term memories, they would facilitate thought process and increase our linguistic awareness of them.

Unfortunately, this hypothesis cannot be sustained. An analogous analysis performed on the Ghost texts, which made little use of SP+FP, yielded a completely different picture. Table 4 shows that a majority of SPs, contrary to the results shown in Table 3, occurred in the second half of the texts and that the increase in the occurrence rates of all of the SPs was also across the board.

Table 4. Percentages of distribution of SPs in Ghost texts

\ text	*G1*		*G2*		*G3*	
P-type	*1st half*	*2nd half*	*1st half*	*2nd half*	*1st half*	*2nd half*
SP (short)	21.1 [22]	14.5 [16]	11.8 [15]	9.3 [13]	8.3 [13]	8.5 [14]
SP (med)	54.8 [57]	55.4 [61]	36.2 [46]	38.8 [54]	66 [103]	62.2 [102]
SP (long)	24 [25]	30 [33]	52 [66]	51.8 [72]	25.6 [40]	29.3 [48]
total	48.6 [104]	51.4 [110]	47.7 [127]	52.3 [139]	48.7 [156]	51.3 [164]

Such a complete flip-flop in the distribution of SPs in the two sets of data suggests that an across-the-board rise or fall in the second half of the texts notwithstanding, that rise or fall might not be statistically significant. The hunch is confirmed: the chi-squared test shows that neither the difference in distribution of the pauses between the first and the second half in P5, as presented in Table 3 (χ^2=6.62, df=3), nor that in the Ghost texts (χ^2=2.01, df=1 for G1, χ^2=0.47, df=1 for G2, χ^2=0.51, df=1 for G3), as presented in Table 4, was not statistically significant at the 5% level. I therefore conclude that the hypothesis that there is a gradual reduction in processing difficulty as the discourse proceeds cannot be maintained, at least in its present formulation.

6 Reasons for pausing

There are several possible reasons for hesitation pause. Evidence suggests that utterances are verbalized roughly one clause at a time and are formulated in three stages: conceptualization, formulation and articulation (Levelt 1988). At the conceptualization stage, speakers create a non-linguistic conceptual representation of what they intend to say; at the formulation stage, speakers begin with the

conceptual representation of their speech intentions, create a syntactic frame and content words to be inserted into it. Finally, at the articulation stage, speakers create an articulatory program that determines the actual delivery of the utterance.

Speakers may introduce a pause at the onset of an utterance to make a lexical decision or to plan overall content for the current utterance. Pausing occurs since their idea, thought or knowledge (roughly, visual or verbal imagery) may be so irregular that there is no pre-existing lexical concept or conceptual structure that matches it. More commonly, speakers pause, since though their idea, thought or knowledge does appear in conceptual structure, but it is constituted in such a way that it cannot be readily translated into syntactic form and deposited into short-term memory (Jackendoff 1987:321), as often seen in an instantaneous translation from one language into another. Broadly, then, when speakers pause to make a lexical choice or to formulate a syntactic frame or to gather their thought, they may be vaguely aware of some affect or feel to the experience, but there is yet no form that can be called on to express the affect or the feel.

The point at issue is whether pausing is determined by something in the nature of the grammar or whether pausing reflects conceptual planning operation that is then translated into syntactic form. Although one cannot rule out a third possibility, namely that pausing is determined by a simultaneous assembling of conceptual planning and syntactic formulation, the present data appear to suggest that structural factors play a relatively minor role, in temporal terms, in pause production. This is what I will attempt to show below.

7 Paragraph, topic chain and pausing

When one listens to spoken language, or when one examines a transcription of it, on cannot help noticing that initial fumbling, false starts or disfluencies are often followed by fluent speech runs of several intonation units. The greatest of the fumbling or the longest of the pausing time often occur at points of a paragraph-like or topic chain-like units, usually introduced with connective words like *ranhou, na(me), danshi* and a few others. In the example 1, (d) through (r) were tolerably fluent. Just prior to this fluent sequence, however, there was a point of long pause between (a) and (c), which happens to be the initial point of what I take to be a paragraph boundary.

An example of a topic chain being produced by extreme hesitating is in lines (l)-(n) of the Ghost story in G3:

(2)
a. ... (H) ranhou ta --
b. ... danshi ta hen bu fangxin.\
c. ...suoyi ta jiu gen zhe nage huairen.\
d. yizhi zou,_
e. yizhi zou,_
f. ... (H) jiu zoudao nage huairen zhu de difan.\
g. ... ranhou ta jiu tingdao nage huairen,_
h. ... da%..dale yitung ^dianhua.\
i. ... (1.2) (GULP) jiushi gen ta tunghuo jiang shuo=,_
j. ... (1.) jiushi=,_

k. ... shiqing meiyou deshou nayangzi.\
l. ... (.8) (H) ranhou=,/
m. ... (2.3) ^ta zai...zaipangbian,_
n. ting ta jiang dianhua de shihou,_
o. cai ^faxian,_
p. ... (.7) shuo=,_
q. ... (1.2) ta=,_
r. ... (1.2) ta de tunghuo jiushi,_
s .. ta zai yinhang de tungshi.\

What appears to have caused the fumbling here is that there was a change in narration from a pure description, up until that point, of the physical events of following a thug to his residence and of seeing him making a phone call, to an interpretation of the content of that phone call. Since that interpretation was the result of an inference, a mental act, based on a series of events presented later in the story, there was thus in (l)-(o) a major shift in event configuration, although on the surface there was no evidence of any change in time, in location or in character configuration just by looking at the transcription itself.

It is productive to suppose that narrative interpretations associated with mental act verbs (discover, believe, infer) involve a greater cognitive effort, since they call for active restructuring of apparently disparate sequences of events in the film, thereby establishing some semblance of order. It is of some interest to observe that there were a total of 26 such mental act verbs in the Ghost texts, 21 of which were, as expected, preceded by extreme fumbling or extended pauses.

Is there an isomorphism between pausing and structural units of some specified length and form? Would pausing behavior at paragraph boundaries differ from that for topic chain boundaries? To find out, I made a determination of paragraph and topic chain boundary points of the G3 text, and noted the amount of time of pausing between these points. The results are set out in Table 5.

Table 5. Boundary types, pause time and boundary introducer

pause type	*pause time (in sec)*	*boundary introducers*	*pause type*	*pause time (in sec)*	*boundary introducers*
P1	2.4	ranhou	P8	1.4	ranhou
TC2	2.3	jieguo	TC2	2.1	ranhou
P2	1.6	ranhou	P9	1.4	na
TC2	1.8	ranhou	TC2	2.1	ranhou
P3	2.7	jieguo, you yitian	TC3	1.4	ranhou
TC2	2.7	suoyi	P10	1.2	ranhou
P4	1.2	ranhou	TC2	2.6	jiu
TC2	3.1	ranhou	P11	2.8	ranhou
P5	2.5	keshi	P12	1.3	na
TC2	0.6	ranhou	TC2	3.5	zheyangzi yilai de hua
TC3	0.6	danshi...zhihou	P13	2.9	jieguo zai dangtian
TC4	1.2	ranhou	TC2	3.3	ranhou
P6	2.4	ranhou	P14	4.3	ranhou
TC2	2.4	danshi	TC2	4	na
TC3	1	erqie			
P7	4.7	ranhou			

Table 6. Contingency table based on Table 5

(a) observed frequencies															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	total
paragraph	2.4	1.6	2.7	1.2	2.5	2.4	4.7	6.7	1.4	1.2	2.8	1.3	2.9	4.3	38.1
topic chain	2.3	1.8	2.7	3.1	0.8	1.7	4.7	2.1	1.3	2.6	2.8	3.5	3.3	4	36.7
(b) expected frequencies															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	total
paragraph	2.4	1.74	2.76	2.2	1.69	2.1	4.8	4.5	1.4	1.94	2.8	2.4	3	4.2	38.1
topic chain	2.3	1.66	2.64	2.1	1.61	2	4.6	4.3	1.3	1.86	2.8	2.4	3	4.1	36.7

Based on Table 5 we construct a contingency table in Table 6. The chi-squared test shows that the difference in the amount of pause time between paragraph boundaries and topic chain boundaries was not statistically significant. (χ^2=5.73, df=3. The tabulated 5% value is 22.0). This means that the cognitive effort involved in the transition from one paragraph to another is not significantly from that involved in the transition from one topic chain to another. As suggested earlier, just as a paragraph boundary is introduced to mark a new orientation in space, time or social context, a topic chain boundary is sometimes introduced when there is a change in the 'world', from a physical world to a mental world, and thus a change in event configuration. The nature of the transition involved in each of these topic chain boundaries deserves a closer analysis, but those that involve a mental act verb seem to show the expected change in event configuration.

The fact that there is no statistically significant difference in pausing behavior between paragraph boundaries and topic chain boundaries thus casts considerable doubt on the isomorphism between pause and structural unit, but that should not be taken to suggest that paragraph and topic chains are functionally equivalent discourse units, however. In a study on the preferred positions for antecedents for various anaphoric expressions, I (Huang 1992) was able to show that, as shown in Table 7, for each anaphoric expression, its antecedents in spoken texts consistently favors the more recent positions than those in written texts, a consequence of the fact that spoken language fades rapidly and hence requires successively more informative expressions to aid the hearer in referent identification, resulting in the asymmetric distribution of anaphoric expressions in the two modes of discourse. Table 7 is a convincing demonstration of functional differences between the paragraph and the topic chain as discourse units as they bear on the choice of anaphoric expressions vis-à-vis their antecedents[4].

Table 7. Preferred positions for Antecedents of Anaphoric Expressions in speech and writing

Anaphoric form	Preferred position for antecedent	
	writing	speech
ZA	previous clause	previous clause
pronoun	previous sentence	previous clause
det NP	previous sentence	same topic chain
bare NP	same paragraph	previous topic chain
poss NP	same paragraph	previous topic chain
proper noun	across paragraph	previous topic chain
complex NP	across paragraph	across paragraph

8 Speech interruptions

Discourse linguists generally agree that the way we speak can be characterized roughly in terms of clause structure and that speakers' pauses sometimes coincide with those of structural boundaries, but since over 80% of utterances were preceded by a pause (see Table 2), and less than 10% of the IUs were realized as full clauses, any search for a correspondence between the pause and a spoken syntactic unit cannot be fruitful.

Intonation units which do not constitute full clauses are of course quite common, but two types of speech interruptions within IUs occurred with such a high frequency in my data that they warrant further investigation. It turns out, on closer analysis, that these two types of speech interruptions function as different strategies for planning ahead. In one type, the speaker prematurely terminates intonation units on a word with a prosodic segment lengthening, indicating that he is experiencing some encoding difficulty, but is generally able to complete his speech intentions in a second IU, sometimes preceded by the VF *jiushi*. This type of speech interruption was marked with an equal sign (=) on the word in question in the data. In the other type, the speaker breaks off the IU before completing its projected contour. The speaker projected to say more within the current unit, but 'abandoned' some portion of the projected utterance. This type of speech

interruption was marked with a double hyphen (--) in the data. To differentiate the two types, I will label the first type word lengthening, the second type speech truncation. In example (3), both types of speech interruptions are exemplified.

(3)
a. ... (.7) (H) ranhou= zhege,_
b. ... (1.5) ta --
c. ... ta zhe% zhege pengyou a=,_
d. ... na yinwei%,_
e. ... yao dedao zhege nuhaizi de nage mima.\
f. ... suoyi ta you=,_
g. ... (.9) ta you sheji xiang yao qu --
h. ... qu=,_
i. ... (.8) qu zhidao zhe --
j. ... jiushi%,_
k. .. yung gezhong% --
l. ... hen duo zhong jimou,_
m. xiang yao qu zhidao shuo=,_
n. ... zhege nuhaizi de <L2 password L2> shi shenme.\

In (f), the narrator produced a prosodic lengthening on the word you, signaling that he was experiencing some processing difficulty. The long pause of nine tenths of a second in (g) confirmed that difficulty as the narrator repeated ta you and attempted to complete his speech intention with a predicate phrase. He was not successful even after three attempts at syntactically formulating his intention with the verb qu. He finally abandoned his attempt in (i) and instead chose to work with the verb yung in (k) and, after some repair in (l) and a pause in (n), was able to bring it off to a conclusion.

It is intriguing to speculate that the type of speech interruption indicated by the mechanism of word lengthening suggests that the syntactic frame for the current intonation units at the point word lengthening occurs has already been formulated, but the word or phrase for a slot has not. This speculation is confirmed by the results shown in Table 8.

Table 8. Frequency distribution of repair mechanisms by word lengthening

text	false start	repeat&repair	recast&repair	total
P1	1	1	0	2
P2	0	3	0	3
P3	0	1	0	1
P4	1	8	1	10
P5	2	4	3	9
subtotal	4	17	4	25 (11%)
G1	2	43	3	48
G2	3	66	3	72
G3	1	75	6	82
subtotal	6	184	12	202 (89%)
total	10 (4.4%)	201 (88.6%)	16 (7%)	227

Table 8 gives a breakdown of the distribution of types of repair mechanism involved in word lengthening. Three types of repair mechanism can be identified: (1) false starts, which refer to cases where the speaker abandons his projected speech intentions, and attempts to re-formulate; (2) repeat and repair, which refers to the kind of IU exhibited in (g), (h), or (i) in example (3) above where the narrator repeated, sometimes optionally, the last word in a preceding IU, sometimes paused with a verbal filler jiushi, as in (j), and worked to complete (or attempted to complete) his projected utterance; and (3) recast and repair, which refers to the kind of language use shown from (k) to (l) in example (3) above. Here the narrator recast his speech intention, however slightly, by a change from the word kezong to the phrase hen duo zhong and then completed his utterance in (n).

Table 8 shows that repeat and repair dominated, meaning that word lengthening is basically a mechanism which allows the speaker some extra time before making his lexical or phrasal choices, usually within the next IU, using the syntactic frame already in place. My data shows that over 90% of the repairs were completed within the next IU.

Table 8 also shows that the Ghost stories, with a total of 864 IUs, accounted for 89% of the use of word lengthening mechanism, as against 11% for the Pear stories, which had a total of 600 IUs, a result in full accord with the general impression that the former were much more disfluent.

If word lengthening is a mechanism for self-repair, what is the rationale for speech truncation? Speech truncation is also a mechanism for self-repair, but it suggests that, in response to speech monitoring by the speaker, he has detected a problem in the formulation of the current utterance and, on detecting an error, proceeds to provide the repair.

An analogous tripartite division of the repair mechanism can also be made for speech truncation. An instance of a false start is seen in the unit (i) in example (3) above; an instance of a repeat and repair is seen in the unit (i) in relation to (h), and an instance of a recast and repair is seen in the unit (l) in relation to (k).

Table 9 sets out the frequency distribution of the repair mechanisms by speech truncation.

Table 9. Frequency distribution of repair mechanisms by speech truncation

text	false start	repeat&repair	recast&repair	total
P1	2	1	1	4
P2	5	3	3	11
P3	0	0	0	0
P4	1	0	2	3
P5	5	9	5	19
subtotal	13	13	11	37 (39.3%)
G1	7	25	9	41
G2	2	9	0	11
G3	0	3	2	5
subtotal	9	37	11	57 (60.6%)
total	22 (23.4%)	50 (53.2%)	22 (23.4%)	94

Table 9 shows that just over 50% of the speech truncations were repeat and repairs. My data indicate that about 70% of the repairs were completed within the immediately following IU. Somewhat unexpectedly, only 23.4% of the speech truncations were false starts--utterances "abandoned" by the speaker before their projected intonation contour was reached. In recast and repairs, the speakers either attempted to retrieve a lexical target, as in unit (f) in example (4) below, or provided additional information on an NP, as in unit (l) in example (3), or, less frequently, recast the syntax of a preceding IU, as in the change from unit (h) to (k). Because the tallying up of the frequencies of the repair mechanisms was done from unit to unit, it was sometimes impossible to do full justice to some of the repair mechanisms actually intended by the speaker, such as the change from (h) to (k), in example (3).

(4) a. .. yinwei,_
b. ... yao mouqu yixie,_
c. ... mouqu yixie liyi.\
d. ... suoyi ta=,_
e. .. qu --
f. .. qile yixie= dungji yao,_
g. ... yao qu sha zhege nanhaizi.\

Speech truncation then, in comparison with word lengthening, displayed a much higher incidence of false starts and recast and repairs. Herein lies the critical difference between the two: while word lengthening is basically a mechanism which provides the speaker some leeway before making his lexical or phrasal choices using the syntactic frame already in place, speech truncation is a mechanism for re-formulating the speaker's speech intentions, which accounts for

both the higher occurrence rates for false starts and recast and repairs and the lower occurrence rate for repeat and repairs found in Table 8.

Speech truncations and word lengthening thus provide windows on thought process in several ways. First, although utterances are roughly formulated one clause at a time, speakers often fall short, because of memory and processing constraints, as a number of scholars have pointed out. Syntactic truncations provides particularly revealing examples of the on-line syntactic re-formulation in the middle of an IU by speakers. Often the re-formulation spans two or three IUs, resulting in 'intermediate' targets and syntactic anomalies, which have to be aborted or set straight. It is instructive to examine these syntactic anomalies in some detail for the potential light they might shed on thought process.

9 Sources of syntactic anomalies

It is true that at the conceptualization stage speakers attempt to create a non-linguistic representation of what they intend to say, but their ability to conceptualize is constrained by robustness of their memory of, and by the complexity of, a story. The less the work required is done at the conceptualization stage, the more the work has to be done at the syntactic formulations stage. For example, ideas about referents have to be activated before events can happen to them; ideas about the sequencing of event have to be activated before clausal order can be formulated. In example (5) below,

(5) a. jieguo buxiaoxin,_
b. jiaotache zhuangdao yige=...shitou shang qu.\
c. ... name,_
d. ... jieguo ta de guozi shenme de ^dou=,_
e. ... chezi dao le.\
f. ... name nage...louzi li de shuiguo,_
g. dangran dou diao dao dishang.\

the speaker may have activated, at the point when (d) was uttered, the idea of a consequent event, but apparently had not yet activated the idea of an anterior cause in (e), causing her to hesitate in (f).

In example (6) below, the speaker activated not just one, but a set of related words for a single slot, leading to compound prepositions like yijie in (d), which she then rejected in (e):

(6) a. ranhou=,_
b. ... (H) gen ta de nupengyou goutung= zhihou,_
c. ... cai nenggou%,_
d. ... (H) yijie --
e. ... (H) jieyou zhege nuhaizi de=,_
f. ... jieyou zhege nuhaizi.\

In example (7) below, the speaker activated several conceptual elements of her speech intentions, but when she chose to focus on an inanimate object (daozi

"knife") as the topic of an IU in (f), she ran into considerable formulation problem, as shown by the extreme fumbling in (h)-(j):

(7) a. ... nage daitu yao qiang ta de pibao a=,_
b. ... ranhou= nage nande dikang.\
c. ranhou=,_
d. ... (1.4) juran=,_
e. ... (1.2) bu zhi zenme gao de.\
f. .. nage daozi=,_
g. ... daitu de daozi jiu=,_
h. ... (1.8) jiu haoxiang jiu chadao,_
i. ... (1.4) jiu ba%...zhege%...nande gei%,_
j. ... (1.1) gei shasile a=.\

10 Crazy syntax

If we recognize traditional phrasal categories NP, VP, PP, AP, AdvP as well as S as the only legitimate constituents, and anything that deviates from them is to be ruled out as an illegitimate constituent, then only 40.7% of the IUs in the data (the conversation text excepted) were legitimate constituents in this sense, and only 9.6% of the IUs were full clauses (19.8% if verb phrases with zero subject were included). A pervasive feature of the data is that clauses were often expressed over two or more intonation units. Indeed, we can be even more precise: on average, a clause in the data was realized over 2.53 IUs, ranging from a low of 1.53 IUs per clause (for the P3 text) to a high of 4.01 IUs per clause (for the G1 text).

But why should illegitimate constituents occur with such pervasiveness in spoken language? If utterances are really formulated one clause at a time, why did full clauses not have occurred with greater frequency? The answer is that while clausal schemas may guide the speakers in the production of utterances, with over 80% of the IUs preceded by long pauses, plus the high incidence of speech disturbances (false starts, disfluencies and repetitions), the speakers did a surprisingly large amount of on-line planning, making the realization of clausal material over one unified IU impossible (see Ono and Thompson 1993).

Still it is true that for some speakers clausal schemas often appeared to be planned one intonation unit at a time. The speaker for the P3 text most nearly approximated such a norm--her narrative came to 1.5 IUs per clause.

Much of the sub-clausal realizations in the data can be explained in terms of Chafe's "one new idea constraint" (Chafe 1987, Ono and Thompson 1993). Consider the units in example (1). In this fragment there are nineteen IUs, seven of which are either full clauses or verb phrases with a zero subject. Unit (a) is a connective word functioning as an independent intonation unit. Such a use of connective words as separate IUs was fairly common in the data--84 out of a total of 201 connective words were used as such, and four of which were compound connectives: *ranhou houlai*, *ranhou suoyi*, *ranhou zuihou*, and, possibly, *houlai jiu*.

All of the connective words in the data occurred following a period intonation, making it easier for the speakers to focus on them as independent

intonation units. Many occurrences of independent ranhou serve a dual function--as a hesitation marker and as a linking word. The first part of a compound connective, that is ranhou, no doubt functions more as a hesitation marker than as a linking word, and the second part, such as houlai, suoyi or zuihou definitely functions as a connective with a specific linking function.

In unit (b), ta jiu occurred after a comma intonation and ended with word lengthening and a long pause leading to (c), signaling that the speaker was doing on-line planning for a predicate phrase. This jiu is clearly a connective indicating temporal progression, and if connective words like ranhou can occur as independent intonation units, so can jiu, as in here and in (g). There were a total of eleven occurrences of ta jiu in the data.

It is worth pointing out that although jiu can occur as an independent IU, the third-person pronoun ta can't, ruled out by the "one new idea constraint", since ta as an anaphoric expression is always old information.

The one new idea constraint also explains the presence of units in (j), (k) and (l). In both (m) and (n), jiushi functions as a verbal filler. In unit (o), the main verb (bu) xiangxin shuo, as the focus of the IU, is a piece of new information and genben is an intensifier. Unit (p) is interesting in two respects. It illustrates the use of the morpheme shuo as a detachable complement marker and the use of the word zheyangzi as a cataphoric expression. Units (q) and (r) are also straightforward independent IUs observing the one new idea constraint. Unit (s) contains no new information and is a repeat and repair utterance left unfinished from (r).

Even the nineteen units in example (1) are enough to provide a glimmering of the syntax characteristic of spoken Chinese. None of the IUs constitute a full clause, and with a total of nine IUs that correspond to traditional phrasal constituents (a, c, d, g, h, j, k, l, q), the remaining units (52.6%) are just pieces of clauses, a percentage somewhat below the 59.3% for the data as a whole.

These pieces of clauses can be classified into six categories, depending on where the constituents of a clause were interrupted by pause:

1. Interrupted NP, as seen in unit (r) in example (1);
2. Interrupted VP, as seen in unit (i);
3. NP with interrupted VP, as seen in units (b), (f) and (m);
4. Verb with interrupted complement, as seen in units (o) and (p);
5. Verb with interrupted NP;
6. Combination of conjunction with a simple NP.

(5) and (6) were not illustrated in example (1), but can be seen in unit (a) and (c), respectively, in the following example:

(8) a. ... (.9) (GULP) qu chupeng,_
b. ... renhe= shizai de wuti.\
c. ... (H) ranhou nage=,_
d. ... nage --
e. ... na= nage guihuen shoudao ta de gandung.\
f. ... jiu= jiaole ta=,_
g. ... jiaole ta zhezhong fangfa.\

Actually a seventh type of non-constituent can be identified, but this type of non-constituent is not a piece of a clause in the strict sense. Rather it is a transsentential fragment that combines a piece from the last segment of a preceding period intonation unit with a piece from the current IU, as illustrated in unit (b) below[5]:

(9) a. ... ranhou ta jiu zai jieshang xianhuang.\
b. ... (H) huanghuang ta jiu=,_
c. ... huangdao yijia=,_

Unit (c) in example (10) below is another illustration:

(10) a. ... ta jiu yizhi liu zai ren --
b. ... liu zai%..zhege yang=jian.\
c. ... (H) yangjian ranhou=,_
d. ...(.8) ranhou= ta de jieju shi,_

Note that in both instances, part of the transsentential fragment came from an intonation unit that was closed with a utterance-final contour. Unit (a) in example (9) and unit (b) in example (10) both ended with a period intonation contour. This type of transsentential fragment formation bears a striking resemblance to the repeat and repair strategy of the word lengthening mechanism discussed earlier in section 6. Both can be seen as strategies for pausing in order for the speaker to plan for the next utterance. In the case of word lengthening, pause was made in order for the speaker to make a lexical or phrasal choice; in the case of transsentential fragment formation, pause was made for more varied reasons, depending on the nature of lexical category of the second piece of transsentential fragment, as can be appreciated by a comparison between the examples (9) and (10).

An analysis of the G3 text in terms of these seven types of non-constituents yielded the results shown in Table 10.

Table 10. Percentage distribution of non-constituents in G3

1. Inter NP	15.7% (22)
2. Inter VP	23.6% (33)
3. NP with inter VP	25.7% (36)
4. Verb with inter C	9.3% (13)
5. Verb with inter NP	6.4% (9)
6. Conj+NP	12.8% (16)
7. transsentential fragment	6.4% (9)
Total	100% (140)

A majority of the interruptions were made within verb phrases, as with the subtypes in (2), (3) and (4). NPs were interrupted (subtypes (1) and (5)) to make lexical choices, while VPs were interrupted (subtypes (2), (3), (4)) to make phrasal or clausal choices.

Over 40% of the IUs in the G3 text were then non-constituents (140 out of 335 IUs), and yet the G3 text was the more fluent of the three Ghost texts. Since a great majority of the non-constituents can be shown to be explainable in terms of the one new idea constraint, their pervasiveness in spoken language must be understood as the language user's strategies, under both cognitive and interactional constraints, for building discourse structure that has begun to achieve some cross-textual consistency and to move gradually toward conventionalized distinct forms. Du Bois (1985)'s observation that recurrent patterns in discourse tokens exert pressure on linguistic types and on the emergence of new grammatical patterns is central to an understanding of the ubiquity of non-constituents. Syntactic constituency is a grammaticization of the information flow in discourse and arises in part as a result of discourse pressures (Heine et al. 1991:240).

11 A comparison with written Chinese

We have shown that over 80% of the IUs in my data were preceded by pauses, that the average length of an IU was just 3.5 words long and that speech disturbances and non-constituents occurred with great frequency. The speakers were usually verbalizing ideas on the run, planning no more than pieces of clauses at a time. A count of the types of intonation contours show that, as expected, there were more intonation units with a utterance-final intonation contour (52.8%) than IUs with a continuing intonation contour (47.8%). Translated into written language, this means that there were more periods than commas in punctuation.

Punctuation practices as found in written Chinese exhibit a markedly different picture. The following table shows the proportions of various punctuation marks in a number of different genres based on a 41,000 word sample.

Table 11. Frequency of punctuation marks in written Chinese

Punctuation	fiction	prose	academic writing	news writing	total
、	28.47 61.7	23.70 57.6	28.47 57.4	19.36 61.0	59.3 (2262)
。	32.96 28.16	31.17 29.89	23.54 18.72	12.33 15.32	23.4 (894)
¬	12.41 3.26	13.87 4.09	38.69 9.45	35.04 13.37	7.1
`	15.89 3.26	6.42 1.51	55.14 10.52	22.43 6.69	5.6
:	28.13 1.72	28.13 1.94	25 1.43	18.75 1.67	1.7
;	21.05 0.77	63.16 2.58	10.53 0.36	5.26 0.28	1
?	13.64 0.57	40.91 1.94	45.45 1.78	0 0	1.1
	0 0	12.5 0.22	12.5 0.18	75 1.67	0.42
!	60 0.57	20 0.22	20 0.18	0 0	0.3
total	1044 (100%)	930 (100%)	1122 (100%)	718 (100%)	3814 (100%)

The mean text sentence length of the sampled writing was 34.6 characters, ranging from a low of 30.3 for fictional writing to a high of 37.7 for academic writing. Since a text sentence marked by a period was made up of about 2.53 commas (2262/894), and since a text sentence was about 20.9 words long (the range was from a low of 17.6 for fiction to 23.4 for academic writing), it follows that a comma had a mean length of 5.92 words (20.9/2.53+1). News writing had the longest-winded style, using one period for every 3.9 commas, in marked contrast to the prose writing, which used one period for just every 1.93 commas. Since the spoken texts in my data (conversation text excepted) used a period for every 0.91 comma, we can say that the prose writing was quite spoken like in its punctuation. Even so, the prose writing was far more fluent and hence unspoken like, if read aloud, than the most fluent of the spoken texts[6].

12 Conclusion

In this paper I have offered a detailed analysis of the location at which pauses fall within utterance sequences in order to determine whether different types of pause are fundamentally different strategies of speech planning and to better understand how grammatical structure of Chinese is shaped and becomes 'sedimented' through repeated use in discourse.

Based on the present data, the preferred strategy for hesitation pause is clearly the use of SPs, especially the long SPs, usually alone and, much less frequently, in combinations with VFs.

There are basically just two VFs in the data: nage and jiushi (or jiushishuo). They usually occur following a comma intonation and signal that the speaker is experiencing some encoding difficulty in retrieving a lexical or phrasal

target. The planning for a larger unit than a phrase or a clause is usually signaled by a pause followed by a connective word.

Over 80% of the IUs in the data were preceded by some type of pause, suggesting that the search for a simple correspondence between the pause and a spoken syntactic unit cannot be fruitful. A question then arised as to whether there might be a general reduction in processing difficulty and thus in the amount of pause time as spoken discourse wears on. On the face of it, this would appear to be a plausible hypothesis since as the discourse proceeds, there would be reduction in interpersonal stress and in the uncertainty about lexical choices. Lexical choices made early on in discourse would be deposited into short-term and long-term memories, which would then facilitate thought process and increase the speaker's awareness of them.

The present data suggest, however, that the hypothesis cannot be maintained, at least in its present formulation.

Another issue explored at some length in the paper is whether pausing is determined by something in the nature of the grammar or whether pausing reflects conceptual planning operation that is then translated into syntactic form. The present data suggest that structural factors play a relatively minor role in pause production. One piece of evidence comes from an analysis of pausing behaviors at paragraph and topic chain boundaries. Results of that analysis shows that there is no statistically significant difference in pausing between these boundaries. Another piece of evidence comes from the observation that utterances of varying sizes, whether they are full clauses or pieces of clauses, were often preceded by the same type of SP.

Intonation units which do not constitute full clauses are extremely common, accounting for over 80% of the IUs in the data. Two major types of speech interruptions are identified signaling different strategies for planning ahead. Word lengthening is a mechanism which allows the speaker some extra time before making his lexical or phrasal choices, using the syntactic frame already in place; speech truncation, on the other hand, is a mechanism allowing the speaker to re-formulate his speech intentions.

Finally, a comparison of pausing behavior in speech with punctuation practices found in written Chinese suggests that writers of Chinese are essentially grammatical punctuators rather than phonological punctuators, since their use of periods and commas found no analog in the speech of spoken discourse.

Notes

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1 See Stenström (1990) for a review of the literature on pausology.

[2] According to Svartvik 91990), the mean length of a pause unit in English is 5.7 words and the mean speech rate is 1.9 seconds per IU.

[3] This means that if we take the average duration of an SP to be 0.5 second, then the speakers were silent about 33% of the total time.

[4] The data used in the study on the preferred positions for antecedents of various anaphoric expressions that led to the results shown in Table 7 consisted of five oral narratives of the film the Ghost and five written texts. There were a total of 1295 anaphoric expression, 454 of which were from the written texts and 841 from the spoken texts. The mean length of each of the discourse units is as follows:

writing	speech
clause = 7.4 words	clause = 6.1 words
sentence = 2.8 clauses	topic chain = 3.46 clauses
paragraph = 3.13 sentences	paragraph = 3.64 topic chains

[5] Some transsentential fragments have been conventionalized as normal discourse forms. I have in mind here intonation units consisting of a full clause or verb phrase followed by a lexicalized phrase zheyangzi or nayangzi "and things like that", as in unit (b) below:

(1) a. ...(1.) suoyi ta jiu zai pangbian=,_
b. ... ziyanziyu zheyangzi.\

[6] In samples from the Brown corpus of about 72000 words drawn in equal proportions from journalism, learned writing and fiction, the figures for punctuation marks are as follows (Quirk et al. 1985: 1613):

commas	46.8% (4054)
periods	45% (3897)
dashes	2.2% (189)
pairs of parentheses	1.8% (165)
semicolons	1.8% (163)
question marks	1% (89)
colons	0.88% (78)
exclamation	0.3% (29)
total	100% (8861)

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An Analysis of Interactional Markers in Korean:
A Comparative study of *-canh-a(yo)* vs. *-ci(yo)**

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1. THE PROBLEM

It is generally accepted that Korean has various inflectional verbal affixes which show the speaker's attitudes and sensitivity towards the speech context (i.e., the speaker, the interlocutor, and the information, cf. Lee 1991, Iwasaki 1993). One of these affixes *-canh-a(yo)* has some interactional functions and is used to elicit agreement or sympathy from the interlocutor. To my knowledge, *-canh-a(yo)* has not been studied as a single morpheme which carries these unique interactional functions. Traditional linguists have been treating this morpheme as merely the phonologically contracted form of the Korean negator *-ci + anh-a(yo)*. According to traditional accounts, *-canh-a(yo)* and *-ci anh-a(yo)* are interchangeable. However, as shown in Kawanishi & Sohn (to appear), this is not the case, given their distinct syntactic distribution (see 1a & 1b) and discourse interactional functions (see 2a & 2b).

(1) a. *o- ci anh- ass e-yo.*[1]
come-CI ANH-PAST-IE-POL
"He did not come."

b. *wa- ss- canh -a-yo.*
come-PAST-CANH-IE-POL
"He came, as you know."

(2) a. *himtul-ci anh- a-yo.*
difficult-CI ANH-IE-POL
"It is not difficult."

b. *himtul-canh- a-yo.*
difficult-CANH-IE-POL
"It is difficult, don't you think so?"

In Korean, there is one more expression, i.e., *-ci(yo)*, which, like *-canh-a(yo)*, is also used to elicit agreement or sympathy from the interlocutor, but less powerfully. Although *-canh-a(yo)* has received little or no attention by scholars, both traditional and modern linguists have often studied *-ci(yo)*. However, these scholars have reached different conclusions. For example, Martin (1969) and others (cf. Lukoff 1982) propose that *-ci(yo)* is a "suppositive marker" or a "suspective marker". Chang (1985) proposes "*imi alm*" 'already having knowledge of' as the central meaning of *-ci(yo)*. Lee (1991) considers *-ci(yo)* as a "committal suffix" since it shows the speaker's commitment to or belief in the truth of the information conveyed with some degree of certainty. However, the meaning of *-ci(yo)* that these studies have elucidated only a narrow range of usage. These studies fall short of a plausible explanation because (1) *-ci(yo)* has been studied without being compared to its *-can-ha(yo)* counterpart, and (2) *-ci(yo)* has been studied on an isolated sentence level, without regard for any speech context.[2] The purpose of this paper is to analyze the interactional functions of *-canh-a(yo)* and *-ci(yo)* by establishing a new semantic system for these forms using discourse data.

2. THE FAILURES OF EARLIER APPROACHES

As mentioned earlier, traditional studies defined *-ci(yo)* as a "suppositive marker" or a "suspective marker" comparing it to its ZERO form or *-a/e(yo)* form:

(3) a. *kulay-yo?*
so- POL
"Is it so?"

b. *kuleh-ci-yo?*
so- CI-POL
"Isn't it so?"
"I suppose it is so, right?"

However, *-canh-a(yo)* can also be used in a parallel way, as the following example illustrates:

(4) *kuleh-canh- a-yo?*
so- CANH-IE-POL
"Isn't it so?"
"I suppose it is so, right?"

Since both (3-b) and (4) show that the speaker is seeking agreement from the interlocutor, it does not seems that the proposed meaning of SUPPOSITIVE is definite enough to distinguish *-ci(yo)* from *-canh-a(yo)*.

Also, there are cases where the meaning of SUPPOSITIVE does not apply:

(5) The speaker recalls an event which is new to the interlocutor.
Speaker Y is reporting how he enjoyed his school life at UCLA as an exchange student.

Y: cincca swi-myense tany- ess- *ci*-yo.
really relax-while commute- PAST- CI-POL
"I attended school without pressure."

In this case, the speaker is sure of what he did. Y is not supposing anything or is he uncertain about the truth of the proposition. For some reason, this kind of utterance has not been accounted for, even though there are many similar occurrences of *-ci(yo)* in real discourse data.

3. THE SOLUTION

I propose that the meanings signaled by *-canh-a(yo)* and *-ci(yo)* are organized into a grammatical system (in the sense of Diver 1969: 47, cf. Kirsner 1979) based on the semantic substance of the "speaker's certainty regarding the interlocutor's affirmative response" which involves the power to urge the interlocutor to agree with the proposition. As indicated in (6), *-canh-a(yo)* signals that the speaker is EXPRESSING A HIGHER DEGREE OF CERTAINTY on the possibility that the interlocutor will agree with the proposition, while *-ci(yo)* signals that the speaker is EXPRESSING A LOWER DEGREE OF CERTAINTY (not regarding the proposition but regarding the interlocutor's affirmative response).

(6)

purpose of communication:
- need understanding → *ZERO*
- need understanding and agreement/sympathy more interactional → speaker's certainty about the interlocutor's affirmative response:
  - EXPRESS HIGHER DEGREE OF CERTAINTY → *-canh-a(yo)*
  - EXPRESS LOWER DEGREE OF CERTAINTY → *-ci(yo)*

With this system, the message of the first minimal pair of *-canh-a(yo)* and *-ci(yo)* would be differentiated as follows.

(7) a. *kuleh-ci-yo?*
so- CI-POL
"I suppose it is so, right?"

<messages>
I do not show my certainty on the proposition.
I hope that you will say yes.
We might share this view.
Please say that I am correct.

b. *kuleh-canh-ayo?*
so- CANH-POL
"I suppose it is so, right?"

<messages>
I do show my certainty on the proposition.
I know that you will say yes.
We are sharing this view.
You shall agree with me.

As indicated by the system, it could be said that the speaker will signal a higher degree of certainty towards the interlocutor's affirmative response in order to urge the interlocutor to agree or sympathize with him/her, when the speaker needs such agreement to support his/her own view. The speaker uses *-canh-a(yo)* to urge the interlocutor to agree strongly. *-Canh-a(yo)* would be used when the speaker wants to show his/her confidence in obtaining agreement or sympathy from the interlocutor, while *-ci(yo)* would be used when the speaker does not want to show such a stance, either because s/he cannot be too confident towards the interlocutor's reaction, or because s/he wants to hide such confidence in order to be polite or to be appropriate to the situation. The speaker uses *-ci(yo)* to urge the interlocutor to agree less strongly since the speaker expresses a lower degree of certainty with *-ci(yo)*. Consider (8):

(8) The speaker is picking up a book to show it to the interlocutor in order to answer the interlocutor's question: "Which book is mine?" The interlocutor is a somewhat far from the books so he cannot identify his book from where he is.

a. i ke *i- ey*-yo.
this thing COP-IE-POL
"This one (I am informing you)."

b. i ke *canh-* a-yo.
this thing CANH-IE-POL
"This one (Don't you recognize it?)."

c. i ke *ci*-yo.
this thing CI-POL
"This one (isn't it?)."
"That one (I am informing you without hurting your pride)."

According to a native speaker of Korean, (8a) is different from (8b) and (8c) in terms of interactional function. For example, the interlocutor's response would be different in each case. In response to (8a), the interlocutor would say "Thank you" or "I see", indicating receipt of the information as it is. On the other hand, the interlocutor would say "Yes" or "That's right" in response to (8b) and (8c) to show agreement with the speaker. This observation suggests that the ZERO form is used to inform the interlocutor of new information (Lee 1991), while *-canh-a(yo)* and *-ci(yo)* are used to seek agreement.

Also, (8b) is different from (8c) in terms of the speaker's attitude towards the speech context. (8b) would be uttered when the exchange is between peers and the speaker knows that the interlocutor knows which book is his. At the same time, the speaker has the confidence to obtain agreement from the interlocutor since the speaker knows that the interlocutor can recognize his own book. On the other hand, (8c) would be uttered in the following contexts: (i) the speaker knows that the interlocutor knows which book is his, but the interlocutor is not close to the speaker (i.e., either a senior or a mere acquaintance), (ii) the speaker is not certain whether the interlocutor recognizes his own book or not, or (iii) the speaker is not interested in the topic or does not care which book is the interlocutor.[3] Although the speaker is confident and certain that the book he picked up is the correct one, he can express less certainty by using *-ci(yo)*. Traditional grammarians have analyzed the functions of *-ci(yo)*'as follows: For the situation as in (i), it has been considered as a softening marker, for (ii) a suppositive marker, and for (iii), no such study has been conducted to date on this phenomenon. What one can see from these three cases might be that the speaker does not express his certainty clearly since he has a low commitment to the context; either he chooses to have a low commitment (as in the cases of (i) & (iii)) or he cannot have a high commitment (as in the case of (ii)). Since the speaker shows low commitment to the context, he cannot express a higher degree of certainty towards the possibility of obtaining the interlocutor's agreement. Thus, in the case of (8c), the speaker is not urging the interlocutor to agree, while with *-ci(yo)*, the speaker clearly is.

In order to provide a sufficient account of the meanings of both *-canh-a(yo)* and *-ci(yo)* in terms of the speaker's certainty towards (or expectation of) the interlocutor's affirmative response, their appearance and functions will be examined within speech contexts from the following perspectives:

[1] types of contexts in which they occur
i.e., reporting difficult experiences,
opposing the other party's view, pure recall.
[2] interaction with the interlocutor
a. response analysis
response allowed or not, length of turn.
b. speaker's insistence

Regarding [1], in contexts in which the speaker greatly wants to seek the interlocutor's agreement or sympathy, such as (a) reporting difficult experiences or unwelcome events, or (b) opposing the other party's view in which the speaker wants to convert his/her opponent to his/her side, the speaker would express a higher degree of certainty regarding the interlocutor's agreement. In other words, in such situation, the speaker would overtly express his/her expectation of obtaining agreement from the interlocutor. On the other hand, in contexts in which the speaker does not seek much agreement or sympathy from the interlocutor, such as in the pure reporting of past events, the speaker wants to understand or accept the indicated information as it is and hope to have agreement from the interlocutor. In this case, the speaker would not express the same degree of certainty as in the first case. In the first kind of context, i.e., "contexts for a higher degree of certainty", *-canh-a(yo)* is used more frequently, while *-ci(yo)* is used in the second type of context, i.e., "contexts for a lower degree of certainty".

Also, the interlocutor's response is a very good clue for figuring out the speaker's intention. Regarding [2], I will examine both the interlocutor's response and the speaker's insistence of his opinion when challenged. The interlocutor is more likely to be forced to agree with the speaker when *-canh-a(yo)* is used while the strength of the speaker's urging is substantially lessened with *-ci(yo)* . In terms of the speaker's insistence, in contrast with *-ci(yo)* the speaker will be more likely to insist in utterances using *-canh-a(yo)* since s/he has strong confidence in his/her own view.

4. VALIDATION

Under "contexts for higher degree of certainty", I will examine the following two types of contexts: (a) reporting unwelcome events, and (b) opposing the other party's opinions. These contexts could be considered as showing that the speaker express a higher degree of certainty.

In this case study, an audio-taped conversation is used. This conversation was held between two Korean exchange students at UCLA. Both of them have some common backgrounds: both are male students from the same university in Korea, and both are in their early twenties (Y was 20 years old and J was 23 years old at the recording time). In order to create a "relaxed" setting, they were asked to talk about their experiences in the U.S. as exchange students, which was a relevant topic for both students.

The length of this conversation is approximately 20 minutes. In order to assure accuracy in the transcription, two Korean native speakers transcribed the conversation first, one of whom was a speaker in the conversation. Based on their transcription, I listened to the tape, then checked and corrected their transcription.

Also, the whole conversation was divided into smaller segments for this study. One segment differentiates itself from the others based on its context. In the case of reporting unwelcome events, only a series of portions in which the speaker is talking about those specific events is studied.

(a) reporting unwelcome events

For the data of reporting unwelcome events, I will use the portion in which the speaker talks about his difficulties in preparing to come to UCLA and enroll in classes. In this portion, the speaker talks about the fact that he came late for the first quarter, the reason why he came late, and how difficult it was to enroll in classes as a consequence of his late arrival. In his report, he presents some undesirable facts such as his late arrival and subsequent missing of all his classes during the first week, his unfamiliarity with the school system, etc. When he mentions these unwelcome events, he marks his statement by *-canh-a(yo)* and tries to elicit sympathy or agreement from the interlocutor by making generalizations to justify or support his actions on those unhappy events. Sometimes, he gives subjective reasoning by using the "subjective causal marker" *-nikka*, to prove his proposition is correct and nonchallengeable.[4] In this portion, the distribution of "sentential enders" is as follows:

TABLE 1: The distribution of "sentence enders" in Y's reporting unwelcome events

forms (Korean morpheme)	% Values	Raw count (# of marked sentences/ # of total sentences)
ZERO form (*-a/-e* or *yo*)	36%	4/11
-canh-a(yo)	36%	4/11
-ci(yo)	0%	0/11
others (two forms)	27%	3/11

In this segment, the most frequently used forms, i.e., the ZERO form and *-canh-a(yo)* will be analyzed. Although the number of ZERO form sentences and that of *-canh-a(yo)* are the same, their distribution or role in the discourse is different. It seems that ZERO forms are used to describe or list some events objectively. *-Canh-a(yo)* is used to illustrate some events subjectively with the speaker's interpretation, thus urging the interlocutor to understand and agree with the proposition. In terms of the character of information provided, the ZERO form is used for new information while *-canh-a(yo)* is used for inferable information. Consider the following portion (9-a), which contains two ZERO forms (lines 5 & 15) and two *-canh-a(yo)* forms (lines 10 & 17):

(9-a) Y and J begin their conversation about their experiences in the United States.
(---> indicates a ZERO form utterance, ===> indicates a *-canh-a(yo)* utterance)

1. J: cheum ne iyaki-na tule- po-ca
first you story-or listen-try-SUG
"First, let's listen to your story."

2. Y: ce-yo?
I-POL
"Me?"

3. J: ung, yeki wa- kaciko...
yeah here came-and
"Yeah, you came (here) and..."

4. Y: cey- ka cheum- ey o- n key
I- NOM first:time-at come-VM thing

---> 5. cinan kyewul, ilwel kuilnal wa- ss- e-yo.
last winter January 9th come-PAST-IE-POL
"The first time I came (here),
I came (here) last winter, on Janunary 9th."

6. J: ung.
"Hunh."

7. Y: kuntey, yeki o- n key wenlay,
but here come-VM COM originally

8. kanguy sicak-i ilwol chilil-i- ketun-yo?
lectures start-NOM January 7th- COP-KETUN-POL
"But, I came here originally...
Lectures started on January 7th."

9. J: ung.
"Hunh."

===> 10. Y: ilwel chilil-i- ntey nuckey wa- ss- *canh-* a-yo.
January 7th- COP-amd late came-PAST-CANH-IE-POL
"(Lectures started) on January 7th, (so I) came (here) late
(now you know)."

11. J: ung.
"Hunh."

12. Y: way nuckey wa- ss- nya-myen-un, "I-20 form"-i...
why late come-PAST-Q- if- TOP- NOM
"(The reason) why (I) came (here) late is that my I-20 form..."

13. J: ung.
"Hunh."

14. Y: ce-nun 12wel 25il- i-nka wa- ss- e. a. 12wol 23il?
I-TOP December 25th-COP-or come-PAST-IE oh December 23th

---> 15. ku ccum- ey wa- ss- e-yo.
that around-at came-PAST-IE-POL
"In my case, (the I-20 form) came on Dec. 25th, oh (no), on Dec. 23th?
or around that time."

16. Y: ku- key eps- unikka yekwen-to mos mantul- ko
that-think no exist- because passport-also cannot make- and

===> 17. amwukes-to mos- ha-*canh*-a-yo.
anything-even cannot- do-CANH-IE-POL
"Without having that, you cannot apply for your passport and you cannot do anything."

18. J: ung.
"Hunh."

19. Y: ku- ttay- pwuthe incey, yekwen mantul-ko,
that-time- from now passport make- and
"It was after that time, that I applied..."

In this portion, the ZERO form is used to present information as it is without any personal comments or opinions added. It appears in line 4 and 5, which is the first sentence that speaker Y uses to start his narrative. In other words, this is an introductory sentence. This presents the first event, his arrival to the U.S. on January ninth. (At this point, the interlocutor expects that other events would be listed after this sentence in temporal sequence.) Also, another ZERO form appears in lines 12-15. Here, Y said that his I-20 form came on December 23rd. This is also a neutral description, thus there is no need for agreement. In both cases, he portrayed the late arrivals of himself and his I-20 objectively, without explicitly mentioning any type of "lateness" in the sentences with the ZERO form. Although these late arrivals caused troubles for Y, within these clauses using the ZERO form, he does not show any subjective attitude of the speaker.

On the other hand, *-canh-a(yo)* is used for unwelcome events and is used to make the information elicit agreement or sympathy. Those sentences with *-canh-a(yo)* are nonchallengeable since they have some supporting or inferable information around them. This nonchallengeability is necessary to obtain agreement or sympathy from the interlocutor. In line 10, Y uses *-canh-a(yo)* to mention his late arrival after providing related information in lines 5 and 8. Based on these factors provided by Y, interlocutor J can understand and fully agree with Y's statement at line 10. Obviously, there is no room for J to challenge to it. In other words, line 10 was presented as nonchallengeable. At the same time, this use of *-canh-a(yo)* has a cohesive power which links the proposition in line 10 with those in lines 5 and 8. Speaker Y uses *-canh-a(yo)* to elicit agreement from the interlocutor J.

Also, in line 17, speaker Y uses *-canh-a(yo)* to portray a certain event as unwelcome and to make the proposition nonchallengeable in order to elicit interlocutor J's agreement and sympathy. It is noteworthy to mention that Y's utterance in lines 16 and 17 is not in the past tense but in the present tense. This utterance is not telling what actually happened to Y, but pointing out a general truth, saying that it is impossible to apply for one's passport without having the "I-20" form. Y's utterance is nonchallengeable since it is a general truth. However, what Y is doing here is not telling a general truth to J but implying that Y could not have had his passport ready or make other preparations until he receives his I-20 form. The speaker can express a higher degree of certainty towards the affirmative response from J, based on this inferrable information. The speaker can use consensual truths to obtain the interlocutor's recognition or agreement. It seems

that *-canh-a(yo)* has a strong cohesive power or inferable power so that Y does not have to say that he could not do anything. By providing the general fact on the relationship between the passport and the I-20 form, interlocutor J can easily infer that speaker Y could not apply for his passport without having the form. Also, Y utters this since he wants to show or prove that his late arrival was not his fault, justifying his powerless situation; Y wants to obtain J's sympathy for this event. In line 16, "subjective reasoning / affect marked causal" *-nikka* is used to show this subjective attitude. According to Sohn (1992), this usage of *-nikka* has an emotive function which usually serves to express some kind of justification by the speaker of a particular situation.

The following segment from the same portion presented above will be examined as one more example of *-canh-a(yo)* which is used with the speaker's subjective reasoning.

(9-b) Up to this point, Y has been talking about unwelcome events at his first arrival at UCLA. (= shows that there was no pause after this statement and the speaker continues the next sentence which starting with another =)

<<skipping 14 lines after (9-a)>>

33. Y: kuntey chescwu- ey-nun kanguy- lul hana-to
but first week-at-TOP lecuture-ACC one- even

---> 34. mos tul- ess- e-yo. kulaykaciko
cannot enter-PAST-IE-POL and
"But I could not attend any classes during the first week, so..."

35. J: ung.
"Hunh."

36. Y: kulay swukang sincheng ha-le tani- nulako kunyang
so enrollemnt application do-VOL commute-because as it is

===> 37. ka-kaciko, pin- tey pyello eps- *canh- a*-yo.=
go-and empty-room not especially not exist-CANH-IE-POL
"So...I attended (classes) to enroll, I went there and (I found that) there was no room for me."

38. J: ung.
"Hunh."

39. Y: =ta sicak-hay-ss- unikka.
all start- do- PAST-NIKKA
"Because all the classes had already started."

In this segment, Y provides the event (line 37) with subjective reasoning (line 39). This reasoning is based on the speaker's perspective and not based on objective facts. Although, the chances of enrolling in a class would be lower after the quarter starts, it should still be possible to enroll until the class is full. Also, the

speaker uses the "subjective reasoning causal" *-nikka* to support his statement in this line.

In this whole portion (including (9-a) and (9-b)), Y uses *-canh-a(yo)* 4 times to elicit the interlocutor's sympathy for his unwelcome events for each case, and each of them is related to his subjective perspectives. The ZERO form is also used 4 times here, but this form is for more objective purposes (not interactional), such as introductory statements, listing events, and closing a topic (see below):

(9-c) The following is the final sentence of this portion of the conversation, before the two move to a new topic.

---> 1. Y: cheum- un toykey himtul- ess- e-yo. ce-nun-yo.
first time-TOP very difficult-PAST-IE-POL I-TOP-POL
"For me, it was very difficult at the beginning."

In summary, it has been observed that the ZERO form is used to present events as they are, while *-canh-a(yo)* is used to presentes the information as nonchallengeable to obtain agreement or sympathy from the interlocutor in order to support the speaker's perspective. The speaker can express a higher degree of certainty regarding the interlocutor's agreement since the proposition which is presented by the ZERO form is nonchallengeable. The ZERO form presents information objectively, without adding any subjective reasoning, personal comments, or opinions. The speaker does not ask the interlocutor to agree or sympathize. On the other hand, *-canh-a(yo)* shows the speaker's nonchallengeable attitude clearly and elicits the interlocutor's agreement. In this sense, *-canh-a(yo)* shows that the speaker expresses a higher degree of certainty and strongly urges the interlocutor to agree with him.

(b) opposing the other party's opinion

As data which reflect an opposition to the other party's opinion, the following portion will be examined which shows that speaker Y presents his opposing idea to interlocutor J. In this data also, *-canh-a(yo)* is observed in high frequency.

TABLE 2: The distribution of "sentence enders" in Y's opposing opinion

forms (Korean morpheme)	% Values	Raw count (# of marked sentences/ # of total sentences)
ZERO form (*-a/-e* or *yo*)	0%	0/5
-canh-a(yo)	100%	5/5
-ci(yo)	0%	0/5

(10-a) Up to this point, J has been talking about how his impression of the U.S. has changed. He said that he thought American society was sexually "chaotic", but having attended bible study groups or dealt with classmates at UCLA, he found that he was wrong.

1. J: kuntey eccemyen kulen-kes hankwuk-pota te yeki-n
but perhaps such- thing Korea- than more here-TOP

2. cilse- iss- nun kes kath-a.=
order-exist-VM thing CONJ-IE
"But, by some possibility, it seems that regarding such things there is more order here than in Korea."

3. Y: =kuntey yeki-nun,
but here-TOP
"But here ..."

4. J: ung.
"Hunh."

===> 5. Y: hakwuk-un tayceycekulo an kul-ess- *canh-* a-yo=
Korea- TOP generally not so- PAST-CANH-IE-POL

===> 6. =kuntey yeki-nun kuel- n ay- tul-i manh-*canh-* a-yo=
but here-TOP such-VM child-PL-NOM many-CANH-IE-POL

7. =sengcekulo mwunlan-ha-ko kulen saynghwal-ul ha-nun
sexually disorder- do-and such life- ACC do-VM

===> 8. ay- tul-i manh-*canh-* a-yo.
child-PL-NOM many-CANH-IE-POL

(0.7)

9. Micengi pang-ey iss-nun ay- tul-to,
Miceng room-at stay-VM child-PL-also
"But Korea, on the whole, is not like that (as you remember). But here, there are many such people (as you know). There are many who are sexually immoral and lead such lives (don't you think so). Including the people who room with Miceng."

10. J: ung.
"Yeah."

===> 11. Y: namca-ay- tul teyli- ko wa- se ca- ko kule-*canh-* a-yo=
male- kid-PL bring-and come-and sleep-and such-CANH-IE-POL

12. =twu-myeng -ina kule-nuntey-yo. yeses-myeng cwung-eyse.
two-CL- even such-but- POL six- CL among-at
"(They) bring boys, and lie down together -- they are like that (as you know). Two of them are like that. Among six (girls)."

13. J: ummmmm.
"Ummmmm."

===> 14. Y: kulen-ke po- myen-un hankwuk-un kuleki himtul- *canh*-a-yo?
such- thing see-if- TOP Korean- TOP such difficult-CANH-IE-POL
"When you see such things, those things are difficult to do in Korea
(don't you think so)."

(3.0)

15. J: kuntey...
"But..."

In this portion, Y disapproves of J's comment on American students' life styles. Right after J's comment, without any pause, Y started his utterance (line 3) and opposes J with *-canh-a(yo)* in line 5. J does not reply to line 5. Again, without any pause, Y continues his argument by providing evidence with *-canh-a(yo)* . In lines 6-8, J provides more general facts. J still remains silent. In order to convince J, Y mentions the case of their mutual friend's roommates a more specific facts in line 9 J reacts somewhat to this utterance a little, but still keeps listening to Y. Y is more specific in line 12 as he provides the number of those people being discussed to support his evidnece with *-canh-a(yo).* Y again uses *-canh-a(yo)* to conclude that those factors are hardly observed in Korea, in line 14. After a relatively long silence, J finally takes his turn.

In this segment, Y is opposing J's view on male-female attitudes in the U.S. Y is pretty certain that J's view is wrong. Since Y has confidence and is sure of what he is saying, Y does not have any pause after his statement with *-canh-a(yo)* , after lines 5, 6, and 11. The speaker does not need and does not request a reaction or response from interlocutor J at these points since he is very certain that he is correct. In other words, no interruption is allowed. This usage of *-canh-a(yo)* an dthe lack of pause clearly show speaker 's attitude. In this portion, Y provides his observations on this issue with *-canh-a(yo)* and makes his observations as correct, namely nonchallengeable. Also, Y's judgments on the Korean situation and the American situation are based on his own perspective, which is subjective in a sense. Y employs *-canh-a(yo)* - and insists that J as a fellow Korean should recognize or remember the Korean situation. In this way, by emphasizing the common grounds between the two, Y tries to convince J. This observation shows that *-canh-a(yo)* is used to convert the speaker's opponent to his/her own side.

First, in this portion, Y implicitly insists that J is wrong by giving a general view on this issue. At this point, J is still not convinced. J does not reply to Y's utterance. Then, Y provides a more specific example and makes a clear comparison in line 14 by using *-canh-a(yo)* again. This *-canh-a(yo)* in line 14 is used to elicit or even urge agreement from J. Y uses this *-canh-a(yo)* with his nonchallengeable attitude: which says "This is a nonchallengeable fact. I expect you to agree with me. I am certain that you will agree with me."

However, unexpectedly for Y, J still insists that his observation is not wrong, by using *-canh-a(yo)* in line 17 of example (10-b) below, which

immediately follows the interaction from (10-a). Even with J's challenging, Y does not change his opinion and asserts that his opinion is correct. This time, Y does not use *-canh-a(yo)* at all to support his opinion. Rather, he uses many hedging devices to be polite to his senior, J. Although Y uses many soft expressions, he still believes he is correct.

TABLE 3: The distribution of "sentence enders" in Y's opposing opinion (second trial)

forms (Korean morpheme)	% Values	Raw count (# of marked sentences/ # of total sentences)
ZERO form (*-a/-e* or *yo*)	40%	2/5
-canh-a(yo)	0%	0/5
-ci(yo)	20%	1/5
other[5]	40%	2/5
hedging expressions[6]	10 times	
(*kuleh-ci-yo* "I guess that is the case.", *ani-ey-yo?* "Isn't it?" <twice>, *cey-ka po-l ttay-n* "when I see it, (In my opinion,)"<twice>, *kes kath-a-yo* "It seems like..."<twice> *molu-kess-nuntey* "I am not sure, but...")		*kuntey* "but", *com* "a little",

(10-b)The following is a continuation from line 13 in (10-a).(+++> indicates a *-ci(yo)* utterance)

===> 14. Y: kulen-ke po- myen-un hankwuk-un kuleki himtul- *canh-* a-yo?
such- thing see-if- TOP Korean- TOP such difficult- CANH-IE-POL
"When you see such things, those things are difficult to do in Korea (don't you think so)."

(3.0)

+++> 15. J: kuntey keth- ulo an tulena- nta ppwun-i- *ci.* hankwuk-to
but surface-at not appear-QUO only-COP-CI Korea- also

===> 16. yocum manhi pakkwi-*canh*-a.=
recently many change-CANH-IE
"But it must only be that they do not appear in public. Korea also changed a lot recently (don't you think so)."

+++> 17. Y: =kuleh-*ci*-yo. kuntey ku ke- nun com ilpwu ani-ey-yo?=
so- CI-POL but that thing-TOP a little part not-COP-POL
"That must be correct, but those people are a small minority, aren't they?"

18. J: ung.
"Yeah."

19. Y: =acik-kkaci-nun kulayto kuk- soswu-ey pwulkwa- ha- n ke
still-by- TOP although very-few- at not exceed-do- VM thing

20. ani-ey-yo?=
not-COP-POL
"Even now, (such people) must be very few in number, aren't they?"

21. J: kulem.
"Indeed."

22. Y: =cey-ka po- l ttay-n kule-n kes kath-a-yo.=
I- NOM see-VM time-TOP such-VM CONJ- IE-POL
"In my opinion, it seems like that."

23. J: mmm.
"Mmm."

24. Y: =cey-ka kule-n ke manhi mos pwa-se kule-nci-n
I- NOM such-VM thing many cannot see-and such-COM-TOP

25. molu- keyss-nuntey,=
not know-CONJ-but
"Maybe it is just that K don't get to witness such things too often, and that's why I understand it this way, though."

26. J: ung.
"Hunh."

27. Y: =cey-ka po- l ttay-n kuk soswu-i- n kes kath-a-yo.
I- NOM see-VM time-TOP very few- COUP-VM CONJ- IE-POL
"In my opinion, it seems that they are very few."

28. J: kulem,. na-nun cikum nay-ka
indeed I- TOP now I- NOM
"Indeed. Right now, I... Since I..."

29. Y: ung.
"Hunh."

30. J: "Bible study" i-nci kule-n tey man tani-nikka
COP-or such-VM place only go- NIKKA
"Since I only go to such as bible study or other places, "

31. Y: ung.
"Yeah."

32. J: nay-ka nemwu kyengkenha-n tey man tani-nikka
I- NOM too pious- VM place only go- NIKKA

33. mikwuk-uy cincca ku sayngwhal-ul molu- nun key
America-of real that life- ACC not know-VM thing

34. ani-n ka?.....(going on)
not-VM Q
"Since I only go to those holy/pious places, I am wondering if I might not know about real life in American, ..."

In this portion, Y uses many indirect expressions such as the hedging expressions as listed in Table 3. However, he does not change his attitude or opinion at all. Y does not pause after each statement even after J's statement in lines 1-2. After giving his observation by overtly saying "in my opinion" or saying "I might be unfamiliar with this issue, but...", Y continues to assert his opinion. As a consequence, Y was successful in getting J to agree with him as seen in lines 22 and 29-35. J is convinced by Y. This means that Y was very certain about what he had been saying in the preceding portion (10-a). Thus, he persists in portion (10-b) after his observation was challenged by J as in line 16. In this portion of (10), the speaker tried to convert J to his side. In (10-a), Y used *-canh-a(yo)* to attempt this since *-canh-a(yo)* is very strong for eliciting agreement. However, Y was not successful, in (10-a), so he changed his strategy to a softer one in (10-b) and finally made J agree.

Under "contexts for a higher degree of certainty", it has been observed that *-canh-a(yo)* is used when the speaker expresses a higher degree of certainty regarding the interlocutor's agreement with a confidence that is strong enough to insist that the perspective is correct even if the speaker is challenged. In other words, the interlocutor is more likely to be forced to agree with the speaker when *-canh-a(yo)* is used.

Now, under "contexts for a lower degree of certainty", I will examine the following contexts: (a) listing past events objectively and (b) making suggestions to one's senior.

(a) listing past events objectively

For data which list past events objectively, the portion in which the speaker talks about what kind of classes he had been taking will be examined. In this portion, the speaker is simply listing the titles of classes and the number of classes as well as how he spent his time at UCLA. Within this portion, there was no strong urge for eliciting agreement observed.

TABLE 4: The distribution of "sentence enders" in Y's listing events objectively

forms (Korean morpheme)	% Values	Raw count (# of marked sentences/ # of total sentences)
ZERO form (*-a/-e* or *yo*)	50%	3/6
-canh-a(yo)	0%	0/6
-ci(yo)	33%	2/6
other	16%	1/6

(11) Y is talking about his experiences during the first and the second quarters at UCLA.

1. Y: twu-kay cenkong ha-ko hana ku ke- l- lo ha-nikka
   two-CL major do-and one that thing-ACC-by do-NIKKA

2. com sikan-i yeywu-ka iss-te- lako-yo=
   a little time-NOM space-NOM exist-RS-QUO-POL
   "I took two classes for my major and that one, I (still) have time."

3. J: ung.
"Hunh."

4. Y: =cheum-ey sayngkak hay-ss-te-n kes pota.
first-at think do-PAST-RET-VM thing than
"Compared to what I thought at the beginning. "

5. J: ung.
"Hunh."

6. Y: kulaykaciko wa- ss-ta ka-ss-ta ha-myense
and come-PAST-EM go-PASS-EM do-while

7. yehayng-to com ha-ko,
travel-also a little do-and
"While I attended classes, I also traveled a little, and..."

8. J: ung.
"Hunh."

+++> 9. Y: mwo... ches-"quarter" cina-ss-*ci*-yo.
what first spend-PAST-CI-POL
"Well, I spend the first quarter (like this)."

10. J: ung.
"Hunh."

11. Y: twupenccay "quarter" pwuthe-nun mwe... kunyang
second from-TOP what as it is

+++> 12. "kick back"-ha myense cincca swi-myense tanye- ss- *ci*-yo.
-do while really relax-while commute-PAST-CI-POL
"Starting from the second quarter, I attended school without pressure."

13. J: ung.
"Hunh."

14. Y: "Japanese"-ha-ko,
-do-and
"(I) took Japanese, and..."

15. J: ung.
"Hunh."

In this portion, Y uses the ZERO form three times to report what he did. Also, *-ci(yo)* is used twice to present past events objectively. In this portion, the character of information provided with the ZERO form and that with *-ci(yo)* are smilar. Then why is *-ci(yo)* used twice? If only the ZERO form were used to report past events, the whole reporting would sound too official as if the speaker is

reporting somebody else's experiences from an objective view, or as if the speaker does not care about the interlocutor at all. In order to avoid this, and to elicit the interlocutor's participation in the speech context, the speaker uses *-ci(yo)* which express a lower degree of certainty regarding the interlocutor's projected sympathy. This strategy has been categorized as a softening strategy by traditional grammarians (cf. Lukoff 1982).

(b) making suggestion to one's senior

For data which include making suggestions to one's senior, I will examine the following portion in which speaker Y is presenting his view as good to his senior J.

(12) Up to this point, J was asking about Y's schedule after returning to Korea.
(Although J is Y's senior, Y will be returning to Korean before J.)

1. J: kulem yelum hakki-ey colepha-nun ke aniya?
then summer quarter-at graduation-VM thing not
"Then, you are graduating in summer quarter, right?"

+++> 2. Y: ani-*ci*-yo. pok hak- ul palo mos tway- yo. cehuy-nun-yo.
not-CI-POL return school-ACC straightly cannot become-POL we- TOP-POL

3. il-nyen swie-ya tway-yo.
one-year rest-have to-POL
"No, I won't. It is impossible to return school directly. For our class.
We have to have a one year break."

<<skip 9 lines>>

11. Y: manil "curriculum"-i pakkwie-kaciko toy-l swu iss-ta- myen-un
if -NOM change-and become-VM POT QUO- if- TOP

+++> 12. ppalli ha-nun ke coh-*ci*-yo.
quickly do-VM thing good-CI-POL
"If they change the curriculum, then, it would be better to graduate quickly."

13. J: ung.
"Yeah."

In this portion, Y explains the returnees' situation in Korea and provides his suggestion about what returnees should do when they change their curriculum. This pattern of *X ha-myen coh-ci-yo.* "I think one should do X" or "Why don't you do X? (Lit. If you do X, it would be good.)" is observed very often in the case of making suggestions. Here, by using *-ci(yo)*, Y is seeking agreement from J on his suggestion.

5. CONCLUSION and SUMMARY

As examined so far, the meanings of *-canh-a(yo)* and *-ci(yo)* would be explained by the speaker's expressed certainty regarding the interlocutor's affirmative response: *-canh-a(yo)* signals that the speaker EXPRESSES A HIGHER DEGREE OF CERTAINTY, while *-ci(yo)* signals that the speaker EXPRESSES A LOWER DEGREE OF CERTAINTY. These attitudes imply that the speaker strongly urges the interlocutor to agree or sympathize with him/her in the case of the former and that the speaker urges the interlocutor to agree or sympathize with him less strongly in the case of the latter.

Through this analysis, we have found that *-canh-a(yo)* and *-ci(yo)* each has its own unique usage. *-Canh-a(yo)* is used to convince the interlocutor, in contexts of reporting unwelcome events, opposing the other party's opinion, and so on, in which the speaker wants to elicit the interlocutor's agreement or sympathy. On the other hand, *-ci(yo)* is used to present information with a lower degree of certainty. With *-ci(yo)*, the speaker presents the information to be judged by the interlocutor. In other words, the speaker leaves some room for the interlocutor to judge, in the case of *-ci(yo)*. Thus, *-ci(yo)* is used in contexts such as listing past events objectively and making suggestions to one's senior. It is difficult to be assertive in the case of the latter.

For further research a more quantitative study should be done on various data. One could obtain more discourse data among various speakers under various situations.

NOTES

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1. LIST OF ABBREVIATIONS:

ACC...accusative	CL...classifier	COM...complementizer
CONJ...conjecture	COP...copular	IE...informal ending
MOD...modifier	NOM...nominative	SUG...suggestion
SUP...suppositive	TOP...topic	PAST...past
PL...plural	POL...polite	Q...question
QUO...quotation	RET...retrospective	VM...verb modifier

2. Lee (1991) is an exception. Although *-ci(yo)* has been studied by comparing it to the ZERO form, I will demonstrate that the ZERO form is not in fact a similar expression, to *-ci(yo)*.

3. In each case, the speaker is certain about the proposition. If he were not sure, a different form would be used such as *i ke ani-ey-yo?* (Isn't it this one?), which is a pure question.

4. Sohn (1992) suggested that *-nikka* is the speaker-oriented causal marker which shows the speaker's own judgment rather than the expression of logical reasoning.

5 Although this category is 40%, they are not used for seeking agreement such as hedging expressions.

6. Although *ani-ey-yo* and *kes kath-a-yo* could be categorized under ZERO form, I will treat them as hedging expressions since it shows the speaker's attitude.

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An Interactional Account of *nikka* in Korean Conversation

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1. Introduction

In this paper, we present an analysis of the Korean connective *nikka*,[1] a connective which has traditionally been noted to mark causality and discovery. We will focus on explicating the interactional functions of *nikka* as it is observed in spontaneous conversation with special reference to how these functions can be coherently accounted for and how they relate to the meaning of this connective. As we will show through the following discussion, this research is an attempt to explore the relationship between grammar and social interaction, an issue which has received little attention in the field of linguistics.

While *nikka* has been a topic of continuous debate, it has been examined primarily on the basis of sentence-level analyses, with an emphasis on its semantic properties as observed at the sentence level only. The traditional approaches thus attempted to identify the meaning of *nikka* by explaining the various functions of this connective particle on the basis of the logical relationship between the two sentences linked by it. A common practice in this traditional line of research is to apply the analyst's grammaticality judgment to made-up sentences within made-up contexts.

In many cases, these previous studies often compared *nikka* with another causal connective *ese* in an attempt to posit different inter-sentential relationships between the sentences linked by each particle. For instance, Ree (1978) states that *nikka* marks the speaker's knowledge, belief, or assertion, while *ese* is limited to marking the speaker's direct reasons for uttering the main clause. This observation suggests that the causality relationship marked by *nikka* should be understood not so much as a direct reason for uttering the main clause as a reason for the speech act itself being made by the speaker (Ree 1978, Lee 1988, Sohn 1992). These findings are in line with the observations that utterances connected by *nikka* serve as a device for argument, whereas those connected by *ese* serve to assert a cause *per se* (Lukoff & Nam 1982). In a similar vein, Lee (1988) attempts to posit the basic meaning of these particles by proposing that *nikka* marks a tentative causality through which the speaker subjectively relates two events which do not necessarily have an inherent causal relationship. *Ese*, on the other hand, according to Lee's analysis, basically marks sequentiality in which a second event occurs in the context

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[1] *Nikka* is one of the discourse connectives which link two clauses in the form of A-*nikka*-B, as illustrated by the sentence below:

pi -ka o **-nikka** coh -ta.
rain-NOM come-CONN good-DECL
As it rains, I feel good.

Here the clause to which *nikka* is attached constitutes what is traditionally called the 'subordinate' idea unit, while the subsequent clause constitutes the 'main' idea unit (cf. Schiffrin 1987). In the following discussion, we will use the term '*nikka*-clause' to refer to the subordinate clause containing *nikka*, e.g., *pi-ka o-nikka* ('As it rains,') in the example above.

of the first event. These findings suggest in general that *nikka* is more subjective and pragmatically conditioned in its use than *ese*, with *ese* tending to mark the objective inter-sentential relationship *per se*, such as sequentiality of events and/or their direct causality.[2]

While these studies provide us with important semantic properties of *nikka*, they fall short of explaining the actual uses of *nikka* as it is motivated in the context of spontaneous interactional discourse. Taking a view that grammatical phenomena are inherently and inextricably intertwined with actual use of language, this paper attempts to address the issue from a different perspective, i.e., from a conversation analytic perspective which treats spontaneous conversation as a primordial discourse genre that constitutes the base of human sociality, and which recognizes the significant role of interaction in shaping grammar (Sacks, Schegloff, & Jefferson 1974). Unlike most of the previous studies that examined this connective at the sentential level, this paper attempts to explicate the interactional functions of *nikka* with special reference to the sequential contexts in which they are situated within spontaneous conversations.

The main purpose of this paper is to provide a coherent and systematic description of the various functions and sequential characteristics of *nikka* by attempting to identify its basic interactional meaning. This interactional meaning is indexed through the interaction between participants who are specifically oriented to the prior and the following contexts of talk. It will be proposed, in this regard, that *nikka* has the interactional meaning of providing an 'intersubjective' ground and thus including the interlocutor in the same domain of experience, with the conversational participants leading to a peak of heightened mutual orientation to some significant 'action' projected in the subsequent context. A contextual correlate of this meaning is that the main clause following the *nikka* utterance is projected to constitute an action which deserves this type of intersubjective co-orientation, i.e., an action that has a significant interactional import for discourse-organization and interactional management. This meaning is shown to be inherently associated with the global function of *nikka* eliciting the interlocutor's upgraded responsiveness in the context where the speaker attempts to accomplish various types of co-ordinated action. We propose that this meaning of *nikka*, as defined in procedural terms, accounts for various interactional functions of the particle observed in spontaneous conversational contexts. Whenever relevant, a comparison is made with other connectives including *ese* in order to highlight the unique functions of *nikka*.

2. Interactional functions of *nikka*-clauses: Providing a ground for co-alignment and co-experience

In explicating the interactional functions of *nikka*-clauses, three types of contexts are broadly identified. First, *nikka*-clauses provide a ground on which the interlocutor's sympathy or agreement is invited, and project in the following main clause an interactionally 'noticeable' action, i.e., dispreferred actions like complaints, disagreements, or arguments (cf. Pomerantz 1984). Three sub-contexts are identified; contexts where *nikka*-clauses (i) provide an affective ground

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[2]Lee (1988) notes that the causality reading of the *ese*-clause derives from the sequentiality reading, which is proposed as reflecting the more basic function of *ese*.

for eliciting sympathy with the speaker's complaint; (ii) provide a factual ground for eliciting agreement; (iii) provide a ground for denying the relevance of the prior action. Second, *nikka* performs a particular guiding function in story-telling contexts by providing a textual ground. Again, two sub-contexts are examined. One relevant context is where the *nikka*-clause projects the 'disjunctive' act of introducing a story as a second story to the preceding one. The other context is where the *nikka*-clause, in the middle of a story, projects some 'dramatic' act of marking some non-usual, significant point of the story in the context of counter-expectation. In the former, *nikka* invites the interlocutor to co-align with the speaker as a story-recipient, while in the latter it functions as a particular type of anaphoric linkage (Grimes 1975) that prepares the interlocutor for some projected upshot of the story. Thirdly, we consider some cases where the *nikka*-clause is post-positioned after the main clause. In such contexts, *nikka*-clauses are often tagged onto the preceding main clause to mitigate the degree of disjunctivity and dispreferredness of the preceding action by bringing in some empirical ground (in the same turn), or to display congruent understanding towards the interlocutor's utterance (across turn boundary). In all of these cases, it is proposed that the basic function of *nikka* is to provide an intersubjectively common ground for leading the interlocutor(s) to a mutually heightened orientation towards the subsequent action, an action which is projected to have a certain significant discourse and interactional import.

2.1. Providing ground for eliciting sympathy and agreement

2.1.1. Providing affective ground for (co-)complaint

One of the most salient functions of *nikka* observed in conversational discourse is that of providing an affective ground on which speakers invite the interlocutor's co-alignment and sympathy towards them. Example (1) is a case in point.[3] This conversation occurs in the context where the interlocutors, who are TA's for intermediate Korean, are complaining about some questions in a quiz made up by another TA, who is not present in this interaction:[4]

(1) (Lunch talk)

1	S:	.h	kuntey	iss -cian	-a,	na-nun (ce-) error-correction
			by:the:way	exist-ASSER-IE	I	-TOP that error-correction

---

[3]In the following examples, we use bold type for *nikka* and the immediately preceding verb to which it is attached. The corresponding portion in the English translation is also written in bold type. The transcription notation used for this paper was adapted from Sacks, Schegloff & Jefferson (1974) with some modifications:

[ ]	Indicates simultaneous utterances	.	Falling tone
=	Indicates contiguous utterance	,	Continuing intonation
//	Interruption (concurrently marked by '[' between turns)	?	Rising intonation
		- -	Cutoff
(0.0)	Intervals between utterances	hhh	Audible aspirations
( )	Words unclear	.hhh	Audible inhalations
:	Sound stretch	(( ))	Transcriber's remarks

[4]We find a discourse marker *kelenikka* in line 6, which contains *nikka*. For a discussion of the functions of this marker, see Kim & Suh (1993, in progress).

2 kwayncanghi silheha-ketun -yo, (1.0) I hate that kind of question.
very:much dislike -INFOR-POL (CODE SWITCH)---------

3 especially in intermediate level-eyse-nun,=
---------- -LOC-TOP
By the way, you know, I really don't like the error-correction type of questions. I hate that kind of question, especially at the intermediate level,

4 J: = a thulin -ke kolu -nun -ke -yo?=
DM wrong-NOML choose-ATTR-NOML-POL
Oh, you mean those questions where you have to find grammatical errors?

5 S: = yey: kulehkey ilpule thulin -ke -l hay noh-akackwu,
yes like:that deliberately wrong-NOML-ACC do put -CONN

6 (k//ule -nikka--)
like:that-CONN
Yes. In these kinds of questions, you deliberately include wrong answers, and, (I mean-).

7 J: [
kuntey keki -ey te mwuncey-nun thulin-k--
but there-LOC more problem -TOP wrong

8 ma-- macun-ke -l thuli- (.) -tako hayse
corret -thing-ACC wrong -QUOT do:CONN

---> 9 i ccem o ccem-ul kkak -ullye **-ni//kka:**,
two point five point-ACC cut:off-INTENT-CONN
*But what is more problematic is, **as I tried to deduct** 2.5 points if the students made a wrong guess by correcting the grammatical parts of the sentence.*

10 S: [
ne//y:
yes

11 K: [ ]=
um:
Right.

12 S: =ne//mwu pwulssangha-ci -yo?
too pitiful -COMM-POL
The students are too pitiful, right?

13 K: [
nemwu mianha-ci -yo?
too sorry -COMM-POL
We *are sorry too much for the students, right?*

From line 1 to line 3, S brings up the error-correction type of test question, and produces a complaint by saying, iteratively through code-switching, that she does not like that type of question. The complaint continues through lines 5 and 6 following J's confirmation-requesting question in line 4. In line 7, J interrupts S and produces a *nikka*-clause, where he describes the trouble that he experienced in correcting the students' answers to the questions. Here we find a strong sense in which speaker J is eliciting sympathy for and co-alignment with his trouble, thus collaborating with S in providing an interactional basis for co-complaining against the absent third party who is responsible for the trouble. Indeed, the interlocutors, S and K, provide quick, affirmative responses in lines 10 and 11 in overlap with J's utterance. Furthermore, in lines 12 and 13, each of them provides an utterance which can be treated as a main clause tagged onto J's *nikka*-clause. By collaboratively producing main clauses in response to J's *nikka*-clause, the interlocutors display their co-alignment with speaker J.

It follows from these observations that, through the *nikka*-clause, the speaker provides the intersubjective ground where the interlocutors are guided into providing the kind of consensus expected by the speaker. It is important to note in this regard that the use of *nikka* is not just concerned with the provision for such a ground. Rather, the major part of the meaning of *nikka* is to project some point in the upcoming main clause in such a way that the speaker invites the interlocutor's collaboration and co-alignment with the projected action. It is by indexing such a procedural meaning of *nikka* that the interactants arrive at a peak of heightened mutual involvement towards the projected point in the subsequent context.[5]

The function of the *nikka*-clause which provides a ground for eliciting sympathy and co-alignment is also observed in example (2). In this example, we find two instances of *nikka*-clauses; the first *nikka* is in line 9, and the second in line 15.

(2) (Lunch talk)

1	L:	ai,	i	ke	mwe	hangsang	achim	-ey	-to mal-i
		EXCL	this	thing	what	always	morning-LOC-ADD		talk-COP
2		-ci,	Sekyengi	hakkyo	teylye-ta		cwu-nulako.	.h	keki
		-COMM	Sukyong	school	take	-INTER	give-ACCO		there

[5]While we will use the terms 'meaning' and 'function' loosely in this paper, it should be noted that, strictly speaking, the meaning of *nikka* is defined in terms of the process of providing ground for some interlocutor-impinging action initiated by speaker, such as command, request, etc. The tendency for *nikka*-clauses to contain shared or unchallengeable information, which has long been observed traditionally, can be explained by the speaker's interactional motivation to bring in common ground with which the interlocutor can easily identify and collaborate. In this respect, the salient tendency of the speaker to present the *nikka*-clause as common ground should be treated as an aspect of the function or the discourse-strategy associated with *nikka*, which is designed to induce effectively the interlocutor's collaboration with the speaker's action. That is, the speaker is oriented to providing common ground because such a ground would be one that can be effectively utilized as an intersubjective ground on the basis of which the speakers can rather safely embark on involving the interlocutors in their mutually heightened orientation to the projected main point. For a more detailed discussion, see Kim & Suh (1993).

3 -nun cikak -i -lanun -key, cikakha-m//yen tto
-TOP being:late-COP-QUOT-NOML:NOM be:late -CONN again

4 kyocang mwe sungin -ul pat-aya toy -e=
principal what approval-ACC get-NECESS become-IE
Shoot, (it's a bit of pain) to take Sukyong to school every morning. Because if students are late for school, they have to be approved by the principal.

5 K: [
hhhhh .h

6 S: =[
emena
EXCL
really?

7 L: ku yetel-si isip pwun -kkaci teyli-e
that 8 -hour 20 minute-by take-CONN

8 -ta cwu-ko kkok (1.6) tases si samsip pwun kkaci
-INTERR give-CONN exactly 5 o'clock 30 minute by

---> 9 **pickup-ul ha-llye -nikka** i -ke cakkwu,=
pick up -ACC do-INTENT-CONN this-thing again and again
*So, **since I have to** take her to school by 8:20 sharp and then **pick her up** by 5:30 sharp, what a bother! - day after day -*

10 K: =hakkyo-ka eti -i -ntey -yo ?
school -NOM where-COP-CIRCUM-POL
Where is her school?

11 (0.6)

12 L: keki vons twi -ey. =
there VONS behind-LOC
Over there behind VONS market

13 K: =e:
yes
I see

14 (2.5)

---> 15 L: ku salam -i ku **mayi -e iss -unikka,**
that person-NOM that be:bound-CONN exist-CONN
***Since I have been tied down** to that tight schedule,*

16 S: kuleh -ci -yo?
like:that-COMM-POL
It's hard, isn't it?

17 L: chom kipwun-i an coh -a. hu//huhhh
a:little feeling -NOM NEG good-IE
I don't feel good. huhuhhh

[
18 K: kuleh-keyss-ney
that -MOD-FR
(I guess) that's the case.

From line 1 to line 4, L complains about his situation in which he has to pick up his daughter by a certain time. This talk is responded to by K and S in lines 5 and 6, with laughter and an exclamation respectively. L's self-commiseration further continues from lines 7 to 9, where he produces a *nikka*-clause in the context of providing a more specific account of his trouble. As in example (1), we can readily note here that L is inviting sympathy for his situation, to which K shows interest in line 10. L's sympathy-seeking practice continues in line 15, where he produces another *nikka*-clause, further inviting the interlocutors' co-alignment and sympathy with his situation of being tied down to that tight schedule.

As in example (1), we find here also that the *nikka*-clauses are immediately responded to by the interlocutors. In line 10, K produces a question which, though potentially digressive, displays his keen interest in the factual information relevant to L's trouble, and in line 16, S collaboratively responds to the *nikka*-clause by intersubjectively providing a main clause before L produces its main clause in line 17. We can see that this utterance by S in line 16, though unclear as to what the entire utterance actually refers to, points anaphorically to some unsaid main clause of the preceding *nikka*-clause, meaning something like 'It's hard, isn't it?'

In sum, the *nikka*-clauses in these contexts serve as an affective ground which invites the interlocutor(s) to sympathize and co-align with the speaker's complaint about his/her own trouble, or about mutually shared trouble. In this sense, we can say that, at the end-point of the *nikka*-clause, the interactants' orientation to the projected action is mutually heightened intersubjectively and affectively to such an extent that the main clause need not be mentioned subsequently, and that the interlocutors can more or less guess what the speaker projects to be the upcoming point. As a result, what we observe is the interlocutor's immediate production of a collaborative response with upgraded rhetorical strength and affectively intensified overtones.

2.1.2. Providing factual ground in oblique disagreement

Another context where *nikka* is used to invite co-alignment from the interlocutor is one in which the speaker counters the interlocutor's disagreement while backing down. Example (3) is a case in point. Preceding this segment of conversation, S, who is doing research on a Korean modal marker, asked H whether he knew of any research papers which present a nice treatment of the topic, saying that those she had looked at were not very helpful. In line 1, H suggests one particular paper:

(3) (Lunch talk)
1 H: kim kyoswunim paper-ey com nao -aiss -nuntey
Kim professor paper-LOC a:little come:out-RESULT-CIRCUM

Prof. Kim's paper discusses something about it.

2 S: caseyhi -nun.
In detail-TOP
(The paper does not show) in detail...

3 H: ca//--
[
4 S: ku -nte//y--
like:that-CIRCUM
But-
[
5 H: a--

6 (0.8)

---> 7 H: hayethun hyensang -ey tayhayse-nun **//nao -a iss -unikka.**
anyway phenomenon-about -TOP come-RESULT-CONN
*Anyway, **(because) it discusses** the phenomenon itself at least.*
[
8 S: ney. ney. ney.
yes yes yes.

After H suggests one paper in response to S's query, S, in line 2, disagrees with H's suggestion by saying that the paper which H just recommended does not provide a detailed analysis of the topic at issue. Following several hitches and overlaps, H produces a *nikka*-clause in line 7, countering S's disagreement by asserting that the paper at least talks about the phenomena.

We can note here that H produces this *nikka*-clause to bring up an empirical, factual ground. What the *nikka*-clause does is to provide a ground on which H can solicit agreement from S by asserting that the paper he suggested is still useful, even though this suggestion was not a satisfactory one for S. In this sense, the *nikka*-clause provides a minimal, but solid ground on which the interactants, though in disagreement with each other, can co-align and ultimately agree, and thus serves as a basis on which the interactants can avoid potentially more serious and face-threatening situations. Indeed, the *nikka*-clause is favorably responded to by interlocutor S, who collaboratively orients herself to the need for conflict avoidance by producing a *pro forma* agreement in line 8. As a whole, we find that, through the use of the *nikka*-clause, H basically maintains his disagreeing position in a highly oblique manner while simultaneously backing down, and prepares a ground for terminating the on-going disagreement sequence. As a result, both interactants mutually save their face.

As in examples (1) and (2), it is noteworthy that the speaker in example (3) also does not produce the main clause. As we mentioned above, the frequent absence of the main clause for the *nikka*-clause can be explained as a grammatical phenomenon interactionally motivated by the interactants' mutually heightened orientation towards the projected action. Furthermore, we find in example (3) that the absence of the main clause is attributed to a politeness strategy for avoiding

conflict. If H had produced a main clause linked to the *nikka*-clause, he probably would have said something like 'so it's still worthwhile to read the paper' or 'so you should read the paper', which would count as a highly face-threatening act (Brown & Levinson 1987). Such an utterance would have resulted in a more serious, direct conflict with the interlocutor. In this respect, the *nikka*-clause provides ways in which interactants can avoid serious confrontation and arrive at a position of co-alignment.

2.2. Textual ground: Common ground for the projected talk

The function of *nikka* that invites the interlocutor's collaboration is also observed in story-telling contexts. In these contexts, the *nikka*-clause provides the common ground on which the speaker positions the hearer as the story recipient continuously from the preceding context, or provides the upshot of the story. Such a function of *nikka* enables speakers to guide hearers into some significant domain in the territory of the speakers' own experience being narrated, and to alert their interlocutors to the upcoming point coherently without being engaged in a verbose introduction.

2.2.1. Providing a setting for initiating a story

In story-telling contexts, *nikka* is often found at sequential places where the speaker initiates a story, as illustrated in example (4):

(4) (N & H)

1 N: kulem mak wuncensa-ka mak: nwul-eka(h)ciko
Then haphazardly driver -NOM haphazardly press-and:then

2 mak: tolli-e(h) h//hh
haphazardly turn-IE
Then the driver rewinds the tape recorder haphazardly. hhh

3 H: [uhhh

4 (3.5)

---> 5 H: khanata (.) tholontho **ka-nikka,**
Canada Toronto go-CONN
***When I went to** Toronto in Canada,*

6 N: ney.
yes

7 H: cito -ey ku nosen-i ta ssui -eiss -e. kuntey, ...
map-LOC that line -NOM all written-RESULT-IE then
The map shows all the bus lines, and there, ((Story continues))

Throughout the context that precedes this talk, the interlocutors, N and H, complained about the public transportation system in Seoul, and the talk continues until line 3 in example (4). After a gap, H produces a *nikka*-clause in line 5 (*When*

I went to Toronto in Canada). This *nikka*-clause initiates an episode about the Canadian transportation system, which is more efficient and less confusing than that of Seoul.

We can first note in example (4) that the *nikka*-clause serves as the initial background setting for the story that will follow. Namely, speaker H, through the *nikka*-clause, provides a temporal framework which serves as the initial stage for narrating his experience with Toronto's efficient bus lines after just talking about Seoul's bus system. From an interactional point of view, it is noteworthy that the provision of such an initial setting, constituted by a short temporal clause, functions to make a rather disjunctive story initiation highly coherent. This is interactionally achieved by interlocutor N's positioning himself as an interested story recipient in response to H's use of *nikka*, which is explicitly signaled by N's production of a receipt marker in line 6. On the basis of the interlocutor's secured attention and shifted stance, the speaker then goes ahead and continues to tell his story.

We can also note in example (4) that the story initiated with the *nikka*-marked temporal clause is actually a 'second' story, which immediately follows a 'first story' (Jefferson 1978). The second story is about the 'efficient' bus system in Toronto, which is contrasted with the 'highly confusing' bus system in Seoul mentioned in the first story. The second story thus has a particular bearing upon the first story since it is in a contrastive relationship. An important point here is that some 'significant' action projected by the *nikka*-clause is significant by virtue of its relationship with the prior talk linked through the *nikka*-clause.

While we noted contrastiveness as reflecting one type of such a sequential characteristic associated with *nikka*, in the next section we turn to another similar discourse relationship between the post-*nikka* and the pre-*nikka* contexts, this time in the middle of a story.

2.2.2. Providing background setting in the middle of a story

While *nikka* provides the common ground when the speaker establishes the frame for a story, it is often used in the middle of a story where it serves as a particular kind of 'anaphoric linkage' (Grimes 1975), a linkage that indicates a break in discourse and initiates a new segment of talk. Example (5) is a case in point:

(5) (Movie story)

1 L: ..... khun atul-hako twul ccay atul-i (.) hapsim -haykackwu
big son -with second son-NOM cooperation-do:CONN

2 incey apeci-lul (.) cwuki-le ka. kulayse incey (0.5)
now father-ACC kill -PURP go:IE and:then now

3 apeci-- apeci puha -tul -i incey (0.6) samurai-tul-i
father father follower-PL-NOM now samurai-PL-NOM

4 iss -nuntey, iltang chen -i -lay(h)hh ke(h)ki(h)
exist-CIRCUM per:one one thousand-COP-QUOT there

5 -nun hhh.h ku iltang chen -uy ku sillyek
-TOP that per:one one thousand-POSS that competence

6 -ul kaci-n ca -tul-ul kacta ta cwuki-ntakwu. (0.8)
-ACC have-ATTR man-PL-ACC all kill -QUOT

7 kuntey apeci -ka incey keki-se michi -e. (1.8)
and:then father-NOM now there-LOC get:crazy-IE

---> 8 **michi -nikka** incey salli -e -cwu-ntakwu.
get:crazy-CONN now save:life-CONN-give-QUOT
The first son and the second son cooperate with each other and go out to kill their father. And there are these men of their father, who are all samurais, and it is said that each of them can fight 1,000 soldiers alone. And the two sons kill all of them, all of these great swordsmen who can defeat 1,000 soldiers alone. And now the father goes insane. ***As the father goes insane,*** *they (his two sons) spare his life.*

9 K: ung:
yes
I see.

In this segment, L is talking about the Japanese movie *Ran*. We find a *nikka*-clause in line 8 (*as the father goes insane*), which recapitulates the event recounted in the immediately preceding context, i.e., the father's going insane, and formulates it as a background setting for the following event. Here, the recapitulated event is presented as a ground on which the hearers are led to orient and prepare themselves to what the speaker is going to tell. Thus, progressively, the hearers are invited to alert themselves to the upcoming point in relation to the recapitulated prior talk, as the *nikka*-clause projects in the subsequent talk a dramatic overturn of events, i.e., the two sons' saving their father's life. This event constitutes a significant upshot of the story involving a sudden turning point, because in the prior context the speaker mentioned that the major goal of the two sons was to kill their father, and that they killed all of their father's followers. This discourse message projected by *nikka* can be captured by the notion of 'counter-expectation', which could be considered a type of contrastive message procedurally defined.

Even though example (5) is different from example (4) in that the *nikka*-clause projects the upshot of the story while in the middle of it, instead of acting as a story initiator, the discourse functions of *nikka* in both cases hinge on the underlying procedural meaning which guides the interlocutor to the projected point in relation to the prior development of talk. In example (4), the hearer was oriented to a second story in the context of the preceding first story, and in example (5), the hearer was oriented to the upshot of the current portion of the story in relation to the preceding context of the same story. We find, therefore, a parallel in examples (4) and (5) in that the *nikka*-clauses are positioned in a sequential place where the upcoming telling is projected as having some significant bearing upon the prior telling. The notions of contrastiveness or counter-expectation as noted above, then,

are some of the sequential characteristics of *nikka* that are closely associated with its discourse-linking functions in story-telling contexts.

In more general terms, this sequential characteristic associated with *nikka* can be described in terms of 'upgrading' the expected degree of responsiveness from the interlocutor, i.e., in terms of eliciting from the interlocutor a more intensified attention and a more congruent response to the agenda at hand. Such an upgrading function of *nikka* naturally presupposes that the agenda at hand, which has been in effect throughout the current interaction from some past time point, is still 'pending' or 'not yet resolved'. Indeed, this observation seems to be relevant to examples (1), (2), and (3), as well as to examples (4) and (5). In examples (1) and (2), the speaker brings up the event framed in the *nikka*-clauses as a way of eliciting upgraded affect and sympathy from the interlocutor in the on-going sympathy-inviting sequence. In example (3), the speaker presents an empirically grounded factual basis for eliciting the interlocutor's agreement as he backs off, so that he can expect an upgraded/agreeing response from the interlocutor.

While this point awaits further research for a more systematic evaluation, the global notion of upgrading, as a sequential characteristic inherently associated with the meaning of *nikka*, provides a basis for distinguishing *nikka* from other connectives like *nuntey*, a backgrounding particle which often serves otherwise similar discourse-linking functions (cf. Kim 1987). For instance, *nuntey*-utterances, just like *nikka*-clauses, are used for initiating a story. However, *nuntey* is different from *nikka* in that *nuntey* lacks the collaboration-seeking function, and often frames a genuinely topic-initial story or brand new background information without any significant bearing upon the prior talk (cf. Kim & Suh in progress). This point is well illustrated in lines 3 and 4 in example (5) above, where we find an instance of a *nuntey*-clause. The *nuntey*-clause is introduced below in example (6):[6]

(6) (Movie story)
H: **samurai-tul-i iss -nuntey**, iltang chen -i -lay
samurai -PL -NOM exist-CIRCUM per:one one:thousand-COP-QUOT
***There are samurais, and** it is said that each of them can fight 1,000 soldiers alone.*

Here we find that the *nuntey*-clause, which contains background information, frames another piece of background information regarding the samurais. In this regard, the *nuntey-clause* has little bearing upon the prior talk, and constitutes a comment which is, though affectively loaded, only auxiliary to the main line of the story.[7]

These observations suggest that, while there may be a group of connectives

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[6]In the data, *nuntey* is glossed as 'CIRCUM (Circumstantial)'.

[7]We can say here that one discourse message associated with *nuntey* is that there is no 'pending' agenda inherited from the preceding context; in sharp contrast with *nikka*, the use of *nuntey* conveys a sense that the previous agenda was resolved or is no longer an issue of concern, with no further need to elicit the interlocutor's upgraded appreciation of the previous agenda (Kim & Suh in progress).

like *nikka* or *nuntey* functioning as an anaphoric linkage, *nikka* is unique in its interactionally oriented procedural meaning and the contextual correlates thereof. In the next section, we further examine this interlocutor-impinging meaning of *nikka* and its globally observed function of eliciting upgraded responsiveness from the interlocutor in the argumentative context.

2.3. Providing a ground for argument

Nikka-clauses sometimes function as a 'disclaimer' which denies the relevance of the interlocutor's prior action by bringing up a shared ground. (cf. Goodwin 1990). This use of *nikka* is illustrated in example (7):

(7) (Overheard conversation)

1 A: haksayng-tul-i philthong -ul po -ko
students -PL-NOM pencil:case-ACC see-CONN

2 mak us -e.
without:reservation laugh-IE
Students saw my pencil case, and laughed a lot.

---> 3 B: **ay -tul-kke -nikka** kuleh -ci.
child-PL -thing-CONN like:that-COMM
*They did that **because your pencil case is a children's pencil case**.*

In this example, A, a college lecturer, complains in lines 1 and 2 by saying that her students laughed after seeing her pencil case. In line 3, B responds by asserting, through the *nikka*-clause, that there is nothing strange about the students' reaction, because A's pencil case is obviously a children's pencil case.

The *nikka*-clause here expresses a reason which is assumed to be obvious and thus acceptable by the hearer without any challenge (in the sense that 'we both know that your pencil case is for children.') (Lee 1991:94). What is noteworthy is that the main clause, which is produced after the *nikka*-clause within a single intonation unit (Chafe 1987), refers back to the propositional content of the prior turn being responded to (*kuleh-ci* 'they did it' (='they laughed')). What the *nikka*-clause does, then, is to provide a shared ground for orienting interlocutor A back to the relevance of the propositional content of her own prior utterance, i.e., the students' act of laughing, instead of responding directly to A's speech act of complaining which invites B's co-alignment. As a result, B does not co-align himself with A's complaint. Rather, B asks A to co-align herself with him by accepting the relevance of the factual detail he provides, which supports the students' act. In this respect, we find that the global 'upgrading' function of *nikka* is realized as one that elicits a substantial shift in orientation from the interlocutor, i.e., a shift of attention away from her current concern with the actual speech act of complaining towards a concern with the propositional content of her utterance.

2.4. Post-positioned ground for disjunctive action

In the preceding sections, we discussed instances of *nikka* that are pre-positioned, i.e., positioned before the main clause. In this section, we turn to cases

where the *nikka*-clause is post-positioned following the main clause in the same turn.

As we will show below, the interlocutor-impinging function of pre-positioned *nikka*-clauses is also observed in post-positioned ones, though in the opposite direction. In this context, the main clause onto which the *nikka*-clause is tagged often constitutes some kind of action which is counteractive to the prior talk, such as a challenge, a sudden backing-off move, or a disjunctively initiated action. What the post-positioned *nikka*-clause does in these cases is to provide some empirical ground for justifying such a disjunctive action by inviting the interlocutor's co-alignment with the potentially 'noticeable' action. That is, the motivation for producing a *nikka*-clause post-positionally is often to mitigate the degree of dispreferredness and disjunctivity of the action which is constituted by the preceding main clause.

Example (8) is a case where we can observe such a remedial function of post-positioned *nikka*-clauses. The *nikka*-clause, found in lines 7 and 8, is produced after the speaker challenges the interlocutor:

(8) (Lunch talk)

1 C: ku ( ) flour iss -can -a//-yo?
that flour exist-ASSRT-IE-POL
You know the flour?

2 J: [
burrito ( )
burrito

3 S: ung
Yes.

4 C: salsa iss -ci -yo.
salsa exist-COMM-POL
and salsa?

5 S: ney.
Yes.

6 C: salsa-lul thak haykaciko mal-ase mek-te -lakwu.
salsa-lul ONOME do:CONN roll-CONN eat -RETROS-QUOT
I found that he spread salsa on the flour (tortilla), and then rolled it up and ate it.

7 S: ku-- kulehkey manhi mek-te -la **mikwuk ai -tul**
that like:that much eat -RETROS-QUOT American people-PL

---> 8 **po -ni//kka.**
look-CONN
American people often eat like that. ***That's what I noticed.***

9 C: [
a ku -ke mot mek-keyss- - ku -ke -n mwe (.)
ah that-thing cannot eat -MOD that-thing-TOP what

10 mot mek-nun -ke -n ani -ciman,
cannot eat -ATTR-NOML-TOP NEG-CONSS
Ah, I cannot eat that- -That is-, It is not that I cannot eat that, but,

In the context preceding this fragment, C complained that when he visited his friend, his friend served him just tortillas and salsa for dinner, without things like beans or meat. The complaint lasts up to line 6. In line 7, however, S does not take the upshot of C's point, and instead produces a challenge by countering the basis of C's complaint, saying that she found that American people often just eat tortillas and salsa. After uttering this, S tags the *nikka*-clause, which provides empirical support for her challenge by showing that her challenge is based on first-hand observation.

Similarly, example (9) is a case where the speaker attaches a *nikka*-clause post-positionally to mitigate the degree of disjunctivity of the preceding action:

(9) (Movie talk)
1 H: ca na-nun incey (.) pap mek-eya -ci.
Now I -TOP now mean eat -NECESS-COMM

2 cwungyohan yayki-lul ta ha-konase incey
important story-ACC all do-CONN now

---> 3 kiek sok -eyse **salaci -ess -unikka.**
memory inside-LOC disappear-PST-CONN
*Now, I'll eat, **since** I finished telling all the important stories, and **they all disappeared from my memory**.*

In the context preceding this segment of talk, H has been telling a story about a movie which contains a number of cruel scenes and gross topics, which other interlocutors had to endure while eating their lunch. This segment of talk occurs as H opens his lunch box after he finished telling all the gross details of the story. The *nikka*-clause in this example provides a ground for the speaker's sudden, disjunctive action of starting to eat lunch, with the humorous effect of highlighting H's tactical strategy of intentionally delaying eating his own lunch, when everyone else had already started.

In sum, these contexts show that post-positioned *nikka*-clauses serve a remedial function such that the speaker mitigates the dispreferred nature of the preceding action by providing an empirical ground that justifies the action. Thus we find that, in comparison with pre-positioned *nikka*-clauses, post-positioned *nikka*-clauses are situated in different interactional contexts. However, it can be observed that, as in the case of pre-positioned *nikka*-clauses inviting an upgraded co-alignment from the interlocutor, post-positioned *nikka*-clauses impinge upon the interlocutor(s) and invite their 'revised' appreciation of the preceding action, i.e., 'revised' towards a more positive appreciation thereof.

3. *nikka* and *ese*

It seems to be relevant, at this point, to compare *nikka* with another causal connective *ese*. As noted earlier, *ese* has often been analyzed along with *nikka* in

previous studies. Some of the previous findings show that *ese*, in contrast with *nikka*, connect two sequential events such that the second event occurs in the context of the first event (Lee 1988), or that the first event constitutes a direct cause of the second (Lukoff & Nam 1982). One important point to be made with regard to these observations is that the A-*ese*-B utterance, whether it denotes sequentiality or causality, is in sharp contrast with the A-*nikka*-B utterance where A and B constitute separate actions; the A-*ese*-B utterance constitutes a monolithic whole, which often serves as a statement or one-shot comment situated in a plain reporting context. Furthermore, unlike *nikka*-clauses, *ese*-clauses do not perform any salient recipient-impinging action which is designed to effect some change in the interlocutor's stance so that co-alignment with the speaker can be achieved. This characteristic of A-*ese*-B utterances is well illustrated in example (8) above. The relevant portion of the data is reintroduced below in example (10):

(10) (Lunch talk: line 6 in example (8))
---> C: salsa-lul thak haykaciko **mal-ase** mek-te -lakwu.
salsa-lul ONOME do:CONN roll -CONN eat -RETROS-QUOT
I found that he spread salsa on the flour (tortilla), and then ***rolled it up and*** *ate it.*

We can readily note that the *ese*-clause is produced in a context where the speaker reports a first-hand observation he made in the past, as shown explicitly by the use of the retrospect marker *te*. Compared with A-*nikka*-B utterances examined above, the A-*ese*-B utterance in example (10) does not convey a salient sense of performing a particular action designed to affect the interlocutor or to elicit a particular collaborative response.[8] Rather, it tends to refer to the speaker's observation which is reported in more or less neutral terms. Even though two sequenced events are indexed by the A-*ese*-B utterance, they are presented as a monolithic whole, which holistically counts as a one single action unit in the reporting context.

We can also observe differences between *nikka* and *ese* as they occur in contexts of understanding checks, where the speaker provides a candidate understanding (Schegloff 1988, Kim 1993). Example (11) shows an instance of *nikka* and an instance of *ese*, both of which are produced as a candidate understanding in response to the interlocutor's preceding trouble source turn. The *nikka*-clause is found in line 14, and the *ese*-clause in line 10:

(11) (N & H)
1 H: pitwulki-lul po -ko coha -kaciko
pigeon -ACC see-CONN happy-CONN

2 ili ttwi-ko celi ttwi-ko kule -taka,
over:here run -CONN over:there run -CONN do:like:that-INTERR
He was so happy to see pigeons, and while running over here and

[8]This point is in line with the well-known observation that the *ese*-clause, unlike the *nikka*-clause, cannot serve as a ground for actions like a command.

over there,

3 N: mwe-l po -ko -yo?
what-ACC see-CONN-POL
He saw what?

4 H: pitwulki.
Pigeons.

5 N: u:ng.
yes
I see.

6 (1.0)

7 H: kuntey kim cay-yun-ssi emma -ka te antal
and Kim Jae-yun-Mr. mother-NOM more being:nervous

8 -i -ya.
-COP-IE
But it was Mr. Jae-yun Kim's mother (= the child's grandmother) who was really fretting about it.

9 (2.5)

---> 10 N: **po-kosiph-ese** -yo? <<= *Candidate understanding*
see-want -CONN-POL
Because she wants to see him?

11 H: ung? (1.0) ani,=
huh no
What? (1.0) no.

12 N: =ah
Oh

13 H: ay kulehkey toy -n -ke.
child like:that become-ATTR-NOML
(She was upset) over the accident where the child became like that.

---> 14 N: **tachi-nikka,** <= *Candidate understanding*
hurt -CONN *(Display of congruent understanding)*
Because he hurt himself,

15 elun -tul -un mot po -a -cwu-ci.
old:people-PL-TOP not:able see-CONN-give-COMM
Old people can't stand things like that.

In this fragment, H is telling a story about an accident in which his friend's son bumped his head on a steel chair at school, and talks about the over-reaction of the child's grandmother in lines 7 and 8. After a pause, N produces a candidate understanding for the reason why the child's grandmother was so upset (*because she wants to see him?*), which is rejected by H in line 11. Here, we find that the candidate understanding is formulated in the form of an *ese*-clause.

As it turns out, what H was referring to in the trouble source turn in lines 7 and 8 was the over-reaction of the boy's grandmother towards the accident, which he explicitly recounts in line 13. N, on his part, gradually approaches a correct understanding, as suggested by his production of the change-of-state token *ah* in line 12 (Heritage 1984). After H explicitly corrects N's wrong guess in line 13, S produces a second candidate understanding in line 14, this time formulated with *nikka*, and with a more solid basis for his understanding.

If we compare the two candidate understandings in line 10 and line 14, we find that the first one formulated with *ese* is more informationally oriented to completing the information gap with an attempt to come up with a cause of the given event. On the other hand, the second one formulated with *nikka* is more interactionally oriented to the display of the speaker's congruent understanding. Given that the *nikka*-clause is produced after speaker H explicitly corrects S in the preceding turn, what S does here is to reiterate what is now shared information in order to display his heightened involvement and collaborative stance (cf. Kim 1993).

4. Conclusions

The preceding discussion provides a detailed analysis of how *nikka*-clauses are actually used by speakers in spontaneous conversational contexts. The findings in this paper, though generally in line with the previous findings based on intuitive analyses of sentences and contexts made up by the analyst, shed light on various significant aspects of the use of *nikka* from a different perspective, i.e., from a perspective which treats the meaning of a linguistic form as being inseparable from the actual context where it is situated. The findings elaborate previous insights by illuminating the sequential characteristics associated with the meaning of *nikka*, and provide ways of accounting for the various interactional functions of *nikka* coherently as discourse strategies deriving from the single procedural meaning embedded in particular sequential environments. They also provide a basis for distinguishing *nikka* from other discourse connectives like *ese* and *nuntey*.

The findings demonstrate that the interactional function of *nikka* is to provide common ground in order to invite the interlocutor's collaboration and co-alignment with some action projected to be significant. One important contextual correlate, in this regard, is that the action projected by *nikka* draws its projected significance from the relationship with the prior context of talk preceding the *nikka*-clause, such as a contrastive link or counter-expectation (cf. examples (4) and (5)). We extend this observation to a more general thesis that *nikka*-clauses are often situated at a sequential place where it is in the service of introducing the subsequent talk on the interactants' mutually heightened orientation by anaphorically linking it to some 'unresolved' agenda. An important aspect of this discourse-organizational function of *nikka* is that it 'upgrades' the degree of appreciation and responsiveness expected of the interlocutor. While this issue requires further research, speakers'

use of *nikka*-clauses to elicit continuously more intense sympathy (as in examples (1) and (2)), to invite a more preferred response in disagreement contexts (as in example (3)), or to invite a shifted orientation (as in example (7)) lends support to such a characteristic of *nikka*.

These observations are also relevant to the cases where the speaker provides the *nikka*-clause post-positionally in the manner of providing an after-thought. In such contexts, speakers provide an empirical ground for the preceding disjunctive or dispreferred action in the same turn in order to mitigate it by inviting the interlocutor's revised assessment of the preceding action. In the context of understanding checks, where the *nikka*-clause is tagged onto the interlocutor's preceding turn to provide a candidate understanding, the upgrading function of *nikka* impinges on the speaker in such a way that he/she displays congruent understanding of the intended reason which is retrievable from the context.

One implication of these findings is that the procedural meaning of *nikka* proposed here can be viewed as underlying two basic functions of *nikka* that have been traditionally recognized, those marking causality on the one hand (cf. examples (1), (2), (3), (5), (7), (9), and (11)), and those marking discovery, on the other (cf. examples (4) and (8)).[9] While it will be interesting to explicate in detail contextual features by which we can determine why one or the other reading (or both) is performed by *nikka*-clauses, those features may not be germane to the meaning of *nikka* itself. Rather, these two readings of *nikka* can be treated as discourse messages differently deriving from the interplay between the meaning of *nikka* and other contextual features such as switch reference, tense, and type of verb. The meaning of *nikka* seems to be more coherently captured by looking at the sequentially relevant procedural side of its use.

The findings point to a number of ways in which we can further address issues that were not fully discussed in this paper. First, it will be useful to examine the functional and interactional role of intonation associated with the use of *nikka*. While differences in intonation would be basically attributed to whether *nikka* occurs pre-positionally and post-positionally, they seem to further index different interactional contexts. For instance, preliminary observations suggest that the rising or rising-continuing intonation indexes a context where the speaker is oriented to inviting further collaboration from the interlocutor who is already collaborating (see examples (1) and (2)). On the other hand, falling or falling-continuing intonation seems to index a context where the speaker is more oriented to 'asserting' an empirical ground in order to effect a rather substantial change in the interlocutor's stance (see examples (3) and (7)). These observations should be further elaborated in interactional terms. In a similar vein, much insight would be gathered by attending to the notion of 'intonation unit' (Chafe 1987), in terms of looking at how the sequential and interactional functions of *nikka*-clauses correlate with the scope of intonation units.

Second, it will be interesting to compare *nikka* with similar connectives in other languages from a cross-linguistic perspective. For instance, the findings in this paper suggest that *nikka*-clauses share some basic sequential characteristics with English *because* clauses, given the findings in Ford (1993a) that the speaker

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[9]It should be pointed out that these functions are often intertwined and cannot be separated.

often uses a *because* clause for adding an account for a disagreeing position, or in pursuit of agreement.[10] Further cross-linguistic research would prove highly useful in explicating these types of parallels observed across languages.

Thirdly, another promising area of research would be the analysis of a discourse connective *kulenikka*,[11] which contains an anaphoric form *kule* ('like that') and *nikka*. This connective is the focus of our on-going research, where we attempt to account for the salient metalinguistic, reformulating function of *kulenikka* in comparison with other connectives like *kulayse* and *kulentey*, which contain *ese* and *nuntey* respectively. Various interactional implications of the metalinguistic functions of *kulenikka* are being examined in the context of argument, disagreement, and repair (Kim & Suh 1993, In progress).

In conclusion, the findings in this paper should be further elaborated in interactional and pragmatic terms with reference to the procedurally defined meaning of *nikka* and its centrally related sequential aspect that elicits an 'upgraded' response from the interlocutors. It will be worth examining this in terms of such issues as politeness strategies, topicality, and organization of affect, which are all relevant to our claim in one way or another. We hope that the interdisciplinary interest in the organization of social interaction and language use will promote further work drawing upon the interactional perspective in accounting for linguistic phenomena, which are generically constituted through finely tuned social behavior. Such a line of research, grounded in detailed analysis of actual talk, will reveal how the linguistic details of message construction is socially organized, and will contribute to enhancing our understanding of the relationship between grammar and interaction.

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[10]Ford (1993b) also notes that, in monologic text, *because* is often associated with marking counterexpectancy in rhetorical relations, which seems to be similar to the textual function of *nikka* that projects the upshot of a story, as noted above.

[11]This discourse connective roughly corresponds to English *so*, or *I mean*.

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Segmental Phonology of Japanese Based on Feature Geometry *

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1. Introduction

Autosegmental phonology has revealed that quite a few phenomena can attain a natural account in terms of the various interactions between autosegmentalized elements. Those phenomena which have been discussed frequently in the literature are tone, harmony, gemination, root and pattern morphology, and so on. However, the nature of the process of consonant-vowel interaction, though commonly seen in languages, has been unclear in autosegmental phonology.

Recently, Cheng (1990), Lahiri & Evers (1991) and Itô & Mester (1992) proposed preliminary analyses on the nature of this process. In this paper, I will examine their analyses on the basis of the data from modern Tokyo Japanese and show that many of the cooccurrence restrictions in a mora can be analyzed in a way which incorporates Lahiri & Evers' proposal and radical underspecification theory.

This paper is organized as follows. In section 2, I will give some theoretical assumptions. Section 3 is devoted to an overview of the basic data of segments in Japanese. In section 4, Itô & Mester's analysis is introduced and then I will argue for Lahiri & Evers' proposal that the existence of the coronal node in front vowels can achieve a more natural account of consonant-vowel interactions. Section 5 is for summary and concluding remarks.

2. Theoretical Assumptions

2.1. Feature Geometry

In early proposals of the feature geometry such as Clements (1985), Sagey (1986) and Mester (1986), phonological features are represented on autonomous tiers which are in turn organized into a hierarchical structure. The strongest motivation for feature geometry is that the representation itself can explain the fact that some features behave as a set in many phonological processes but others do not. Many researchers have discussed the structure from then on and it is still a matter of debate which features are grouped together under which class node (cf. McCarthy 1988, Paradis & Prunet 1990, Rice & Avery 1991, etc). What I am concerned with here is not the gross geometry but the function of certain nodes, so I assume the structure in (1), which is based on the geometry proposed in McCarthy (1988).[1]

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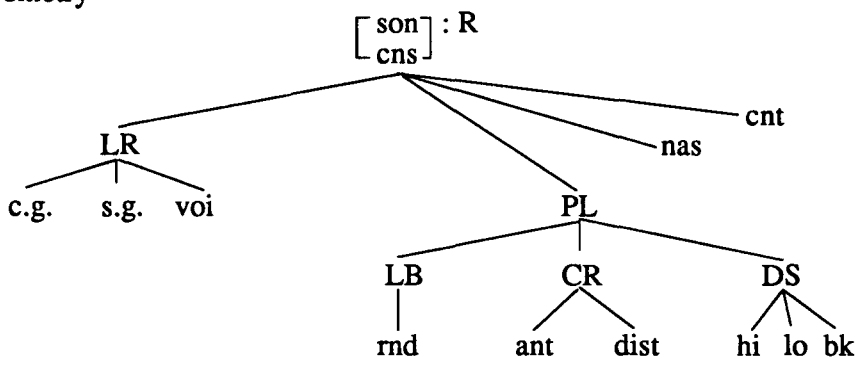
(1) Feature Geometry[2]



Every feature or node in the geometry constitutes an autosegmental tier which is subject to the following phonological operations or constraints: spreading, delinking and the obligatory contour principle.

(2) Obligatory Contour Principle (OCP): McCarthy (1986)

At the melodic level, adjacent identical elements are prohibited.

The OCP was originally proposed in Leben (1973) and has been discussed considerablly in the literature. Readers are referred to McCarthy (1986), Hayes (1986a, b), Schein & Steriade (1986), Borowsky (1987), Yip (1988, 1989) and Honma (1992) for the extension and generalization of the original idea. I assume that the OCP is effective only if the 'identity' of the elements can be computed. Thus, while all terminal features in the geometry are subject to the OCP in all levels of the derivation, class nodes are not subject to it if the dependent features are unspecified.

Just as the OCP refers to the 'adjacency' in its statement, the phonological operation, in particular spreading, is applied only to adjacent elements. This has been an implicit assumption in many autosegmental works and recently Archangeli & Pulleyblank (1987) suggest a condition which requires strict adjacency.

(3) Locality Condition: Arcahngeli & Pulleyblank (1987)

A rule apply only if a specified target is adjacent to a specified trigger.

1. McCarthy argued that the features [sonorant] and [continuant] may be incorporated into the root node since they do not show tyoical autosegmental properties such as spreading, delinking and the OCP restriction. He also generalized the idea that nodes under the place node stand for the active articulators in the vocal tract and have monovalent status, which is called Articulator Thoery.

2. I will use the following abbreviations for nodes or features in this paper:

R:	Root	son:	sonorant	cnt:	continuant	lo:	low
LR:	Laryngeal	cns:	consonant	nas:	nasal	bk:	back
PL:	Place	voi:	voice	ant:	anterior		
LB:	Labial	c.g.:	constricted glottis	dis:	distributed	μ:	mora
CR:	Coronal	s.g.:	spread glottis	rnd:	round	σ:	syllable
DS:	Dorsal	cns:	consonantal	hi:	high		

2.2. Underspecification

I assume the theory of Radical Underspecification which involves minimizing the information included in the lexicon (cf. Kiparsky 1982, Archangeli 1984, 1988, Archangeli & Pulleyblank 1986). Feature geometry and the locality condition mentioned in the former section provide an empirical argument for underspecification. In harmony processes where the trigger and the target of the process are not skeletally adjacent, the intervening segment which is transparent to the process must be unspecified for the harmonizing feature in order to maintain the locality condition.

3. Segmental Phenomena in Japanese

Traditionally, the broad phonetic transcription of Japanese sounds is as follows.

(3) Vowels

i ɯ
e o
a

(4) Glides

j w

(5) Consonants

	Labial	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Plosive	p b	t d			k g	ʔ
Nasal	m	n		ɲ	ŋ	
Fricative	ɸ	s z	ʃ ʒ	ç		h
Affricate		ts dz	tʃ dʒ			
Tap		ɾ				

Through the considerations on the distribution of those sounds, McCawley (1968) suggests that Japanese lexicon has four strata of vocabulary: Native, Sino-Japanese, Onomatopoeia and Foreign. Itô and Mester (1992) extend his idea and fix the boundaries of such strata on the basis of various observations.

(6) Constrained organization of Japanese lexicon: Itô and Mester(1992)

a.*#r: no stem-initial *r*

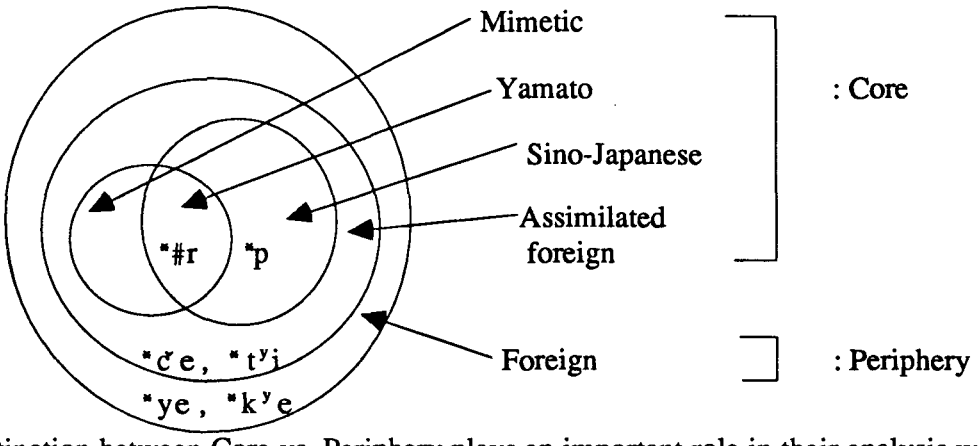
b.* p: no *p* outside of geminate structures

c.* ʧ e : no sequence of "palato-alveolar + e"

d.* tʸ i : palatalized alveolars must change into palato-alveolars

e.* kʸ e : no sequence "palatalized C + e"

f.* ye: no sequence of the form "front glide + e"



The distinction between Core vs. Periphery plays an important role in their analysis which we will see later. However, if we look into peripheral class words more closely, there remain a number of morae which are not accounted for by Itô & Mester. Some of the morae are very rare to occur, but they are still recognizable for a native speaker of Japanese as far as the KANA-syllabary system provides the orthography. Examples of loan words containing those morae which are never found in the core are given in the following.

(7) a. Coronal consonant + Vowel

	Loan word	Source
[ti]	paatii	'party'
[di]	disɯkɯ	'disc'
[si]	siizɯn	'season'
[zi]	bɯizii	'VZ'
[ʃe]	ʃeedo	'shade'
[ʒe]	obɯʒe	'objet (Fr)'
[tʃe]	tʃekkɯ	'check'
[dʒe]	dʒetto	'jet'
[tsi]	tottsii	'Totzy'
[dzi]	dzippɯ koodo	'zip code'
[tse]	tsepperin	'Zeppelin (Ger)'
[tsa]	tsaa	'czar (Rus)'
[tso]	sɯkerɯtso	'scherzo (Ita)'
[ɕe]	mjɯnɕen	'München (Ger)'

b. Labial consonant + Vowel

	Loan word	Source
[ɸi]	ɸiibaa	'fever'
[ɸe]	ɸeɾii	'ferry'
[ɸa]	ɸantaʒii	'fantasy'
[ɸo]	ɸookɯ	'fork'

There are numerous examples of asymmetric distributions of morae in the core and the periphery as well as obvious gaps. Such asymmetries or gaps call for an explanation in a principled way in the phonology of Japanese.

4. Underlying Representations and Cooccurrence Restrictions

4.1. Coronal Node in Vowel Feature Geometry

It seems uncontrovercial to posit common five vowels /i/, /e/, /a/, /o/ and /u/ as underlying representations of Japanese vowels.[3] The full specifications of these vowels are in the following.

(8) Full Specification of Japanese Vowels

	i	e	a	o	u
high	+	−	−	−	+
low	−	−	+	−	−
back	−	−	+	+	+
round	−	−	−	+	−

I take Ishihara(1991)'s underspecification as the starting point to argue the minimization of lexical information. (9) and (10) show the underspecified matrices and redundancy rules respectively.

(9) Underlying Representation of Japanese Vowels

	i	e	a	o	u
high		−	−	−	
low				−	−
back	−	−			

(10) Default Insertion

a. [ ] --> [+high]
b. [-back] --> [-low]
c. [ ] --> [+low]
d. [ ] --> [+back]

The Feature [round] is not distinctive in Japanese and can be omitted from the underlying representation. Values of other features are completely minimized in (9). He claimed that a phenomenon of vowel merger can be taken as a favorable argument for the underspecification in (9). Vowel merger is a process where two vowels in word-final position form a long vowel.

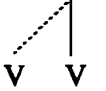
(11) Long Vowel Formation

a. tiisai	--> tiisee	'small'
b. kurai	--> kuree	'dark'
c. amai	--> amee	'sweet'
d. omosiroi	--> omosiree	'funny'
e. hosoi	--> hosee	'thin'
f. osoi	--> osee	'slow'

(12)

a. [-high] spreading

b. [-back] spreading



In his analysis, rightward spreading of [-high] and leftward spreading of [-back] derives the long vowels. Before the default insertion takes place, two spreading rules (12a,b) are applied under certain circumstances to bring about a feature combination [-high, -back], same as underlying /e/, for each root node. If the underlying representation is fully specified, we need delinking of every feature which is specified [+] before the rules in (12) apply. Thus, Ishihara concludes that the underspecification of vowels provides a simpler derivation which is preferable for the Derivation Simplicity Criterion (cf. Kiparsky 1982).

Though the argumentation is straightforward, there remain similar processes which Ishihara did not mention. Examples including other vowel mergers are shown in (13).

3. Though 4-vowel analysis is proposed in Bloch (1946) and 6-vowel analysis is proposed in McCawley (1968), recent works have taken for granted that Japanese has a common 5-vowel system. See Vance (1987) for a detailed discussion.

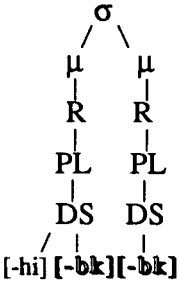
(13) Long Vowel Formation

a. ei-->ee	: eiga	-->	eega	'movie'
b. ou-->oo	: omou	-->	omoo	'think'
c. ui-->ii	: samui	-->	samii	'chilly'
d. ae-->ee	: omae	-->	omee	'you'
e. oi-->ee	: futoi	-->	futee	'thick'
f. ai-->ee	: kitanai	-->	kitanee	'dirty'

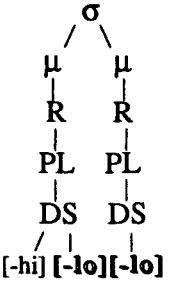
Here, notable differences lie between (13a,b) and (13c-f). First, (13a,b) are very productive processes found not only in the core but also in the periphery. On the other hand, (13c-f) are found almost only in Native class. Second, the context in which those changes occur is severely restricted for (13c-f). In addition, they have a stylistic peculiarity which represents rough, working-class language (called sometimes BERANMEE 'rough' style).

Another important fact which Ishihara did not mention is the domain of the process. If we do not refer to it at all, any combination of vowels can undergo the change: say, the reverse sequence of vowels in (13) can even change into a long vowel. This is not the case because long vowel formation seems to occur only in diphthongs. Therefore, we have to define possible diphthongs in Japanese. However, Ishihara's underspecification model encounters a serious problem if we assume that OCP is effective on terminal features in a syllable. Underlying feature values such as [-back] or [-low] cause a violation of the OCP in diphthongs.

(14) a. /ei/



b. /ou/



: **OCP violation**

The original motivation for the OCP involved underlying representation (Archangeli & Pulleyblank 1986, p142), where it blocks out a violating structure. Hence, the above case is problematic in that those vowel hiatuses can never occur underlyingly.

To avoid such an inadequate situation, we have to reconsider the underspecification of vowels in (9). In order to eliminate [-low] from the underlying representation, we have to posit [+low] specifying /a/. Then, [-high] of /a/ becomes redundant and can be removed.

In the case of the feature [-back], it is hard to convert the value. Tateishi (1990) argues on the basis of statistical investigation that the epenthetic vowel should be /u/ in Sino-Japanese morphemes. So it is not desirable to specify [+back] in the underlying /u/ since the least specified vowel may be epenthesized. Cheng (1990) and Lahiri & Evers (1991) claim that vowels may have a coronal node underlyingly. If we adopt their hypothesis, then we can

substitute [-back] with coronal node which is not affected by the OCP underlyingly. In addition, I assume that glides are non-syllabic counterparts of high vowels (cf. Jakobson, Fant & Halle 1952). As a result, we have the following underlying representation and redundancy rules for vowels and glides.

(15) Underlying Representation of Japanese Vowels and Glides

	i	e	a	o	u	y	w	
cns	-	-	-	-	-	-	-	
CR	CR	CR				CR		
ant	ø	ø				ø		
DS	DS	DS	DS	DS	DS	DS	DS	
hi	ø	-	ø	-	ø	ø	ø	
lo	ø	ø	+	ø	ø	ø	ø	

(16) Fill-in rules[4]

a. [ø] --> [-ant] / [__, -cns]
b. [ø] --> [+high]
c. [ø] --> [-high] / [__, +low]
d. [ø] --> [-low]

Notice that blanks and [ø] in the matrices are not equivalent. Since articulator nodes are privative in nature, the blanks in (15) are never to be filled in the course of derivation.

Of course, the process of long vowel formation has to be reconsidered. The most unmarked cases, /ei/-->/ee/ or /ou/-->/oo/ are still a single feature [-high] spreading under these new configurations. As for the BERANMEE style, we cannot follow Ishihara's simple analysis. There exists [+low] for /a/ in (15) and it is to be delinked in the long vowel formation. Thus, the description of the rule cannot be as simple as Ishihara's version. However I am suspect of treating those vowel mergers as lexical processes. One counter example for the lexical analysis is that the phrase /to#iu/ 'say as' changes into /tee/ in BERANMEE style. The vowel sequence /o-i/ merges though it contains a word boundary.

4.2. Underlying Consonants

Following McCawley (1968), we need only plain consonants in the Yamato class. Furthermore, though he postulated /C^y/ for the mimetic, we can eliminate those palatalized segments if the palatalization in mimetics can be analyzed as a docking of an independent morpheme. The argument for palatalization feature in mimetics is given in Mester and Itô (1989). On the contrary, Sino-Japanese and (Assimilated) Foreign morphemes need /C^y/ segments underlyingly since there is a distinction between /C/-initial morphemes and /C^y/-initial morphemes.

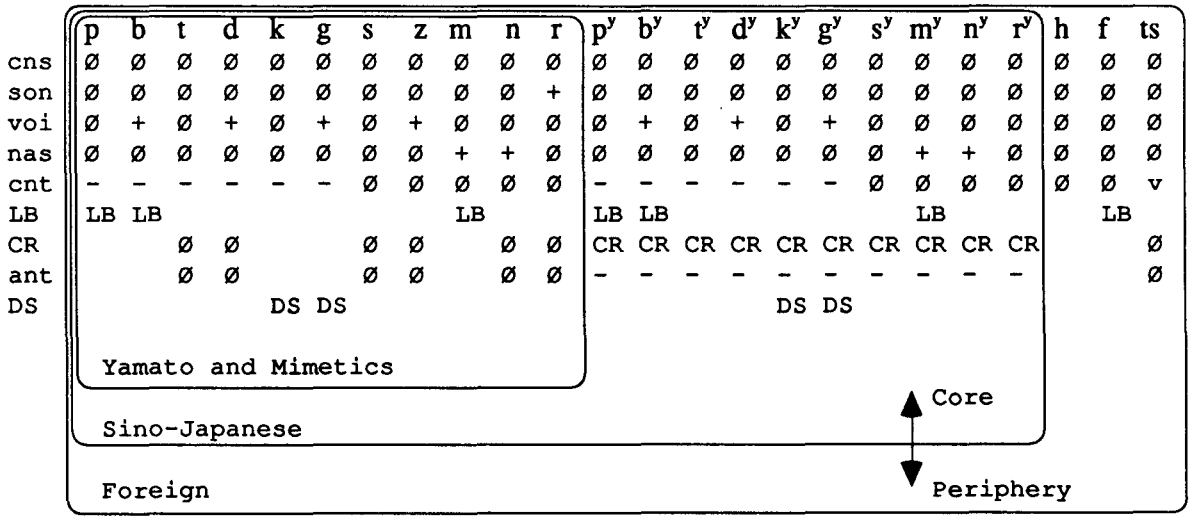
(17) a. kaku 'nuclear' vs. k^{y}aku 'guest'
b. nou 'brain' vs. n^{y}ou 'urine'
c. puaa 'poor' vs. p^{y}uaa 'pure'

4. I follow Keating (1988) in that redundancy rules are classified into three types: "*Fill-in rules*: rules that fill in feature values without reference to context beyond the segment in question, and includes rules that either refer to other feature values of the segment, or refer to no other information. *Position rules*: rules that fill in feature values on the basis of a segment's position in the string of segmens, in syllable structure, etc., but without reference to melodic feature values of neighboring segments. *Context rules*: rules that fill in feature values on the basis of neighboring segments' feature values. These are rules of assimilation, including harmony, and dissimilation " (p31-32).

Moreover, Itô (1986) claims that /C/-/C^y/ distinction is also necessary in morpheme final position in the Sino-Japanese class. She postulated that Sino-Japanese morphemes do not contain a final vowel. Nevertheless, we can predict which vowel will occur on the surface if /C/ and /C^y/ are distinct; /i/ is epenthesized after /C^y/ and /u/ is epenthesized after /C/. Therefore, we should have both plain and palatalized segments underlyingly in Sino-Japanese and Foreign morphemes.

As shown in (7) in section 3, voiceless alveolar affricate /ts/ or voiceless bilabial fricative /f/ cooccur with any vowel in the periphery class, while they only cooccur with /u/ in the core class. Thus we have to posit that /ts/ and /f/ exist underlyingly in the periphery. Moreover, /h/ is to be present underlyingly in the periphery since (6b) -- 'no p outside of geminate structures' which I call the p-constraint -- is valid only in the core. Above considerations suggest that the underlying inventory of segments may have a concentric structure just as in (6). The underspecified matrices of Japanese consonants are given in (18), where the inner matrices are shared by the outer matrices.

(18) Underspecification of Consonants



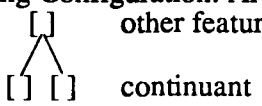
(19) Fill-in rules for consonants

a. [ø] --> [+cns]
b. [ø] --> [-son]
c. [ø] --> [+son] / [_ , +nas]
d. [ø] --> [-voi]
e. [ø] --> [+voi] / [_ , +son]
f. [ø] --> [-nas]
g. [ø] --> [-cnt] / [_ , +nas]
h. [ø] --> [+cnt]
i. [ø PL] --> [CR]
j. [ø] --> [+ant]

In (18), /ts/ is the only underlying affricate and thus has the [v] representation since affricate is a contour segment to which both values of [continuant] link. I follow Archangeli (1984) in that underlying [v] indicates a branching configuration. This configuration gives an environment

to which redundancy rules will apply.

(20) Branching Configuration: Archangeli (1984)

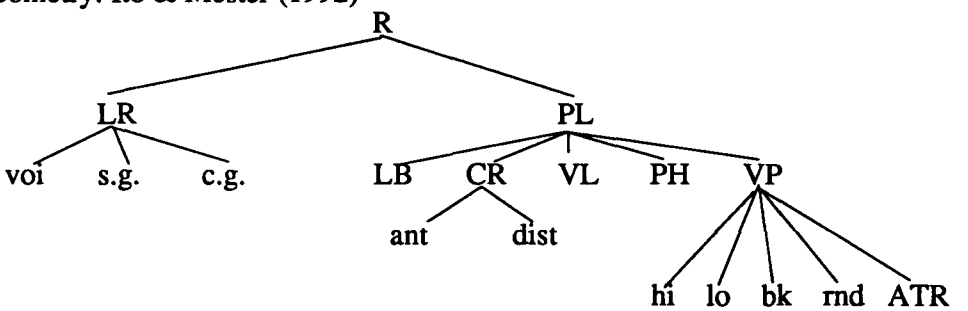


According to her, the redundancy rule which supplies [+continuant] always fill in the blank on the right since the order of two values of [continuant] is universally fixed: [-cont][+cont]. The remaining blank on the left is specified [-continuant] underlyingly. In addition, I follow Avery & Rice (1989), Cho (1990) and many others in that the coronal node is universally unmarked and underspecified when it dominates [+anterior].

4.3. Analysis of Cooccurrence Restrictions: Itô & Mester (1992)

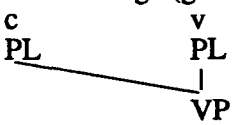
Itô & Mester (1992) shows an autosegmental analysis to the asymmetries between the core and the periphery. They introduced an entirely new mechanism, CV-linkage, to explain the consonant-vowel interaction. This mechanism crucially relies on feature geometry which is quite different from the one assumed in this paper.

(21) Feature geometry: Itô & Mester (1992)

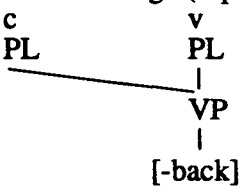


In (21), vowel features are located under the node called Vowel Place (VP) . The CV-linkage mechanism which they adopt is in the following.

(22) a. CV-Linkage (general)



b. CV-linkage (Japanese)



This linkage requirement is general but some language particular properties can be parameterized. In Japanese, [-back] VP must link to the preceding consonant. They further assumed that there is a language-specific constraint on cooccurrence relations among features.

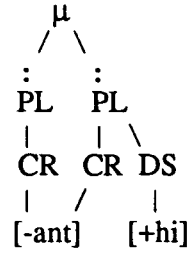
applied. However, it has to be active before the stage in which [+anterior] is supplied by a certain redundancy rule in the case of (24). Therefore we must at least have an ordering among these redundancy rules and AC. If they adopt a different version of underspecification theory which allows [+high] to exist underlyingly, the ordering problem may not arise. Nevertheless we cannot know how they really assume. There was no explanation what their analysis interact with underspecification theory.

4.4. Analysis with complex vowels

4.4.1. Coronals

As we have seen in section 4.1, coronal node is substituted for [-back] in front vowels, which is motivated by reasons related to the OCP. This may have the equivalent effect to Itô & Mester's Japanese CV-linkage which requires a spreaing of VP node dominating [-back]. As for the AC, it must be rewritten to refer to a doubly-linked [-anterior]. Here I propose a constraint which is active at the stage where the fill-in rule is applying. In other words, it is a type of redundancy rule interacting with other fill-in rules. I extend Keating's terminology (see footnote 5) and call the constraint 'Contextual Anteriority Constraint (CAC)'.

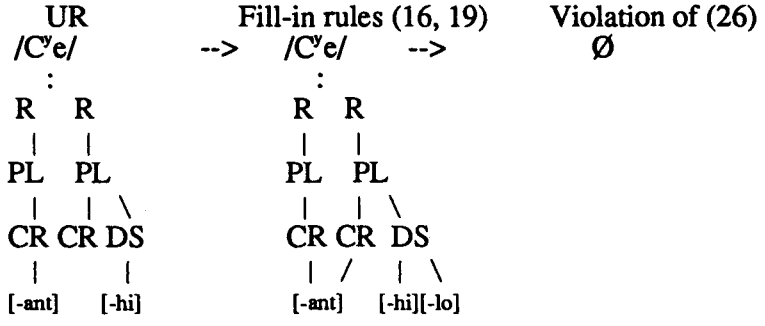
(26) Contextual Anteriority Constraint (CAC)



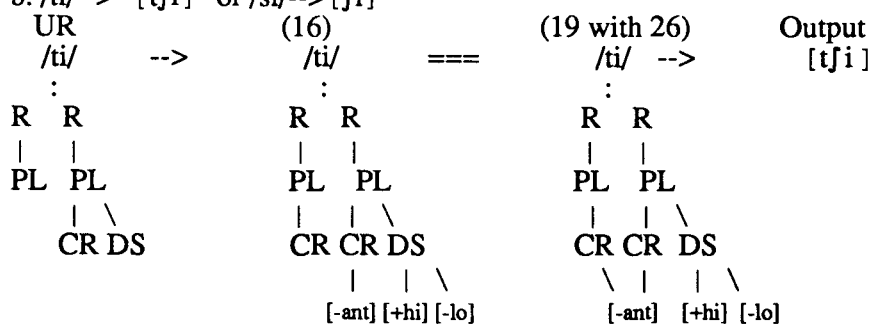
The effect of this constraint is equivalent to AC: it blocks /C^{y}e/ occurrence and forces /ti/--> [tʃi] or /si/-->[ʃi] change in the core. Feature geomety analysis is shown in (27).

(27) Derivations in the Core

a. C^{y}e exclusion



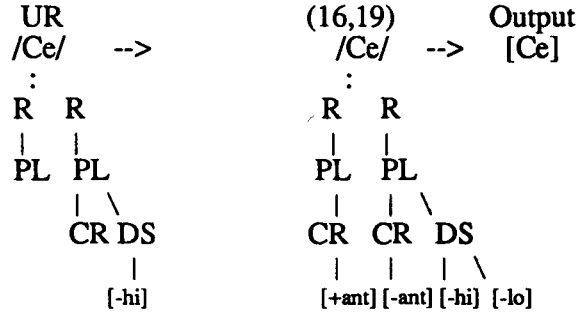
b. /ti/--> [tʃi] or /si/--> [ʃi]



Note that CAC also has dual-purpose effects. While it rules out /C^{y}e/, it saves /ti/ or /si/ as, at first sight, having a feature changing function. If we look into the situation closely, it however does not change any feature value. It just blocks out the application of a certain fill-in rule or the resultant structure. In (27b), CAC blocks the fill-in rule (19j) to be applied. Then, [-ant] under the coronal node of /i/ will automatically spread to the coronal node of /t/. Thus, CAC is not a feature-changing device which causes [+ant] to alter [-ant]. In (27a) on the other hand, the OCP requires [-anterior] to be doubly-linked. It is assumed that if the application of some redundancy rule causes a violation of the OCP, the feature is automatically fused (cf. Archangeli & Pulleyblank 1986, p133). If we manage to apply CAC as a feature-changing device here, it is also impossible to cause [-ant] to alter [+ant] because there exists a universal constraint that vowels cannot have [+ant]. I follow Itô and Mester's idea that the constraint is *turned off* toward the periphery. Thus, [C^{y}e], [ti] or [si] can be derived since CAC does not block the application of fill-in rules in the periphery.

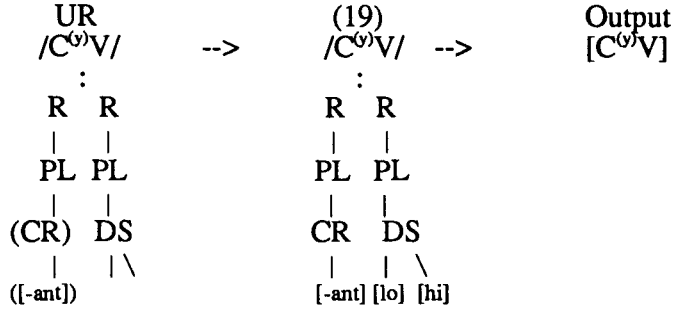
In the case of /C+e/, CAC has no influence on the application of fill-in rules since /e/ does not acquire [+high]. The derivation is given in (28).

(28)



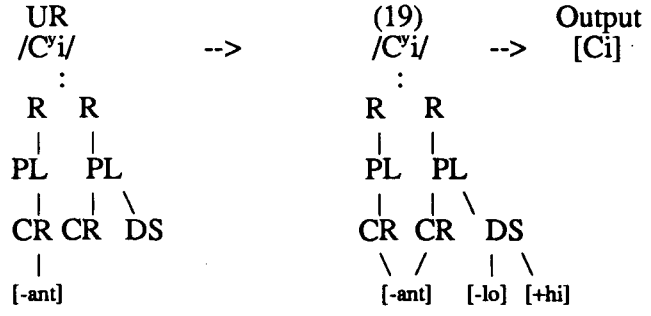
When a simple vowel, a vowel with only a dorsal node, combines with coronal consonants, CAC has no influence again since it refers to complex vowels alone. The derivation is shown in (29).

(29)



Finally, in the case of /C^{y}+i/ mora, the fill-in rule (16a) supplies [-anterior], which merges with already existing [-anterior] to avoid the OCP violation. The resultant structure is identical with the structure of /C+i/ morae shown in (27b). /C^{y}+i/ is therefore not distinct from /C+i/.

(30)

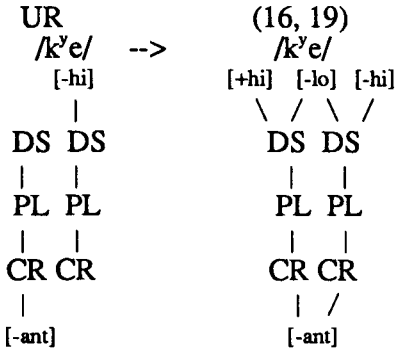


The analyses shown above explain why the morae in (7a) occur only in the periphery (except [çe], which is not coronal but labial underlyingly as we will see later). On the other hand, the distribution of coronal sonorants may seem rather simple: there is no asymmetrical distribution in the core and the periphery. However, if we assume that CAC is turned off in the periphery, then we have a wrong prediction. Underlying /n^{y}+e/ will result in [ɲe] and /r^{y}+e/ will result in a palatal or palato-alveolar tap which are found neither in the core nor in the periphery. Itô and Mester (1992)'s AC also fails to account for the case of coronal sonorants. To avoid such inadequacies, the turning off mechanism of CAC must be modified. I tentatively state that CAC in (26) is turned off in the periphery iff the onset consonant is [-sonorant].

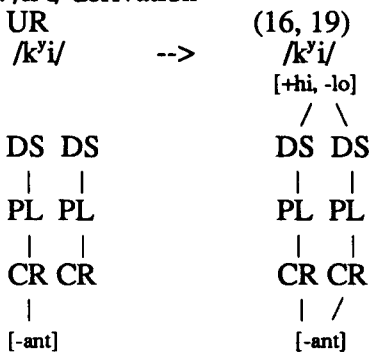
4.4.2. Velars

The distribution of velars is symmetrical in the core and the periphery. Thus, we have only to rule out the combination of 'palatalized segment+front vowel'. Since velars have the dorsal articulator node, the derivation of morae including velars is quite complex. The schemata in the below show only the structures under the place node.

(31) a. k^ye derivation



b. /k^yi/ derivation



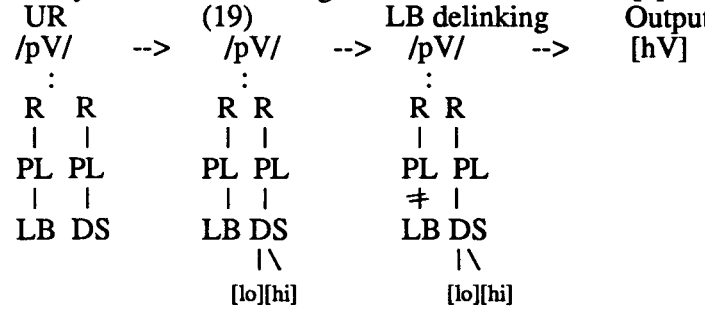
After the fill-in rules in (16) and (19) have applied, the resultant structures have a closed linking; i.e. dorsal nodes as well as coronal nodes in a mora are linked to a feature. This might be some sort of the OCP violation since adjacent place nodes are totally (31b) or partially (31a) identical.

4.4.3. Labials

I follow McCawley (1968) in that only /p/ and /p^y/ are the underlying form of surface [p], [h], [ç] and [ɸ] in Native or Sino-Japanese morphemes. What I am concerned with here is how the p-constraint (6b) is viewed in terms of the autosegmental theory.

Consider the derivation of /plain onset + vowel (except /i/)/ first. The change of /p/ into [h] is analyzable as a delinking of the labial node since [h] is a placeless consonant.

(32)



/p/ changes into [ç] in the cases of /palatalized onset + vowel/ and /plain onset + i/. I assume that palatals are complex segments which have both a coronal node and a dorsal node simultaneously.

(33)

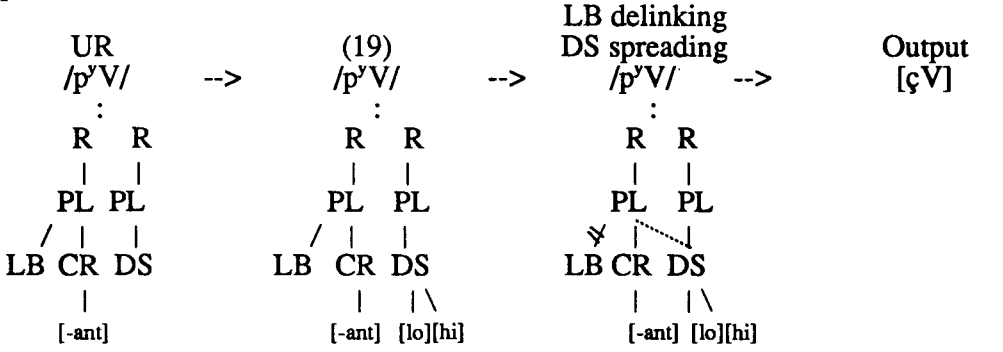
Dental	CR, +ant	
Palato-Alveolar	CR, -ant	
Palatal	CR, -ant	DS
Velar		DS

Autosegmental intepretation of the p-constraint then includes a spreading of the dorsal node from vowel to the onset consonant which has a coronal node. Though /pi/ has no coronal node in the onset, CAC enforces [-anterior] to be doubly-linked here . Thus, a coronal node is

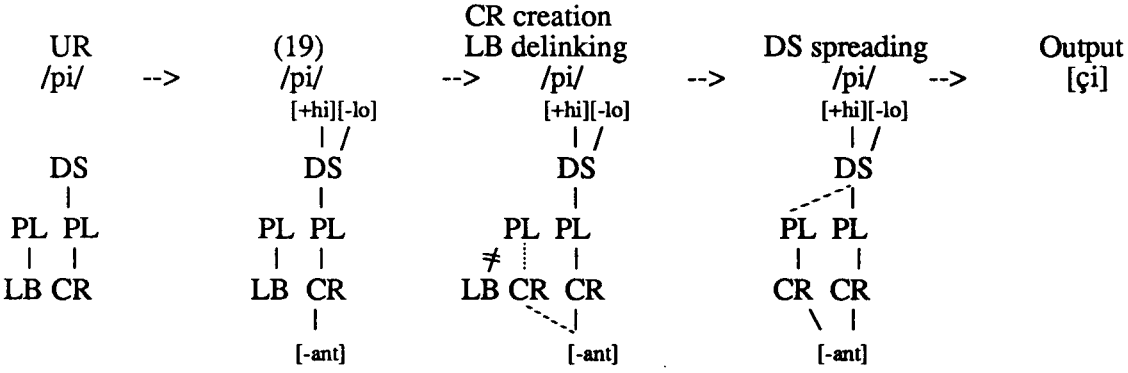
created to supply a docking-site for [-anterior]. Then dorsal node spreading can take place since the onset has a coronal node. The derivations are shown in the following.

(34)

a. /p^{y}V/ derivation



b. /pi/ derivation



Thus, the p-constraint (6b) can be interpreted as the result of the following autosegmental operations.

(35) p-constraint (Effective only in Yamato and Sino-Japanese)

a. Delink the labial node of the onset consonant.

b. Spread the dorsal node if the onset has a coronal node.

5. Concluding Remarks

So far, we have seen that many cooccurrence restrictions in a mora are accounted for in a straightforward way with a view that front vowels are complex. For the asymmetric distribution of coronals in the core lexicon and the periphery, we invoke the 'turning off' mechanism of Anteriority Constraint proposed by Itô & Mester (1992). However, we need a slight modification of AC in order to refer to information in the whole structure of a mora. We further extended the scope to labials and found that the p-constraint in the core lexicon is viewed as an autosegmental operation.

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The English present perfect and the *guo* and *le* in Mandarin

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As Anderson (1982) pointed out, to compare a grammatical category of one language with the same category of another language is always a complicated task because linguists disagree among themselves on what the meanings of that grammatical category really are. The present perfect is an abstract grammatical category, so it inevitably suffers from disagreement among linguists as discussed by Liu (1993). In this paper, I would like to discuss the semantic features of different types of the English present perfect and these features with those of the Mandarin CRS *le* and experiential *guo*. I will adopt Comrie's (1976) categories that the present perfect includes four types: (1) *perfect of result*, (2) *experiential perfect*, (3) *perfect of persistent situation*, and (4) *perfect of recent past*; and the discussion will follow the order of these four categories.

1. Perfect of result and *le*

To examine the real semantic features of the present perfect itself, the examples taken from previous studies are statements without adverbials that may affect the interpretations. The examples are

(1) John has arrived. (Comrie 1976, p. 56)
(2) He has died. (Fenn 1987, p. 104)
(3) I have written a letter. (Sorensen 1964)
(4) He has received a good education. (Ibid.)
(5) I've had/taken a bath. (Leech 1971, p. 34)
(6) He has been given a camera. (Ibid.)
(7) He's cut his hand with a knife. (Ibid.)
(8) Someone has broken the doll. (Ibid.)

According to Matthews (1987), not all types of verbs in the present perfect form can have the resultative meaning. His study showed that the following types of verbs are likely to have the resultative meaning: verbs that indicate

punctual changes of state (e.g. *switch off* the light);
punctual changes from transition into process (e.g. *look away*);
punctual changes as aspectual (e.g. *begin* to rain);
incremental process (e.g. *grow older*);
initiated incremental process (e.g. *increase*);
quantified incremental process (e.g. the hay *dries*);
accomplishment as effective (e.g. *draw* a circle);
accomplishment as affective (e.g. *wash* a car);
achievement (e.g. *win* a race).

Matthews' findings are plausible because these types of verbs account for most of the examples used to illustrate the resultative use of the present perfect. For instance, the eight examples listed above can be matched as:

(1) as achievement
(2) as achievement
(3) as accomplishment as effective

(4) as accomplishment as affective
(5) as accomplishment as affective
(6) as achievement
(7) as accomplishment as effective
(8) as accomplishment as effective,

which only illustrate three of Matthews' verb types. Although Matthews did not define the terms "achievement" and "accomplishment" in his paper, according to Vendler (1967), *accomplishment* verbs are verbs that describe durative telic events and have homogenous successive stages and an arbitrary final point, whereas *achievement* verbs are verbs that describe instantaneous changes of state with an outcome of a new state. Based on these definitions, the examples listed above are satisfactorily categorized. Other verb types are illustrated below:

(9) John has switched off the light (punctual changes of state).
(10) John has looked away (punctual changes as process).
(11) It has begun to rain (punctual changes as aspectual).
(12) John has grown older (incremental process).
(13) The population of this town has increased (initiated incremental process).
(14) The hay has dried (quantified incremental process).

Do these English present perfect sentences have the same semantic features as those of the CRS *le* in Mandarin? According to Liu (1993), sentences ending with the particle *le* may have the following semantic features:

1) a newly-established state (physically or mentally) holds true till the speaking time;
2) the state of affairs was established at some indefinite time in the past;
   2.1) it leaves open how long ago the state was established, but if a specific time adverbial is used, it indicates the time when the event or situation that establishes the new state occurred;
   2.2) it leaves open how much state of affairs has been changed; but relevant adverbials are always allowed to be used to specify the amount;
3) the speaker informs or reminds the hearer of the new state and then either closes the topic unless the hearer responds to it, or continues bringing in new information by himself.

Feature 1) can definitely interpret all the sentences (1 to 14) listed above. Sorensen (1964) commented that it is not necessarily true to say that the present result of sentence (3) is: I have a letter in a finished state, for it also makes sense to say "I have written a letter, but I thought better of it and tore it to pieces."[1] If the present perfect in this sentence is acceptable, it may not be the resultative perfect. It is more likely to be treated as the experiential perfect as involved in the following context:

Speaker A: Have you ever written any letter before?
Speaker B: Yes. I have written a letter, but I thought better of it and tore it to pieces.

Without this context, the original statement in question is more likely to be expressed as "I wrote a letter, but I thought better of it and tore it to pieces." In other words, Sorensen's argument, which is somewhat irrelevant here, does not deny that sentence (3) has the implication that "the finished state" of the letter has been established. Anderson (1982) also noted that

> the English Perfect does not directly signal a result-state in "He has left," since we can say "He has left three times already--why is he still here?" with no

contradiction. But the Perfect can be USED to convey the MESSAGE that he is not here, since "He has left" will normally have that interpretation unless there are conflicting cues. (p. 232)

Again, Anderson's example "He has left three times already" sounds more experiential than resultative because the cumulative sense up to the present time is one of the major feature of the experiential perfect (this will be discussed in detail in section 2). For instance, if the cumulative sense of this expression is deleted, it is not likely for one to say "*He has left, but he is still here." Like Sorensen, Anderson failed to provide a very convincing example to show that the "resultative state" of the resultative present perfect can be canceled. However, Anderson may be correct in saying that the Perfect in "he has left" can be USED to convey the MESSAGE that "he is not here." But I do not think that this resultative state can be canceled by any conflicting cues. In my opinion, what can be canceled is not the resultative state, but some other related implications.[2] Consider the following sentences:

(15)a *He has left, but he is still here.
b He has left, but you can call him if you want.
c He has left, but he left a message for you.

(15)a is not acceptable simply because it does not convey any idea. (15)b is acceptable because what is canceled is not the resultative state of *his not being here* but the consequence of his not being here. However, the hearer still can contact him through other means although the resultative state exists. The same interpretation goes for (15)c. This interpretation applies to the illustrations given earlier (1-14). I will recall ten of these illustrations (with an apostrophe after each number) to show how the resultative state cannot be canceled.

(1') ?John has arrived (here), but he is not here yet.
(2') *He has died, but he is still alive.
(3') *I have written a letter, but the letter does not exist.
(4') *He has received a good education, but he is not educated.
(5') *I have taken a bath, but my body was not bathed.
(7') *He's cut his hand with a knife, but there is no sign of being cut.
(This may be acceptable in a mystery-movie).
(8') *Someone has broken the doll, but the doll is not broken.
(9') *John has switched off the light, but the light is still on.
(10') ?John has looked away, but he is still looking at me.

Since different verbs may produce different types of semantic implications in the present perfect form, the better way to generalize the semantic feature should not be the meaning of the verb itself, but a generalized semantic feature that includes all present perfect verbal phrases. As the resultative present perfect does suggest a strong implication of establishing a new situation through different events or actions, as discussed earlier in this section, the first semantic feature of the CRS *le* in Mandarin can serve this purpose. For instance, (1) suggests that a new state of his being here has been established by *has arrived*; (3) suggests that a new state of a letter being written has been established by *has written*; (9) suggests that a new state of the light being off is established by *has switched off*; (10) suggests that a new state of John's looking away has been denoted by *has looked away*; (11) suggests that a new state of raining has been denoted by *has begun*; in (12), the state of John's growing older has been suggested by *has grown*. And all these newly

established state or the "effect" of these states are meant to last till the speaking time.

These examples show that it is reasonable to claim that the first semantic feature of the CRS *le* in Mandarin corresponds to the semantic implications of the resultative present perfect form. However, one important point that needs mentioning is that the first semantic feature cannot apply to the negative form of the English present perfect. For instance, in (16),

(16) John hasn't arrived yet.[3]

the negative form of the present prefect suggests that no event has occurred, and accordingly no new state has been established. But the present perfect fits the sentence perfectly. This illustration indicates that the first semantic feature needs to be modified to interpret the English resultative present perfect satisfactorily. It may be rewritten as:

1') a state (physical or mental; changed or expected to be changed) holds true till the speaking time.

But this problem will not affect the CRS *le* in Mandarin because in Mandarin, whenever the negative modifier *meiyou* is used to negate the occurrence of an event or a state, the CRS *le* is not allowed to appear.

As for the second semantic feature which says that the state was established at an indefinite time in the past, it has been agreed upon by most scholars who have tried to compare the present perfect and the preterit in terms of the time when an event or situation occurs, that a specific temporal reference cannot collocate with the present perfect because the present perfect does not provide the "definite" time point of when an event or situation occurs.

Although both the English present perfect of result and the CRS *le* in Mandarin may share this second feature in some ways, they are very different in others. Compare the following sentences:

(17) ta likai bangongshi *le*
s/he leave office CRS
'S/He has left the office (s/he is not in the office now).'

(18) ta likai bangongshi liang-ge xiaoshi *le*
s/he leave office two -CL hour CRS
'S/He left the office two hours ago.
/S/He has been away from the office for two hours.'

(19) ta san dian jiu likai bangongshi *le*
s/he three o'clock then leave office CRS
'S/He left the office at three o'clock.'

(20) xianzai ta likai bangongshi *le*
now s/he leave office CRS
'S/he is not in this office now.'
?'Now s/he has left the office.'
?'S/He has left the office now.'

These examples indicate that Mandarin *le* can collocate with temporal adverbials more freely than the English present perfect. For example (18) cannot directly be translated as "s/he has left for two hours" to mean "s/he has been away from the office for two hours." (19) cannot be translated directly as "*s/he has left the office two hours ago." In (20), the *xianzai* 'now' sounds more like *now that* rather than the temporal meaning of "the present."

Feature 2.2) which says that the amount of "the state of affairs" that has been

changed does not affect the use of the CRS *le* in Mandarin can also apply to the resultative perfect in English. Consider the following sentence:

(21) I have read the book.

This sentence is most likely to mean that the person read the book and was aware of the contents, but it does not matter how much "contents" he has "learned" from the book and how much he has been "influenced."[4]

The third semantic feature that implies the function of finality of a sentence probably has little to do with the English present perfect in general because the grammatical form does not necessarily appear at the end of the sentence. Even when the present perfect appears at the end of the sentence, the intonation of the sentence signals whether there is more to be said or not. Apparently, this feature is very specific to the CRS *le* in Mandarin only.

To summarize, the English resultative perfect has the following semantic features:

1) a state (physical or mental; changed or expected to be changed) holds true till the speaking time;
2) the state (if changed) was established at some indefinite time in the past.
3) specific temporal reference are not allowed to be collocated.
4) the amount of the state that has been changed does not affect the use of the present perfect.

All these features are necessary for the use of the resultative perfect whereas in the preterit, the first three features are not necessary and most of the time are absent. Compared with the semantic features for the CRS *le*, the similarities and dissimilarities can be listed as follows:

A) Similarities:

1) Both the English resultative perfect and the CRS *le* in Mandarin share a general meaning of the present perfect as "current relevance of an anterior event."[5]
2) Both imply a state that lasts till the speaking time.
3) The definition of the "state" in question relies very much on the contexts (including the predication) as well as pragmatic elements.
4) The amount of the state that has been changed does not affect the use of the present perfect or the CRS *le*.

B) Dissimilarities:

1) The English resultative perfect is not allowed to collocate with specific temporal references but the CRS *le* is allowed to.
2) While the English resultative perfect can also be used in the negative form (negated with *not*), the CRS *le* can never be used in a negative form negated by *meiyou*.[6]
3) The CRS *le* always indicates the ending of a statement whereas the English resultative perfect does not.

2. Experiential Perfect and *guo*

In English, there is no explicit marker to distinguish the experiential present perfect from the present perfect of other meanings. The English experiential perfect is sometimes indistinguishable from the continuative perfect (Fenn 1987). However, there are sentences

that are often used to illustrate the meaning of the experiential perfect. For instance,

(22) Bill has been to America. (Comrie 1976, p. 58)

(23) I have read *Prinipia Mathematica* five times. (McCawley 1971, p. 104).

(24) Einstein has visited Princeton. (McCawley 1971, p. 106)

(25) John has kicked the ball a couple of times. (Declerck 1990, p. 349)

(26) I flatter myself that when prattle was needed I have never been found wanting. (Fenn 1987, p. 78)

(27) Have you ever in your life seen anyone so entirely delightful as Rose? (Fenn 1987, p. 78)

There are at least two factors that may determine whether a present perfect expression can be interpreted as experiential: they are 1) predications involving different types of verbs and 2) adverbials. According to Matthews' (1987) assumption, predicates that may have the experiential meaning are those containing non-dynamic, non-temporary, and distal (remote) verbs (e.g. *be* tall, *contain* drugs, *know* the truth, *love* her, *drive* a cab, *rule* England). He also claims that

> Predications involving (non-telic) activities (*paint*) or co-extensive behaviour (e.g. *work in a factory*) seem to favour either 'experiential' or 'fulfillment' readings. The choice seems to be pragmatically determined. Thus *work in a factory, smoke, drive a cab* will normally sui generis prefer an 'experiential' reading, while *play chess, dance, sing* will sui generis prefer a 'fulfillment' reading (p. 136).

Matthews' claim reveals several problems. First, he assumes that the non-dynamic verbs can have the experiential reading on the one hand, but on the other, he also claims that non-telic activities can have the experiential reading. Meanwhile, in his list of predications containing non-dynamic verbs, it may be difficult, especially for the English learner, to view *drive a cab* as a non-dynamic state.[7]

Secondly, the assumption that the choice between "experiential" or "fulfillment" readings is determined by pragmatic elements needs to be developed to make the term "pragmatically" more specific. For instance, the present perfect sentence *John has worked in a factory* seems to favor the experiential reading, but *John has finally worked in this factory* may favor the fulfillment reading. The present perfect sentence *She has sung a song* may mean "fulfillment" whereas *She has sung songs* may mean "experiential." These examples show that both adverbials and noun phrases are possible elements that determine the reading of the present perfect. It is undeniable that the difference made by *sung a song* and *sung songs* is a grammatical difference (*a song* vs. *songs*) although the difference can also be regarded as pragmatic.

Thirdly, since the English experiential perfect is not marked explicitly, the experiential reading of the present perfect therefore relies much more on the context than the experiential meaning denoted by the marker *guo* in Mandarin. Compare (28) & (29):

(28) He *has read* this book.

(29) ta du *-guo* zhe-ben shu
s/he read -EXP this-CL book
'S/He read/has read this book.'

In (29), it is very clear that the speaker means to say that, so far, the subject has read the book at least once. The event stopped at some indefinite time before the speaking time. On the other hand, (28) may be read as resultative. But in a certain context, the experiential

reading may become explicit. Consider (30):

(30) Yes. He has read this book, although he may have forgotten the contents.

However, the present perfect in the first clause may be replaced by the preterit in (30) to retain the same meaning. This fact makes the English experiential reading much more complicated in that the present perfect is not a necessary form but one of the optional forms to express experientiality.

As for the adverbial related to the experiential reading, Fenn (1987) did a very thorough study on the types of experiential perfect (general experiential and limited experiential). He concluded that *ever* and *never* are strong indicators of the experiential perfect. He also claimed that "In many contexts in which the adverb *ever* is not actually present, the sense of it is, so that it could be added without altering the meaning in any way. If this can be done, then this is a clear indication that an experiential perfect is involved" (p. 79). If we apply this principle to sentences (22) to (25), we may find that Fenn is generally correct. Fenn also provided the following examples:

(31) I don't think I've met anyone so entirely devoid of sentiment as you are.

(32) Before proceeding, let me quote what is perhaps the most typical example of this function of the perfect that I have come across.

Other adverbials indicating frequencies like *sometimes, often, always, once, three times,* etc. are also often treated as experiential indicator.[8] Fenn (1987) made it very clear that "it is appropriate to categorize all perfects with such adverbs (*never, sometimes, often,* and *always*) as experiential" (p. 94). Two of the examples given by Fenn are listed below:

(33) I've always done it this way = Whenever I've done it, I've done it this way every time.

(34) Well, father, I've often tried to faint when I wanted something that you wouldn't give me, and I've never been able to manage it.

The semantic features of the experiential marker *guo* in Mandarin are in many ways similar to the semantic features of the English experiential perfect. According to Liu (1993), all sentences marked with experiential marker *guo* must have the following semantic features:

1) the event or situation occurred at least once;
2) the event or situation occurred at some indefinite time in the past;
   2.1) it leaves open how long ago the event or situation occurred; but if the time when the event or situation occurs can be specified, an adverbial with specific time reference can collocate with the experiential marker (i.e. *guo* in Mandarin);
3) the event or situation ended at some indefinite time in the past.
   3.1) it leaves open whether the event or situation was partially or completely fulfilled; but if the extent of the fulfillment is referred to, a related adverbial can collocated with the experiential marker (i.e. *guo* in Mandarin);
4) the memory of such event or situation or cumulative amount of events or situations holds (as an experience) till a point of time reference; if no further time reference is provided, the speaking time automatically serves as the time reference (current relevance);
5) the expression is capable of functioning as a complete sentence.

As discussed in section 1, the idea of the formal structure of "a complete sentence" in English is not simply decided by the structure of *have V-en*, so the fifth feature listed

above will not apply. But all the other four semantic features (except for 2.1) & 3.1)) seem to serve as semantic features of the English experiential perfect. The first feature has been discussed by many scholars (e.g. Comrie 1976) and is generally considered to be one of the basic feature of experientiality.

The second feature is also accepted by most scholars who have tried to compare the present perfect and the preterit in terms of the time when an event or situation occurs that a specific temporal reference cannot collocate with the experiential perfect because the present experiential perfect does not provide a "definite" time point of when an event or situation occurs. Although both the English experiential perfect and the Mandarin *guo* share the second feature in this perspective, they are very different in feature 2.1). Compare the following sentences:

(35) I've met him *before/in the past/once*.

(36) *I've met him *yesterday/when I took the train/several days ago*.

(37) wo zuotian jian *-guo* ta
I yesterday see -EXP her/him
'I met her/him yesterday.'

A major difference between the English experiential perfect and the Mandarin experiential marker *guo* lies in that it is impossible for the English perfect to collocate with specific temporal reference, whereas the same situation is grammatical in Mandarin. Therefore, for the English experiential perfect, feature 2.1) should be rewritten as:

2.1') specific temporal references are not allowed to collocate with the experiential perfect.

The third feature is in fact rarely mentioned in previous studies. Perhaps it is too obvious to be mentioned and discussed. However, if the verb is roughly divided into two groups, stative and dynamic, then the third feature will account for why some situations cannot be regarded as experiential. If stative verbs mainly depict states (e.g. *be* angry, *own* a farm, *be* tall, *know* the truth, *belong to* you) and denote the experiential meaning, these states must be ended at some indefinite time in the past. The notion of "ended" always refers to the occurrence of "different" or "opposite" situations. For instance, "*own* a farm" may be ended by "*not own* a farm" or "*have* the farm *sold*." Accordingly, the following expressions are always treated as experiential if the conditions in the parentheses are true:

(38) He has been tall (but now he is not as tall).

(39) He has been dead (but now he is alive again).

(40) He has owned a farm (but now he no longer owns it).

This feature perfectly accounts for why the following example does have more of an experiential meaning than a resultative meaning:

(41) These forks *have been* ours, they *have been* my cousin's, and now they belong to you. (Hirtle 1975, p. 5; Declerck 1990, p. 325)

The same principle applies to dynamic verbs, including transitional verbs (e.g. *die, arrive*), stance (e.g. *sit, stand*), goings-on verbs (e.g. *rain*), activity verbs (e.g. *talk, work*), process verbs (e.g. *ripe*), accomplishment verbs (e.g. *drink*), achievement verbs (e.g. *win*), and momentary acts and events (e.g. *fire* a gun, *sneeze*). Consider the following sentences involving dynamic verbs (Quirk et al. 1985):

(42) He has died (and he is still dead).

(43) He has arrived (and now he is here).

(44) ?He has lain here (and now he is still lying here).
(45) ?It has rained (and now it is still raining).
(46) He has worked in this company (and is still working in this company).
(47) The apple has ripened (and now is ready for us to eat).
(48) He has drunk a cup of wine (and now he is still drunk).
(49) He has won a lot of money (and now he is still rich).
(50) He has fired a gun (and is still looking for the bullet).

These present perfect expressions, if acceptable, will not be treated as experiential simply because there are no opposite "situations" to "end" the "event" described by these dynamic verbs. Apparently, the resultative states or continuative states of actions should be treated as part of the "continuation" of all these events. If the continuation no longer exists, the events will be considered as "having ended." Consider the following revised expressions:

(51) ?He has died (but he somehow is alive again).
(52) He has arrived (but for some reason he has left).
(53) He has lain here (but now he has been moved to somewhere else).
(54) It has rained (but now it no longer rains).
(55) He has worked in this company (but now he no longer works here).
(56) ?The apple has ripened (but somehow it turns green again).
(57) He has drunk a cup of wine (but now he wants to drink something else).
(58) He has won a lot of money (but now he is poor again).
(59) He has fired a gun (but he doesn't know how to do it any more).

These examples show that the contexts indicating the ending of the event often imply the experiential meaning.

As for feature 3.1), all experiential perfect seem to allow the collocation of adverbials that indicate the amount or the frequency of the "events" that have been experienced. For instance, all the examples (51-59), as long as the pragmatic requirements are not violated, can be modified by *once*, *never*, *some*, etc. for the proper context without changing the experiential meaning. On the other hand, as Fenn (1987) suggested earlier, these adverbs often indicate the experiential interpretations of the collocated present perfect verbs.

The fourth feature related to current relevance and the cumulative function is probably the most important feature that distinguishes the experiential present perfect from the preterit. The preterit by itself usually does not provide current relevance. Recall some of the examples used earlier and compare them with the preterit:

(60)a Bill has been to America.
b ?Bill was to America.
(61)a John has kicked the ball a couple of times.
b John kicked the ball a couple of times.
(62)a It has rained.
b It rained.
(63)a He has died.
b He died.
(64)a Bill has gone to America.
b Bill went to America.

Sentence (60)a can only be interpreted as an experiential perfect whereas (64)a can by no means be interpreted as experiential.[9] If the experientiality is treated as a continuum as in

figure 4.1,

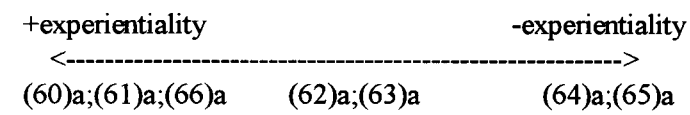

Figure 1

we will find that the present perfect with only the experiential meaning cannot be replaced by the preterit and still keep the experientiality. For instance, (60)b is simply not acceptable as an experiential expression and (61)b, although acceptable, fails to express the original experiential meaning (i.e. the current relevance is missing). Both (60)a and (61)a indicate current relevance by the present perfect (including the main verbs) whereas (60)b and (61)b do not.

As for (62)a, the experiential meaning is not shown clearly by the present perfect (including the verb *rain*). If the experiential meaning is possible, related contexts other than the present perfect verbal phrase should be added. Compare the following two pairs of sentences:

(65)a It has rained so the ground is wet.

b It rained so the ground is wet.

(66)a It has rained before in this area; you can't say it has never rained.

b ?It rained before in this area; you can't say it has never rained.

(65)a is considered more "resultative" than "experiential" in meaning and it is more likely that the preterit can replace the present perfect without changing the resultative meaning if the context has already made the situation clear. However, (66)a is considered more "experiential" than "resultative" and it is less easy to replace the present perfect with the preterit without changing the experiential meaning. (63)a, like (65)a, can be regarded as a resultative perfect sentence and the present perfect can be replaced with the preterit without changing much of the original resultative meaning. To conclude, figure 1 indicates that the higher the experientiality, the less likely that the present perfect can be replaced by the preterit without changing the experiential meaning.

To summarize the semantic features of the experiential perfect and compare the experiential perfect with the preterit based on these features, the results will be as follows:

Features	ExpPerf	Preterit
1) Event occurred at least once	+	+/-
2) Event occurred at some indefinite time in the past	+	+/-
3) Specific temporal references can be collocated	-	+
4) Event ended at some indefinite time in the past	+	+/-
5) Cumulative sense up to the speaking time	+	-

This table shows that there are differences between the following two expressions:

(67) John has been there.

(68) John was there.

In (67), the speaker says that John has been there at least once and the event of "being there" described in this expression should be started and ended at some indefinite time in

the past. This event in question should be discrete[10] in a sense that it is usually separate from another event. For instance, if one wants to develop a episode from (67), one may say:

(69) John has been there, so he must know something about this place.

(70) John has been there; why will he go there again (or why did he go there again)?

(71) John has been there, and when he was there, he met....

Since the second clause of each example either makes explicit the implication of the event expressed by the experiential perfect or develops a new idea on the basis of such implication, these examples show that the events described by the experiential perfect are "discrete" or "complete" although the discreteness of each "experiential event" described may have different levels of "fulfillment."[11] Owing to this discrete feature, the experiential perfect implies that the "events" experienced as "independent experiences" are cumulative up to the speaking time.

In (68), the speaker tells us that "John was there" once but does not imply that John has been there at any other time. That is why the term "at least once" does not necessarily apply. The event of "being there" described in this expression should be started and ended at some definite time in the past because the preterit is always ready to collocate with specific temporal references.

However, these semantic features can serve as very reliable indicators only if the present perfect denotes a strong sense of experientiality, as figure 1 indicates. The less experientiality the present perfect indicates in an expression, the less likely it is that these features can serve as criteria to distinguish the present perfect and the preterit.

Between the experiential marker *guo* in Mandarin and the experiential perfect in English, the similarities and dissimilarities can be listed as follows:

A) Similarities:

1) Both the English present perfect and the experiential *guo* in Mandarin share a general meaning of the present perfect as "current relevance of an anterior event."
2) Both imply an event or situation that occurred at least once in the past.
3) Both show a cumulative sense of the events that occurred.

B) Dissimilarities:

1) The English experiential perfect is not allowed to collocate with specific temporal references but the experiential marker *guo* is allowed to.
2) While the English experiential interpretation relies very much upon the related contexts as well as pragmatic elements, the experiential marker *guo* always make the experientiality explicit.[12]
3) English speaking people tend to replace the English experiential perfect with the preterit without changing the original meaning whereas the experiential marker *guo* cannot be replaced by any other marker to express the same meaning.

3. The perfect of persistent situation and *le*

The continuative sense of the present perfect requires a time span from the past leading up to the present (Leech 1969; Fenn 1987; Greenbaum & Quirk 1990; Declerck 1991). If this type of adverbial is implied or employed in an expression, only the present perfect can be used to denote the continuative meaning. Consider the following examples:

(72) I've lived here (from then to now).
(73) I lived here (then or before now) (pointing at a picture).
(74) I am living here (now).
(75) I lived here (before) and I'm living here now
(there could be break between the two events).

These examples indicate that (73), (74), and (75) can not replace (72) without changing its original meaning.

However, since contexts will greatly affect the interpretation of the present perfect sentence, the semantic features for the continuative perfect can only be significant for those present perfect expressions that already indicate a continuative meaning. For instance, the following isolated present perfects, although using the verb *to be*, do not necessarily denote one and the same reading:

(76)a She has been young (experiential).[13]
b She has been sick (continuative?/experiential?).

(76)b can be interpreted as continuative or experiential according to different contexts. Compare the following two expressions:

(77)a You have been sick, so you should be able to understand how I feel now.
b She has been sick, that's why she is losing a lot of weight.

Obviously, (77)a sounds more experiential and (77)b sounds more continuative.

Now assume the continuative present perfect sentence can be categorized as a separate type. Does the continuative present perfect share the same semantic features as those of the resultative perfect? Recall the revised semantic features for resultative (section 1):

1) a state (physical or mental; changed or expected to be changed) holds true till the speaking time;
2) the state (if changed) was established at some indefinite time in the past.
3) specific temporal references are not allowed to be collocated.
4) the amount of the state that has been changed does not affect the use of the present perfect.

The differences between the resultative and the continuative perfects lie in the following aspects. First, the continuative reading implies an event or situation that lasts till the speaking time while in the resultative reading, it is the "state" resulting from an event or situation that lasts till the moment of speech. Second, a specific time span in which the event or situation was "occurring" is always referred to in the continuative reading but not in the resultative reading. For instance, it is all right to use a span of time in (78) but not in (79):

(78) I've lived in this place for almost ten years (continuative).
(79) ?I've learned it for ten years (resultative).[14]

Third, since the continuative perfect has nothing to do with resultative states, the fourth feature related to the "state" of affairs does not apply. Therefore the revised semantic features for the continuative perfect are:

1) an event or situation, positive or negative, continues till the speaking time;
2) the event or situation started at some indefinite time in the past.
3) specific temporal references are not allowed to collocate with the continuative perfect.

As for the similarities and dissimilarities between the English continuative perfect and the

perfect sense denoted by the CRS *le*, they can be listed as follows:

A) Similarities:

1) Both the English continuative perfect and the CRS *le* in Mandarin share a general meaning of the present perfect as "current relevance of an anterior event".
2) Both the English continuative present perfect and the continuative CRS *le* are not allowed to collocate with specific temporal references to refer to "current relevance."
3) Both the English continuative present perfect and the continuative CRS *le* are sensitive to the pragmatic constraints. That is why the following expression is acceptable neither in English nor in Mandarin:

(80) *ta likai wo likai le san nian *le*
S/He leave I leave PFV three year CRS
*'S/He has been leaving me for three years.'

B) Dissimilarities:

1) While a span of time leading up to the speaking time is preferable in the use of continuative present perfect, the CRS *le* always requires clear quantitative descriptions of the amount of time or materials that has been involved in such event. For instance,

(81) wo kan -le san -ge zhongtou shu *le* (quantity of time)
I read PFV three-CL hour book CRS
'I have been reading for three hours.'

(82) wo kan -le san -ben shu *le* (quantity of materials)[15]
I read PFV three-CL book CRS
'I have been reading three books (up to now).'[16]

2) While the English continuative perfect can also be used in the negative form (negated with *not*), the CRS *le* can never be used in a negative form negated by *meiyou*.
3) The CRS *le* always indicates the ending of a statement whereas the English continuative perfect does not.

4. Perfect of recent past and *le*

The perfect of recent past is regarded as a independent function of the present perfect only if it is agreed, as Binnick (1990) suggested, that the event expressed by the perfect of recent past, past as it is, has present relevance to the extent that only in the present time is it known, realized, or appreciated. If the past event in question is not expected to be "appreciated" in the present time, the preterit, rather than the present perfect, will be employed. McCawley (1972) also claims that the use of hot-news perfect or the perfect of recent past may have a lot to do with presuppositions concerning the listener's knowledge (see Liu 1993).

The CRS *le* in Mandarin also can provide a similar function. The sentence *xia yu le* 'It's raining' is capable of the interpretation that it has just begun to rain or when the speaker has just discovered that it is raining (Chao 1968).[17] According to the semantic features of the CRS *le* in Mandarin, *xia yu le* 'It's raining' provides the following information:

1) The speaker informs of a state of raining which lasts till the moment of speech;

2) the state of raining started at some indefinite time in the past;
   2.1) it is not known how long ago it started raining;
   2.2) it is not known how much rain has fallen;
3) the speaker informs or reminds the hearer of the state of raining and either suggests closing the topic unless the hearer responds to it, or he may continue introducing new information.

These semantic features may have to be revised if they are to be applied to the English perfect of recent past. First of all, the perfect of recent past does not necessarily create any new state, or a created new state may not last till the moment of speech. If the event or state lasts till the moment of speech, the speaker may not use the present perfect to express the "imminent" news. For instance, it is all right to say *xia yu le* in Mandarin to denote the imminent news or event but this expression cannot be translated into ?*It has rained* in English to denote the same implication. It's more likely that one will say *Oh, it's raining* instead of *Oh, it has rained*. Therefore, the semantic features for the English perfect of recent past may be revised as:

1) The speaker informs of an event or situation with the assumption that the event or the situation holds current interest;
2) The event or situation may start and end at some indefinite time in the past;
3) specific temporal references are not allowed;
4) the event or situation must be discrete from other events.

These features look very similar to the features of the experiential perfect. In fact, they differ in several respects. First, the experiential perfect cannot serve as "hot news." For instance, one can hardly find a situation to use *He has been to China* as "hot news." Apparently, the sense of remoteness is much stronger in the experiential perfect than it is in the perfect of recent past, although such sense of remoteness is somewhat subjective to the speaker himself. Second, the perfect of recent past cannot be interpreted as experiential because the event or situation cannot be "cumulative" up to the speaking time owing to the condition that the event or situation is supposed to occur only once in the past. Third, the function of the perfect of recent past may be no more than providing a piece of news whereas the experiential perfect may have more implications. That is, an experience may be the basis of many other references. Hence, the perfect of recent past may be paraphrased as "the past news with current interest," whereas the experiential perfect may be paraphrased as "the past event or events with current impact."

As for the similarities and dissimilarities between the English perfect of recent past and the same sense denoted by the CRS *le*, they can be listed as follows:

A) Similarities:

1) Both the English perfect and the CRS *le* in Mandarin share a general meaning of "current interest of an anterior event."
2) Both imply the event does not last till the speaking time.
3) Both may have the tone of "surprise" for one who receives the "news."

B) Dissimilarities:

1) The English perfect of recent past is not allowed to collocate with specific temporal references but the CRS *le* is allowed to.
2) While the English perfect can also be used in the negative form (negated with *not*),

the CRS *le* can never be used in a negative form negated by ***meiyou***.

3) The CRS *le* always indicates the ending of a statement whereas the English resultative perfect does not.

5. Conclusion

In this paper, I tried to analyze the English present perfect on the basis of semantic features and compared the semantic features with those with the CRS *le* and the experiential marker *guo* in Mandarin. There are at least three advantages for doing this: a) to distinguish the four different types of the English present perfect from one another, b) to distinguish each type of the present perfect from the semantic features of the preterit, and c) to distinguish each type of the present perfect from the use of the CRS *le* and the experiential *guo* in Mandarin. For instance, the continuative perfect always indicates that there is an event or situation, positive or negative, that lasts till the moment of speech whereas the resultative perfect always indicates that there is a state (if changed, it must result from an event) that also lasts till the speaking time. However, the experiential perfect and the perfect of recent past do not share this feature. The connection of "current relevance" of these two latter categories are based on "current impact" and "current interest," respectively, as discussed in the previous section. In addition, the cumulative sense of the "events" experienced by the subject (or agent) up to the speaking time can be denoted only by the experiential perfect.

At the end of each section, I also compared the semantic features for the experiential marker *guo* with the English experiential perfect and the semantic features for the CRS *le* with the other three types of present perfect. These comparisons provide information that helps English instructors in Mandarin-speaking areas predict the potential errors that may be produced by the English learners. For instance, the possible errors that may be produced by Chinese students for the resultative perfect are:

*I have written the letter yesterday.

*He has changed since three years ago.[18]

These errors can be accounted for by the learner's failure in understanding the semantic features illustrated in section 1, or in applying the semantic features of the continuative perfect to those of the resultative perfect. To avoid these types of error, it would be useful for Chinese ESL (or EFL) instructors to realize the semantic features postulated in this paper for each of the four types of the English present perfect. The semantic features for the CRS *le* and the experiential marker *guo* will help Chinese ESL (or EFL) instructors predict potential errors during instruction. However, potential errors usually include semantic and pragmatic elements. For instance, the error of the continuative perfect may result from the inappropriate lexical choice of the verb, so that the sense of continuation is impossible. Hence, the possible error types can be categorized as: 1) inappropriate lexical choice of the verb; 2) inappropriate collocation between the event and the temporal schema; and 3) inappropriate application of any of the four different types of the present perfect. The errors in these categories require instructors to recognize, to evaluate, and to improve or correct on the base of the semantic features illustrated and discussed in this paper.

Notes

[1] This sentence, pointed out by both Prof. Drum and Prof. Thompson (p.c.) as not likely, will be discussed later in this section.

[2] By the same token, the first semantic feature denoted by the CRS *le* in Mandarin is not likely to be canceled by any conflicting cues. For instance, one is not likely to say:

*ta zou *le*, keshi ta hai zai zher.
s/he leave CRS but s/he still at here
*'S/he has left, but s/he is still here.'

However, it is acceptable to say the following sentence although this is by no means normal in daily life:

Speaker A: Zhang xiansheng zai ma?
Zhang Mr. in Q
'Is Mr. Zhang here?'
Speaker B: ta zou *le*, keshi ta zuotian wanshang you hui lai *le*
s/he leave CRS but s/he yesterday evening again return come CRS
'S/he left, but s/he was back last evening.'

The sentence spoken by speaker B is complicated because the two resultative states provided by the two clauses are contradictory to each other. Speaker B tries to tease the hearer by showing the resultative state opposite to the hearer's expectation first, then provides the expected state. This definitely makes the language used more dramatic than simply saying "He was back last night." But I am not sure that the resultative state provided by the first clause is canceled by the state provided by the second clause, because both resultative states exist, though at different times. On the other hand, the relationship between these two resultative states is somewhat indirect compared with that between the two states provided by the following statement:

*ta zou *le*, keshi ta hai zai zher.
s/he walk CRS but s/he still at here
'*S/he has left, but s/he is still here.'

[3] It is suggested by Prof. Drum (p.c.) that (16) implies that John is expected to come. In other words, the new situation is expected to be established although for some reasons it has not occurred yet.

[4] Some verbs naturally avoid the phenomenon of "different extents" of the state that has been established. For instance, "He has switched off the light" implies the situation changed from "the light is on" to "the light is off."

[5] Here all the examples, both in English and in Chinese, should be "isolated" from any other grammatical categories (e.g. adverbials, modals) that may affect the interpretation of the meaning of the perfect, except for the necessary parts of the subject and the predicate.

[6] The point worth noting is that in Mandarin, if a statement is negated by *bu*, the CRS *le* is allowed because it implies a situation change from "having the potential to occur" to "not having the potential to occur." If the statement is negated by *meiyou*, it means that the event did not occur at all, and therefore could not establish a new situation. The latter negation is similar to the English resultative perfect negated by *not*.

[7] Prof. Thompson pointed out here that if "drive a cab" is treated as "a habitual activity," it could be understood as "non-dynamic state."

[8] Fenn (1987) summarized the results of Duskova's (1976) empirical study based on contrastive data from British and American plays. The results indicate that both British and American English have the same tendency of using the preterit to replace the present perfect when there are adverbials like *never, ever, always*, although the incidence of replacement is in general considerably higher in Duskova's American

corpus. Occurrence of the respective forms with "experiential" adverbs is as follows:

	never		*ever*		*always*		*often*		*before*	
	Perf.	Past	Perf.	Past	Perf.	Past	Perf.	Past	Perf.	Past
British	30	18	19	9	20	18	2	-	18	2
American	13	47	8	20	10	14	3	-	1	4

[9] Declerck (1990) notes that it is also possible to say *I have gone to a priest and I have told him about my troubles* to describe exactly what the speaker is doing, and therefore "continues to use the present perfect in spite of the fact that there is a...shift from indefinite to definite reference" (p. 308). Although Declerck did not mention the experientiality in this sentence, it does show some experiential meaning. According to Fenn (1987), if this sentence is understood as experiential, it will allow the insertion of *ever* or *once* between *have* and *gone* without changing the original meaning. Now compare the following two sentences:

(A) I have (once) gone to a priest and I have told him about my troubles.

(B) I went to a priest and (I) told him about my troubles.

Obviously the differences between (A) and (B) here will be closer to that between (60)a and (60)b or between (61)a and (61)b, rather than to that between (64)a and (64)b.

[10] The term "discrete" is used here to mean an event that is treated as single, completed, and sufficient in itself so it usually does not need other contexts to help express the meaning.

[11] For instance, when one says that "I have met John three times," in which the three "events" of *meeting John* may differ in that one "meeting" has a longer time and more detailed conversations involved and the other two "meetings" may simply have a couple of sentences involved. However, the difference of the extent of the fulfillment of each discrete event does not affect the use of the experiential perfect.

[12] It is true that sometimes the marker *guo* can replace the perfective marker *le* to mean "something has been completed" (see section 3.2.1.). In this use, little experientiality is involved. But according to Teng (1973), this use of *guo* can always be distinguished by negating it with *meiyou*. If in a negated sentence, the *guo* is still needed (obligatory), the *guo* can be regarded as the experiential *guo*. Otherwise, there is no case in which the perfective *le* can replace the marker *guo* to denote the meaning of experientiality.

[13] All the examples in (76) are somewhat peculiar since specific contexts are needed to make these examples sound more natural. For instance, in a context like: *She has been young, so she should be able to figure out what I'm thinking about right now*, (76)a will sound much more acceptable.

[14] Even if some resultative expressions allow the collocation of a span of time, the time span does not necessarily lead up to the speaking time. In addition, the time span refers to the "state" resulting from the event rather than to the "occurrence" of the event. For instance, the following sentence *He has left for Paris for two months* does not say "it takes two months to leave" but "he will be away from here for two months."

[15] If these two sentences appear without the quantitative descriptions, they will simply mean "I have read the book" which indicates more "state-establishing" rather than continuativeness.

[16] Since the perfect phrase "have read" shows little sense of "continuative," I used the progressive present perfect to make the continuative sense more explicit.

[17] Anderson (1982) notes that the reason why Mandarin CRS *le* is not used for the pure experiential sentence is that the Mandarin CRS *le* is much more closely tied to the present. It has emphatic uses and uses translated by "now" and the future; thus it would not be an appropriate use for the mere existence of an experience far in the past, as the English present perfect includes a reference to an unspecified anterior time which may be long ago, thus "Have you (ever, ever once) been to China?" is possible (p. 237).

Two comments can be made for Anderson's claim. First, since he also agreed with the possible use of the experiential perfect in English, he should not have compared the experiential perfect with the present

perfect of the recent past while these two present perfects have two different interpretations. Secondly, as not all English present perfect sentences necessarily have the same meanings, so all Mandarin sentences containing the CRS *le* are not constrained by the sense of imminence. Therefore, it would be more appropriate to compare a sentence with the same feature (i.e. as McCawley's "hot news" perfect") with the Mandarin sentence illustrated here. Consider the following dialogue,

A. ni xiansheng hao ma?
you husband good Q
'How is your husband?'

B. wo xiansheng? women lihun *le.*
I husband we divorce CRS
'My husband? We have been divorced.'

A. shenme? nimen lihun *le*! wo zenme dou bu zhidao.
what you divorce CRS we how all not know
'What? You have been divorced! Why didn't anyone tell me that.'

B. zhe hai shi shi nian qian de shir ne.
this still be ten year before NOM affair REx
'It happened (as early as) ten years ago.'

Compared with the dialogues I developed in section 2.2.4.4., the function of *le* in this dialogue does not show much difference from the features of the present perfect of recent past in English. Both Mandarin and English examples are capable of interpretations of recent hot news as well as a sense of surprise. Therefore, the interpretation of the recent-remote opposition on the basis of the speaking time does not necessarily apply to the use of the CRS *le*. By the same token, the notion of recency for the present perfect of recent past is also criticized by Fenn (1987) and others as lacking a specific definition.

[18] These two examples were selected from the errors in Liu's (1993) empirical study.

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DISCOURSE PERSPECTIVE FOR CORE-OBLIQUE DISTINCTION IN JAPANESE*

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1. Introduction

The distinction between core and oblique arguments is one of the major distinctions observed in discussions of the grammatical roles of noun phrases (NPs). Although languages may differ in how they manifest it morphosyntactically, the distinction between NPs playing core and oblique roles appears to be relevant to many languages in the world. For example, in languages with pronominal affixes on the verb, such as Hualapai (Yuman), core arguments (Dixon's (1979) *A, S* and *O* arguments), but not oblique arguments, are typically indexed by those affixes. In English, NPs in core roles (subjects and objects) are left unmarked, whereas the obliques are generally marked by prepositions.

The fact that the CORE-OBLIQUE distinction is widely observed cross-linguistically suggests that the distinction is related to a universal property of human languages. Thompson (to appear) proposes that the distinction can be explained in terms of discourse parameters concerning the informational status of the referents of NPs and the use of NPs at the moment of mention.

This paper, following Thompson's study on English, will examine the role of discourse properties in the CORE-OBLIQUE distinction in Japanese. Unlike English, Japanese does not make a clear morphological distinction between CORE and OBLIQUE arguments: case postpositions are attached equally to most arguments. Thus, Japanese will make a good test case for Thompson's suggestion that the cross-linguistically pervasive CORE-OBLIQUE distinction is motivated by discourse. Our examination of discourse properties of NPs in Japanese conversational data suggests that the CORE-OBLIQUE distinction in Japanese does not work in the same way as that in English.

2. Previous Studies

In studies of Japanese grammar, the question of the CORE-OBLIQUE distinction has been discussed as the problem of the COMPLEMENT-ADJUNCT distinction. The syntactic or functional criteria proposed include the *DO SO* TEST (Somers 1984), the REFERABILITY TEST (Kameyama 1985), and QUESTION PULL (Hasegawa 1988).

The first two tests have been proven unreliable by Hasegawa (1988). Hasegawa shows that *soo suru* 'do so', which has been argued to substitute for a VP containing core objective argument(s) but not obliques, does not always replace a phrase with a verb and core argument(s). The referability test is based on the assumption that core arguments can be anaphoric when ellipted, but that obliques cannot. However, Hasegawa again shows that referability (anaphoric or not) does not always distinguish core arguments from obliques.

* We would like to thank Sandy Thompson and Jack Du Bois for their inspiring comments on an earlier version of this paper.

Hasegawa, as an alternative to the *do so* test and the referability test, proposes the QUESTION-PULL test as a criterion for the CORE-OBLIQUE (or COMPLEMENT-ADJUNCT) distinction. The QUESTION PULL test is an attempt to capture the CORE-OBLIQUE distinction from the perspective of semantic obligatoriness. Hasegawa argues that native speakers know for each verb the lexically specified semantic case frame and that they have a strong feeling of incompleteness when the semantically required elements are missing without justification from context. In the QUESTION PULL test, native speakers of Japanese are presented with verbs in isolation without justifiable context and are requested to ask questions about information that they feel is missing. Questions about core arguments are assumed to be required before those about obliques, since speakers will more strongly feel the need for information for core elements. Thus, the order of questions is considered to reflect the semantic obligatoriness of the element. Hasegawa characterizes CORE arguments (COMPLEMENTS) as elements questions about which are asked before those about a clear ADJUNCT (i.e., a temporal element). Hasegawa reports that, based on this criterion, QUESTION PULL can reliably identify CORE arguments as far as active sentences are concerned.

Okamoto (1989) reexamines Hasegawa's QUESTION PULL test and concludes that QUESTION PULL is invalid as a test for distinguishing core arguments from obliques. The QUESTION PULL test attempts to identify core arguments, which are semantically obligatory, by examining what information the speaker feels is 'missing' based on his/her structural (not contextual) knowledge about the verbal subcategorization frame. For this test to be a test of argument structure, it is crucial that the speaker's judgment is a 'context-free', purely structural one. In reality, however, there is no interaction, including that in an experimental setting, that is totally 'context-free'. In addition, the results of the QUESTION PULL test can only suggest differences between elements in the degree of importance to the verb, and does not prove a particular element to be obligatory or not.

Okamoto further questions 'semantic obligatoriness' as a structural notion. She argues that the semantic obligatoriness of an item is contingent upon the interpretation of each utterance and cannot be determined as an inherent lexical feature of a verb (p.5). Thus, a particular element may be necessary for the semantic completion of a verb used in a certain context, but the same element will not be judged to be necessary based on context-free, inherent lexical subcategorization for the verb. Based on this argument, she rejects the structural notion of 'case frame' or 'valency' and the structural distinction between CORE and OBLIQUE (COMPLEMENT and ADJUNCT in her terms). According to Okamoto, the CORE-OBLIQUE (COMPEMENT-ADJUNCT) distinction for arguments must be discussed in each specific context in which the arguments are used.

Okamoto's study shows that the notion of 'semantic obligatoriness' is very difficult to utilize as a criterion and that 'semantic obligatoriness' alone may not be a definitive criterion for the CORE-OBLIQUE distinction. However, we think that there are still good reasons to maintain the structural distinction between CORE arguments and OBLIQUES. For example, many languages including Japanese have syntactic processes that refer only to core arguments (cf. Section 3.3 below). If, as Okamoto argues, argument structure is an ephemeral structure

formed and maintained only within a specific context, we cannot explain the skewed domain of those syntactic processes. Such consistent patterns across different contexts lead us to believe that the distinction between CORE and OBLIQUE is part of Japanese grammar.

Thompson (to appear) considers a new direction for the discussion of the CORE-OBLIQUE distinction by proposing that the distinction can be explained in terms of the discourse properties of NPs. CORE arguments are those that are more central to discourse, that is, those 'that humans talk about the most and which they want their listener to keep track of, or which are centrally involved in events' (p.13). By examining 'information flow' (Chafe 1987) properties of each NP in conversational data, Thompson shows convincingly that the CORE arguments in English are in fact more likely than OBLIQUES to express a concept that is 'given' information, to have an identifiable referent and to be tracked through the discourse.

The current study is intended as a further step in the ongoing effort to give a precise characterization and useful criteria for the CORE-OBLIQUE distinction in Japanese, and also as a continuation of the attempts to explore the possibility of a crosslinguistic or universal characterization of the CORE-OBLIQUE distinction.

3. Treatment of Data

3.1. Data

The data for this study consist of three excerpts from longer stretches of conversations between native speakers of Japanese. Each of them is approximately three minutes in length. Two of three excerpts (called TELEPHONE CALLS and BIG SISTERS) are taken out of about 180 minutes of a conversation among three people, a couple and a female friend. In TELEPHONE CALLS, they talk about the relationship between the female friend and her boyfriend. The conversation in BIG SISTERS concerns the siblings of the female friend. The third excerpt (SUPER STUDENT) comes from about 45 minutes of a conversation among three fellow graduate students, two male and one female, which is a gossip session about prospective new students in their department.

Each conversational excerpt was transcribed using the conventions described in Du Bois et. al. (1993). Our database contains about 910 Intonation Units.[1]

The total number of NPs in three conversational excerpts is about 600 (overt NPs: 320, ZERO NPs: 273). All NPs were coded for grammatical relations, information flow properties, animacy (human vs. non-human), and distance from the predicate.

3.2. Identification of ZERO NP

Japanese is one of the languages that make extensive use of 'zero NPs' and it was clear that the decision on the treatment of the 'zero NPs' would have a major impact on the result of a study. In this paper, ZERO NP is defined as *a nominal concept implicitly carried in the case frame of the predicate.* By

[1] Intonation Unit is 'a stretch of speech uttered under a single coherent intonation contour' (Du Bois et. al. 1993:47).

'nominal concept' we mean *a concept with which a set of nominal properties, i.e., grammatical relationship, nominal meaning, information flow properties, are associated.*

Identification of ZERO NPs is by definition based on the structural (partly semantic and partly discourse) notion of CASE FRAME. CASE FRAME is a grammatical specification in the lexicon about the set of arguments that are essential to a particular predicate. As it evolves, a CASE FRAME is shaped both by semantic and discourse needs. In this sense the relationship of arguments specified in the CASE FRAME to the predicate is both semantic and discourse-functional. Nominal concepts that are part of the CASE FRAME for the predicate are semantically and discourse-functionally required by the predicate, and when any of these nominal concepts is not expressed by an overt NP in a clause, we identified it as a ZERO NP. In the following example, *otooto* 'younger brother' in line 5 and *otooto* and *kanojo* 'girlfriend' in line 7–8 are identified as ZERO NPs (enclosed in curly brackets), because they are semantically required by the main predicates, *iru* 'exist' and *tsuretekiteiru* 'have brought (someone)', respectively.

(Ex 1) BIG SISTERS

```
4  K: ^Otooto  no-hoo-ga saki  ni 'kekkon-suru to   omou  naa. /
       brother more.than early DAT get.married COMP think PRT
      '(My) brother may get married earlier (than me).'

5  M: {otooto  ni  wa} Kanojo  <X iru X> ?
       brother DAT TOP girlfriend exist
      'Does (your brother) have a girlfriend?'

6  K: Un, \
      yes

7     {otooto  wa} {kanojo     o}  ie    ni%, _
       brother TOP  girlfriend ACC house to

8     ^nando       mo  tsuretekiteiru <X mon X>. \
       many.times PRT have.brought      PRT
      '(My brother) has brought (his girlfriend) home many times.'
```

In the majority of cases, ZERO NPs thus identified occupy valency role positions (i.e., *A, S* and *O*). In some cases, however, we identified ZERO NPs in positions that are not valency role positions, as in the following examples.

(Ex 2) BIG SISTERS

```
76 K: ^sono  ko   ga {uchi  ni} kuru to,
        that girl NOM  house to  come when
      'When that girl comes (to our house),'
```

(Ex 3) BIG SISTERS

72 K: **{uchi ni wa}** sooyuu, _
family in TOP such
'in our family'

73 <Q ^fuwafuwa Q> tto shita no ga 'inai wake. \
soft COMP be NZR NOM exist.NEG PRT
'There is no such a soft person (in our family).'

The directional verb *kuru* 'come' denotes an inward movement toward the reference point. Because the use of *kuru* always implies the reference point of the movement (the goal in this case), we consider the reference point *uchi* 'house' in (ex 2) a part of the CASE FRAME of the verb. In (ex 3), the locative nominal *uchi* '(my) family' is identified as a ZERO NP since the domain of existence is considered to be specified in existential expressions.

No ZERO NP was identified when the construction did not syntactically specify the predicate as well as the arguments associated with the predicate, except when the predicateless clausal fragment was the second member of a question-answer pair, as in the following case.

(Ex 4) BIG SISTERS

167 T: {anata no imooto wa} nani yatten no? \
you GEN younger.sister TOP what do NZR
'What (sport) does (your sister) do?'

168 K: .. **{imooto wa}** handobooru. \
younger.sister TOP handball
'(She plays) handball.'

In (ex 4) K's utterance in line 168 does not contain a predicate. This utterance, however, is an answer to T's previous question in line 167, 'What does (she) do?'. Based on comparison with the question sentence, the subject *imooto* 'younger sister' is identified as a ZERO NP although the predicate to which it is associated is missing in line 168.

If a predicate could be argued to have a grammatical argument but the addition of such an argument changes the meaning significantly, then no ZERO NP was identified. In (ex 5) below, it is syntactically possible to have *watashitachi ni wa* 'to us' (in italics) as an argument, but the presence of such a NP would change the meaning to the extent that the utterance becomes less appropriate in the context (*we don't know* instead of *it is hard to know*).

(Ex 5) BIG SISTERS

103 K: {sore wa} ***{watashitachi ni wa}*** wakan nai kedo ne=.
that TOP *we* *to TOP* known NEG although PRT
'It's hard to know, though.'

There are also cases where the use of a predicate is potentially confusing.

(Ex 6) BIG SISTERS

```
157 M: ... {kanojo wa} ^tairyoku          aru   kara    ii jan. \
           she    TOP  physical.strength exist because OK PRT
           'It is good because (she) has physical strength.'

158 K: U=n. \
       hmm

159 T: <@ tairyoku          aru   kara    tte @>, /
          physical.strength exist because COMP
        '"because (she is) strong?"'
```

In line 159, T is repeating M's utterance in 157 just to take up M's expression which T thinks inappropriate. Here *tairyoku aru kara* is not functioning as a predicate of the clause in line 159, and therefore the nominal concept *{kanojo wa}* (cf. line 157) that could be associated with the verb phrase was not identified as a ZERO NP.

3.3. Grammatical Relations

In this paper, our examination of information flow and other properties of NPs is organized around syntactically defined NP categories, i.e., *A, S, O* and *B (oblique)*.

In Japanese, SUBJECT can be defined as a NP which (1) can be coreferential to the reflexive pronoun *jibun* 'self' and (2) can trigger the 'subject honorification' form of the predicate, i.e., *o (verb)-ni naru, o-(predicate adjective/adjectival nominal)* (cf., Shibatani 1990). The category of SUBJECT is divided into two types according to the valancy or CASE FRAME. The subject of a two-place predicate is coded as *A*, while subject of a one-place predicate is coded as *S* (cf., Comrie 1978, Dixon 1979), as in the following examples.

(Ex 7) SUPER STUDENT

```
          A              O
248  Y: sono hito   ga {sono shigoto o} morau   n   yate, \
       that person NOM that job    ACC receive NZR PRT
       'That person will get that job.'
```

(Ex 8) TELEPHONE CALLS

```
           S
281  K: (0) Atashi ga 'datte, \
            I      NOM because

282     'San Francisco iku no  mo, \
                     go  NZR too
        'Even that I go to San Francisco....'
```

Sono hito in (ex 7) and *atashi* in (ex 8) are both categorized as subject because they can be antecedents of the reflexive pronoun *jibun*:

(Ex 7') **sono hito** ga *jibun no daigaku de* shigoto o
that person NOM *self GEN university LOC* job ACC
morau
receive
'That person will get a job at his own university (=the university from which he graduated).'

(Ex 8') **atashi** ga *jibun de* iku.
I NOM *self INST* go
'I myself will go.'

NPs which appear in the position of *sono hito* (ex 7) and *atashi* (ex 8) can trigger subject-honorification as shown in the following examples, where *sono hito* and *atashi* are substituted with nouns which refer to someone respected, such as *sensei* 'teacher':

(Ex 7") **sensei** ga sono shigoto o *o-morai-ni* *naru.*
teacher NOM that job ACC *receive(honorific) become*
'The teacher will get that job. (honorific)'

(Ex 8") **sensei** ga *o-iki-ni* *naru.*
teacher NOM *go(honorific) become*
'The teacher will go. (honorific)'

We coded *sono hito* in (ex 7) as *A* since the predicate *morau* 'receive' takes an object (represented as a zero NP *{sono shigoto}* here) besides the subject. *Atashi* in (ex 8) was coded as *S* since the predicate *iku* 'go' does not take a syntactic object.

OBJECT (*O*) is syntactically defined as a NP which can be a subject in the passivized counterpart (cf., Shibatani 1990).[2] The zero NP *{sono shigoto}* in (ex 7) and *bokutachi no uwasa* 'rumor about us' in (ex 9) are coded as *O* since they could appear as subject in the corresponding passive clauses.

(Ex 9) SUPER STUDENT
A O
85 Y: {Kanojo ga} ^**bokutachi no .. ^uwasa** o 'kiite 'ne, \
she NOM we GEN rumor ACC hearing PRT
'(She) hearing a rumor about us.'

(Ex 7'") **sono shigoto** ga (sono hito ni) morawareru.
that job NOM (that person by) receive.PASS
'That job will be taken (by that person).'

---

[2] Triggering the 'object honorification' form of the predicate *o-(verb) suru* could be another syntactic property of object roles (cf., Shibatani 1977). However, although he did not give specific examples, Shibatani (1990) stated that the object honorification can be 'triggered by all kinds of non-subject noun phrases, e.g., the direct and indirect objects as well as other oblique nominals.' (p.286).

(Ex 9') **uwasa** ga (kanojo ni) kikareru.
rumor NOM (she by) hear.PASS
'The rumor will be heard (by her).'

Based on this criterion, NPs which have been referred to as 'direct' and 'indirect object' of 'ditransitive verbs' (e.g., Shibatani 1990) are both coded as *O*. They may equally be subjects of the passive counterparts, as shown below.[3]

(Ex 10) TELEPHONE CALLS

```
          A            O              O
127  K: {hito   ga} {watashi ni} {denwa      o} ^kakete
       someone NOM  I       DAT  phone.call ACC make.call
           kuru no  wa, \
           come NZR TOP

128     ^zenzen       ii   no  ne=. \
         by.all.means good NZR PRT
       '(somebody's) calling (=making a call to) (me) is
       perfectly OK.'
```

(Ex 10') **watashi** ga denwa o kakerareta.
I NOM phone.call ACC made.call.PASS
'I was called.'

(Ex 10") **denwa** ga watashi ni kakerareta.
phone.call NOM I DAT made.call.PASS
'A phone call was made to me.'

There are some cases where combination of an object and a predicate is rather idiomatic. In these cases, *O* can be considered to be functioning as a part of the predicate specifying a type of event or action (i.e. 'non-argument predicating NP' in Thompson's (to appear) terms). *{denwa}* in (ex 10) is in fact an example of this type of *O*'s: the predicate *kakeru,* whose literal meaning is 'hang', means 'make a call' when and only when it takes *denwa* 'phone call' as *O* (even as a zero NP). Other such combinations of a predicate and *O* in our data include *kiru* 'cut' with *denwa* (= 'hang up'), *suru* 'do' with *denwa* (= 'call'), *mawasu* 'rotate' with *daiyaru* 'dial'(= 'dial (v)'), *kaku* 'write' with *tegami* 'letter' (= 'write/send a letter'), and *hakusu* 'get' with *koohyoo* 'good impression' (= 'become popular').

---

[3] Shibatani (1990:287) argues that 'the category of indirect object is distinct in Japanese from that of the direct object and the oblique objects' based on the phenomenon of 'quantifier float': quantifier float is possible from subject and direct object but not from indirect object (nor obliques). In Shibatani (1977), however, he shows that quantifier float has to do with surface cases rather than with grammatical relations. Based on the observations that quantifiers cannot take off from dative or genitive-marked subject NPs, he concludes that quantifier float is only allowed from nominative or accusative-marked NPs. Since 'indirect object' typically takes dative case (both of the two non-zero 'indirect object' NPs are marked with Dative in our data), we can conclude that quantifier float is not allowed from 'indirect object' due to its surface case. Thus, we do not have any syntactic process to distinguish the syntactic category of 'indirect object' from that of 'direct object'.

S, as well as *O*, may function as a part of a predicate as in the following example.

(Ex 11) BIG SISTERS

```
180 M: {anata no  imooto          wa} se% .. takai? /
        you   GEN younger.sister TOP height high
       'Is (your younger sister) tall?'
```

In (ex 11), while *se* 'height of a human' specifies the domain of the predicate adjective *takai* 'high', *anata no imooto* 'your younger sister' is the target of the predication. There have been debates in the Japanese linguistic literature over the grammatical status of the two NPs associated with a predicate adjective in such constructions. According to Kuno (1972), they are both subject because they could both be marked with the nominative *-ga* (for example, (ex 11) could be *anata no imooto ga se ga takai*). Basically, we follow this analysis but for different reasons. The predicate adjective, by definition, takes only one argument *S*, such as *se* 'height' in (ex 11). This *S*, however, combined with the adjective, is functioning as a 'higher' predicate describing the property of 'being tall' of *imooto* 'younger sister', which may be considered as the *S* with respect to the [*S*+adjective] sequence. In fact, the reflexive pronoun *jibun* and subject honorification refer to *imooto* as a subject of the clause as shown in the following.

(Ex 11') **watashi** wa *jibun no kurasu de ichiban* se ga takai
I TOP *self GEN class LOC most* height NOM high
'I am tallest in my class.'

(Ex 11") **anata no imooto** wa se ga *o-takai.*
you GEN younger.sister TOP height NOM *high(honorific)*
'Your sister is tall. (honorific)'

A similar analysis can be applied to cases such as (ex 12).

(Ex 12) BIG SISTERS

```
157 M: ... {kanojo wa} ^tairyoku          aru   kara    ii jan. \
           she    TOP  physical.strength exist because OK PRT
       'It is good that (she) has physical strength.'
```

Here the predicate is existential. The NP in the existential expression (*tairyoku* 'physical strength') is apparently a subject (*S*) of the predicate. But the whole existential expression (*tairyoku aru* '(literally) physical strength exists' = 'have physical strength') is functioning as a possessive predicate with *kanojo* 'she' as a possessor. That the possessor is syntactically *S* can be seen in the fact that it can be coreferential with the reflexive pronoun *jibun* and trigger subject honorification, as in the following.

(Ex 12') **watashi** wa *jibun no kurasu de ichiban* tairyoku
I TOP *self GEN class LOC most* physical.strength
ga aru.
NOM exist
'I am strongest in my class.'

(Ex 12") **anata no imooto** wa tairyoku ga
your GEN younger.sister TOP physical.strength NOM
o-ari-ni naru.
exist(honorific) become
'Your younger sister has physical strength. (honorific)'

Based on the assumption that NPs which function to provide a specific meaning to the predicate are in fact not functioning as an argument but merely a part of the predicate, Thompson (to appear) excluded those 'non-argument predicating NPs' (such as our *denwa* in ex. 10, *se* in ex. 11, and *tairyoku* in ex. 12) from consideration in her study. In order to make our results compatible with Thompson's, we also exclude them from our statistics in the following sections.

If NPs are neither *A, S*, or *O*, they are considered as OBLIQUES (*B*). Semantically, OBLIQUES may include those expressing source (ablative; ex. 13), goal (ex. 14), location (ex. 15), time (ex. 16), cause (ex. 13), co-actor (comitative; ex. 17), and passive agent (ex. 18).

(Ex 13) TELEPHONE CALLS

B(source)
240 M: {Kare wa} **kanachan** ^kara=, /
he TOP K ABL
B(cause)
241 {kare ni} 'denwa shinai **koto** de, \
he DAT phonecall do.NEG thing by

242 'guzuguzu wa 'iwanai hito na n desho? /
complain TOP say.NEG person COP NZR isn't.it
'(He) is not a (kind of) person who complains because (you) do not call (him), is he?'

(Ex 14) BIG SISTERS

B(goal)
7 K: {otooto ga} {kanojo o} **ie** ni%, _
brother NOM she ACC house to

8 ^nando mo tsurete kiteiru <X mon X>. \
many.times too take come PRT
'(My) brother has brought (her) to (our) house many times.'

(Ex 15) BIG SISTERS

B(location)
190 K: {imooto wa} **uchi** de ichiban okkii. _
sister TOP family in most big
'(My) sister is biggest in (our) family.'

(Ex 16) TELEPHONE CALLS

```
                                    B(time)
87   T: ore wa ^kookoo      no  toki ni 'sooyuu=, _
        I   TOP high.school GEN time in  such

88      'omoi- --

89      'omoide ga  aru   yo=. \
         memory NOM exist PRT
        'I have such a memory of when (I was in) high school.'
```

(Ex 17) SUPER STUDENT

```
                  B(co-actor)
32   Y: {Boku ga} Mary to 'shabettete, /
         I    NOM M     COM speak
        '(I) was speaking with Mary.'
```

(Ex 18) BIG SISTERS

```
                       B(passive agent)
184  T: {imooto ga} 'Kanachan ni ^okkii tte  iwarete doo sun no. \
         sister NOM  K        by  big   COMP say.PASS how do NZR
        'What (can your sister) do if (she) is called "big" by
        you?'
```

3.4. Information Flow Parameters

3.4.1. Activation State

Each referential NP was coded for ACTIVATION STATE values, GIVEN, NEW and ACCESSIBLE, based on the following criteria.

'Given' (G): when a concept is judged to be in the hearer's focus of consciousness at the time of mention of the NP *because of recent mention* — i.e., if the NP has been mentioned recently (within 20 Intonation Units (= IUs)[4])

'Accessible' (A): when a concept is judged to be in the hearer's peripheral consciousness at the time of mention of the NP *because of an earlier mention* — if the NP has been mentioned before but more than 20 IUs before

'New' (N): when a concept is judged to be out of the hearer's consciousness at the time of mention of the NP *because of lack of mention* — if the NP has never been mentioned before

The parameter of ACTIVATION STATE is considered to be relevant only for referential concepts. Thus, non-referential NPs were not given any ACTIVATION STATE value (marked as Inapplicable (*)).

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[4] We arbitrarily decided on the number in order to operationalize our definition of GIVEN and ACCESSIBLE categories.

3.4.2. Identifiability

Japanese does not have a grammatical marker of 'definiteness' comparable to the English definite article, and therefore the relevance of the parameter of IDENTIFIABILITY can be controversial in Japanese. We coded NPs for IDENTIFIABILITY for the sake of comparability with the English results, but by doing so we are not making any claim about the relevance of the parameter in Japanese. We tried to follow criteria set up for English as close as possible, but our background as speakers of a language without a 'definiteness' marker could have influenced or hampered our judgment about the IDENTIFIABILITY values of NPs.

We coded IDENTIFIABILITY based on the context. A NP was coded as IDENTIFIABLE (I) if it was referential and the hearer was judged to be able to identify which particular entity was referred to by the NP (cf., Du Bois 1980). A NP was coded as NON-IDENTIFIABLE (N) if it referred to a referent which the hearer was judged not to be able to identify. We considered the parameter of IDENTIFIABILITY to be irrelevant (coded as Inapplicable (*)) when the NP was not used to refer, i.e., to introduce an entity or concept as something to talk about in a conversation.

3.4.3. Discourse Referentiality

The parameter of DISCOURSE REFERENTIALITY has to do with the function of NP at the particular time of mention in discourse. Unlike ACTIVATION STATE or IDENTIFIABILITY, this parameter is concerned with the use of NPs, rather than with the nature or cognitive status of referents. Our coding criteria for the DISCOURSE REFERENTIALITY is as follows:

Tracking (T): when the speaker is judged to be mentioning the NP to introduce a new referent or keep track of a referent introduced earlier
Non-tracking: if not tracking
Predicating (P): when the NP is used as a part of the predicate
Orienting (O): when the NP is used to set the locative and/or temporal framework in which the predication occurs
Others (N): NPs used for other non-tracking functions including *Classifying, Identifying* etc.

4. Properties of NPs and CORE-OBLIQUE distinction in Japanese

In this section, we explore an answer to the question of the CORE-OBLIQUE distinction in terms of various properties of NPs. In the following discussion we take ZERO NPs into account but exclude 'non-argument predicating NPs', as described in Section 3.3.

4.1. Information Flow Properties of NPs

4.1.1. Activation State

The following table summarizes the results concerning the relationship between the syntactically defined grammatical relations, *A, S, O* and oblique, and the ACTIVATION STATE properties of the NPs:

	G	A	N	*	Total
A	75 (83.3%)	1 (1.1%)	4 (4.4%)	10 (11.2%)	90
S	132 (65.0)	27 (13.3)	19 (9.4)	25 (12.3)	203
O	22 (23.9)	18 (19.5)	20 (21.7)	32 (34.8)	92
B	39 (41.5)	11 (11.7)	18 (19.1)	26 (27.7)	94
Total	267	57	62	93	479

Table 1: Grammatical Relations x Activation States

In the above table, skewing in the distribution of the *A* NPs toward GIVEN is very noticeable. *S* also shows a high GIVEN value but the general distribution pattern is not as skewed as *A*. This suggests that the *A* position has a more specialized function in discourse organization. *O* shows an interesting pattern. It is lowest in GIVEN and highest in NEW.

The following is the same result adjusted and compared to the English result reported in Thompson (to appear). Thompson does not use the category of ACCESSIBLE. We distinguish GIVEN and ACCESSIBLE in order to take into account the effect of distance between the mention in question and the previous mention, but these two categories can be merged based on the fact that in both cases the concept has been previously mentioned. In the table below, the numbers of GIVEN and ACCESSIBLE NPs in table 1 are combined as GIVEN.

	Given	
	Jpn	Eng
A	84.4 (%)	85 (%)
S	78.3	65
O	**43.4**	**65**
B	53.2	35

Table 2: Grammatical Relations x Activation States (Japanese vs English)

The tendencies for GIVENNESS in two languages can be summarized as follows:

English: A >> S, **O >> B**
Japanese: A > S >> **B > O**
(Note: *a* >> *b* indicates that '*a*'s value is substantially higher than that of *b*'; the significant differences between English and Japanese are in bold):

A striking difference between English and Japanese is observed in *O*. The tendency for NPs in the *O* role to be GIVEN in Japanese is far lower than that in English.

4.1.2. Identifiability

The results concerning the relationship between grammatical roles of NPs and IDENTIFIABILITY are summarized as follows:

	I	N	*	Total
A	84 (93.3%)	2 (2.2%)	4 (4.4%)	90
S	168 (82.8)	6 (3.0)	29 (14.3)	203
O	49 (53.3)	8 (8.7)	35 (38.0)	92
B	62 (66.0)	6 (6.4)	26 (27.7)	94
Total	363	22	94	479

Table 3: Grammatical Relations x Identifiability

NONIDENTIFIABLE is very rare regardless of grammatical relations. The hierarchy in terms of the IDENTIFIABILITY value, *A>S>B>O*, is similar to that in terms of ACTIVATION STATE observed in the previous section. *O* and *B* show noticeably low IDENTIFIABILITY values, but we should not exaggerate the significance of the low values, since the differences in IDENTIFIABILITY values are effects of the numbers of inapplicable cases rather than those of NONIDENTIFIABLE cases. If we exclude inapplicable cases, the effective difference between *A/S* and *O/B* is far smaller than it appears at first.

	I	N
A	97.7 (%)	2.3 (%)
S	96.6	3.4
O	86.0	14.0
B	91.2	8.8

Table 4: Grammatical Relations x Identifiability (without *)

Table 5 compares the IDENTIFIABILITY values in Japanese and English (English figures are from Thompson (to appear)).

	Identifiable	
	Jpn	Eng
A	93.3 (%)	95 (%)
S	82.8	90
O	**53.3**	**87**
B	66.0	58

Table 5: Grammatical Relations x Identifiability (Japanese vs Englsh)

Just like the values of ACTIVATION STATE, the overall results are comparable to that of English except in *O*. The IDENTIFIABILITY value of *O* is significantly lower than the English value. The tendencies for NPs to be IDENTIFIABLE are summarized as follows:

English: A > S > **O** >> **B**
Japanese: A > S >> **B** > **O**

4.1.3. Discourse Referentiality

The following table summarizes the use of NPs in different grammatical roles in terms of Discourse Referentiality.

	Tracking	Non-Tr	Total
A	83 (92.2%)	7 (7.8%)	90
S	182 (88.8)	23 (11.2)	205
O	61 (66.3)	31 (33.7)	92
B	32 (34.0)	62 (66.0)	94
Total	358	123	481

Table 6: Grammatical Relations x Discourse Referentiality

A and *S* are very likely to be TRACKING in our database. The TRACKING value of *O* is much higher than *B*, but is not high enough to be grouped with *A* and *S*. The following is comparison of distribution of TRACKING in Japanese and English (English figures are from Thompson (to appear)).

	Tracking	
	Jpn	Eng
A	92.2 (%)	98 (%)
S	88.8	90
O	**66.3**	**83**
B	34.0	26

Table 7: Grammatical Relations x Discourse Refereniality (Japanese vs English)

The hierarchy of the TRACKING value is the same, *A>S>O>B*, for both languages, but the distribution pattern shows an important difference. In English it seems reasonable to group *A, S* and *O* together in contrast to *B*. In Japanese, however, *O* is too far below *A* and *S* in TRACKING to be grouped with them. The tendencies for the NPs to be TRACKING in English and Japanese can be summarized as follows:

English: A > S > O >> B
Japanese: A > S >> O >> B

4.2. Other properties of NPs

We examined other properties of NPs and ZERO NPs in discourse to shed light on the CORE-OBLIQUE opposition in Japanese.

4.2.1. Intonational grouping of NPs

CORE arguments can be characterized as elements that are structurally, semantically, or pragmatically close to the predicate. In this section, we explore the possibility of capturing the 'distance' between arguments and the predicate from the perspective of intonational grouping of clausal elements.

We coded overt NPs for whether they appear in the same Intonation Unit as their predicate or not. Here we do not take ZERO NPs into account, since it is unreasonable to determine their intonational realization without surface forms. The result is summarized in the following table.

	Same IU	Diff IU
A	9 (42.9%)	12 (57.1%)
S	51 (65.4)	22 (28.2)
O	19 (65.5)	10 (34.5)
B	32 (48.5)	29 (43.9)
Total	111	73

Table 8: Intonational location of NPs in relation to the predicate

The four grammatical roles show the following hierarchical relationship in terms of the tendency to be in the same intonation unit as the predicate: *S, O>B>A*. *S* and *O* are in the same intonation unit as the predicate more than *B* and *A*. These results suggest that *S* and *O* are closer to the predicate than *B* and *A*, but the nature of 'closeness' seems to be different from 'coreness' or semantic/discourse-functional 'centrality'. If whether a NP is in the same IU as the predicate or not correlated with the semantic/discourse-functional 'centrality', we would expect *A* to show the similar pattern as *S* (see the previous sections on the information flow properties). In our results, however, the tendency for *A* to be in the same IU is significantly lower than *S*. The result may be explained by other factors, such as a) the syntactic difference between two types of subject or b) 'preferred argument structure' (Du Bois 1985), which are beyond the scope of this paper.

4.2.2. Humanness

Humans are more likely to be central participants (participants that are most closely kept track of) in conversation than non-human entities. We assume that the notion of 'core argument', as the term suggests, involves not only structural 'centrality' but also semantic or pragmatic 'centrality'. Then, it seems useful to examine how the distribution of human participants is correlated with grammatical roles.

	Total	Human		Non-human	
	#	#	%	#	%
A	90	85	**94.4**	5	5.6
S	203	141	**69.5**	62	30.5
O	92	19	**20.7**	73	79.3
B	103	34	**36.2**	69	65.2

Table 9: Human NPs x Grammatical Relations

Apparently the distribution pattern for humanness does not show any indication for *A, S,* and *O* to form a group against obliques. Interestingly, the

degree of humanness yields the hierarchy *A>S>B>O*, which is similar to that observed for the degree of GIVEN and of IDENTIFIABLE.

It is very tempting to identify some correlation between humanness and the discourse dimensions of ACTIVATION STATE and IDENTIFIABILITY, but we have to proceed with caution. The humanness hierarchy *A>S>B>O*, is not peculiar to Japanese. Although Thompson does not discuss the humanness of valency roles, some statistics indicate that English shows a similar distribution pattern of human NPs (p.c. Elise Kärkkäinen). In English, however, the degrees of GIVEN and of IDENTIFIABLE do not show the same hierarchical patterns as the degree of humanness. Thus, the correlation between humanness and GIVENNESS/IDENTIFIABLENESS observed in Japanese does not conform to the universal pattern but indicates a language-specific meaningful pattern.

The following table summarizes the informational characteristics of human NPs and nonhuman NPs in different valency roles.

		# of NP	Given (%)		Identifiable (%)		Tracking (%)	
A	Human	85	87.1		96.5		95.3	
	Non-hum	5	20.0	*84.3*	40.0	*93.3*	40.0	*92.2*
S	Human	140	82.3		91.5		92.2	
	Non-hum	63	25.4	*64.5*	61.9	*82.8*	82.5	*88.8*
O	Human	19	73.7		84.2		63.2	
	Non-hum	73	11.0	*23.9*	43.8	*53.3*	67.1	*66.3*
B	Human	34	70.6		91.8		55.9	
	Non-hum	60	25.0	*37.9*	51.7	*66.0*	21.7	*34.0*

* The values in italic are those of all NPs.

Table 10: Human NPs vs. Non-human NPs

Human NPs are generally much more likely to be GIVEN, IDENTIFIABLE and TRACKING than nonhumans regardless of grammatical relations. It is especially noteworthy that human *O* and human *B* NPs show quite high tendencies to be GIVEN (73.7% and 70.6%, respectively) and IDENTIFIABLE (84.2% and 91.8%, respectively), even though their overall GIVEN and IDENTIFIABLE values (shown in italics in Table 10) are very low compared to those of the *A* and *S* roles. The TRACKING values, however, do not seem to be affected by humanness as much as the GIVEN or IDENTIFIABLE values.

At this point we do not have access to detailed statistics for English human NPs and nonhuman NPs comparable to our Japanese statistics, but we can make an informal comparison of the two languages. As mentioned above, humanness of grammatical roles in English shows a pattern similar to Japanese, that is, *A* and *S* being highly human and *O* and *B* being highly nonhuman. Also, it does not seem unreasonable to assume, although we need real data to prove it, that English human NPs, just as those in Japanese, are highly GIVEN, IDENTIFIABLE and TRACKING regardless of valency role.

Recall that the difference between English and Japanese in information properties of NPs occurs in the dimensions of ACTIVATION STATE and IDENTIFIABILITY in the *O* and *B* roles positions. As we can see in the above table 9, the *O* and *B* positions can be characterized as *predominantly nonhuman*

positions. In other words, the information properties of the *O* and *B* positions are shaped mostly by those of nonhuman NPs. This fact suggests that the difference between English and Japanese stems from the difference in the nature of nonhuman NPs in these two languages. The important role of nonhuman NPs in explaining the difference between the languages would be also suggested by the fact that English and Japanese do not show any significant difference in terms of the information properties associated with human NPs.

The following table summarizes the information properties of the *O* and *B* roles in English (Thompson (to appear)) and Japanese.

	Given* (%)		Identifiable (%)		Tracking (%)	
	Eng	Jpn	Eng	Jpn	Eng	Jpn
O	65	43.4	87	53.3	83	66.3
B	35	53.2	58	66.0	26	34.0

* GIVEN value of Japanese includes ACCESSIBLE

Table 11: the *O* and *B* NPs in English and Japanese

The *O* NPs in English are much more GIVEN, IDENTIFIABLE and TRACKING than those in Japanese, whereas in the *B* position, the difference between English and Japanese data is not so great. This fact suggests that, in English, NPs in the *O* position tend to be more GIVEN, IDENTIFIABLE and TRACKING regardless of humanness. Thus, in English, since the *O* position is predominantly nonhuman, the nonhuman NPs in the *O* position must have information flow properties similar to those of human NPs. In the *B* position, which is another nonhuman-predominant position, however, the values of GIVEN, IDENTIFIABLE and TRACKING are distinctively low.

In Japanese, on the other hand, nonhuman NPs show low tendencies to be GIVEN and IDENTIFIABLE no matter what valency role they are in. Clearly the human/nonhuman distinction is a more important factor to consider than the grammatical roles in explaining the dynamism of information organization in Japanese. Interestingly, however, this human-centered information organization does not dominate all dimensions of information flow. The TRACKING value shows a pattern different from that for GIVEN or IDENTIFIABILITY. Apparently the Tracking value has more to do with grammatical role than with humanness: *O* NPs are more likely to be TRACKING, whereas *B* NPs are less likely to be TRACKING. This deviation from the general pattern in the dimension of DISCOURSE REFERENTIALITY might be caused by the very nature of the parameter. In other words, there might be some inherent characteristics in the parameter of DISCOURSE REFERENTIALITY that, unlike in ACTIVATION STATE or IDENTIFIABILITY, make the TRACKING pattern strongly centered around valency roles. To give a definite explanation for the deviation, however, is beyond the scope of this paper, and for now we leave any further discussion for future research.

In sum, the difference between English and Japanese stems from the difference in the role of humanness in information structuring. In English the grammatical role of the NP is more important in structuring information than humanness of the NP. Information is organized based on the grammatical roles,

and therefore the valency role positions *A, S* and *O* share similar informational characteristics (more GIVEN, IDENTIFIABLE and TRACKING) as opposed to obliques. In Japanese, on the contrary, information is structured more around the humanness of NPs. Whether a NP is human or not greatly affects how it is mentioned and integrated into the overall informational organization. This humanness-centered organization of information explains the substantial difference in informational characteristics between predominantly human *A/S* and predominantly nonhuman *O/B*.

5. Conclusion

In this study, following Thompson's (to appear) proposal, we approached the question of the CORE-OBLIQUE distinction in Japanese through examination of discourse properties of the NPs. We examined the characteristics of each grammatical relation in terms of information flow properties, i.e. ACTIVATION STATE, IDENTIFIABILITY and DISCOURSE REFERENTIALITY. Further, we investigated the relationships between grammatical roles and their semantic or intonational properties.

Our study of the discourse characteristics of grammatical roles (*A, S, O* and *B*) found the pattern *A>S>>B, O* (with *B* and *O* in a variable order) in terms of tendency to be GIVEN, IDENTIFIABLE and TRACKING. The pattern is different from that observed for English (*A>S>O>>B*) in the behavior of *O*. The peculiarity of *O* is not random but is consistent through various information flow prameters. This suggests that Japanese information structuring follows a principle different from that in English.

The general pattern that groups *A* and *S* together as opposed to *O* and *B* in terms of information flow properties matches the pattern found with the distribution of human NPs. Based on this observation, we conclude that information organization in Japanese is based on humanness rather than grammatical roles of NPs. On the other hand, the distribution pattern of human NPs in English (which is simlar to that of Japanese) does not find correlation in the domain of information flow. In English, information is structured around the grouping of CORE (*A, S* and *O*) and OBLIQUE rather than the humanness of NPs.

Theoretically the above observation can lead us to two different conclusions about the question of the CORE-OBLIQUE distinction in Japanese. If, as proposed in Thompson (to appear), infomation flow patterns are a universal basis for the CORE-OBLIQUE distinction, we have to conclude that *A* and *S*, but not *O*, are CORE arguments in Japanese, since only *A* and *S* consistently show information flow properties attributed to CORE arguments. This would illustrate that categorization of CORE and OBLIQUE arguments may be different from language to language in terms of grammatical roles of NPs. Alternatively, we could assume that *A, S* and *O* constitute a universal set of CORE arguments and that Japanese shares this universal principle. Then we have to conclude that the Japanese information structuring pattern is not based on the CORE-OBLIQUE distinction. This in turn forces us to deny the universal validity of information flow pattern as a basis for the distintion. We will leave our final decision about which of the above is the case to further investigation.

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Constituent prototypicality and well-formedness in Japanese: The case of mi-ru[1]

Shinichi Nishikawa

In the last decade or so, some of the most significant research on the nature of semantic categories has been done in the framework of 'prototype theory'. Most research in this framework (Brugman, 1981; Coleman and Kay, 1981; Fillmore, 1971; Lakoff and Brugman, 1988; Lakoff, 1987; Norvig and Lakoff, 1987; etc.) are out growths of a series of studies by Rosch and her associates on prototypes (1973, 1975, 1976, 1977, etc.). Prototype theory assumes that our conceptual categories are organized hierarchically around cognitively salient 'prototypes' or 'cognitive reference points' and that this effects the way we categorize concepts in two ways. First, it should show 'prototype effects (or asymmetries)'; certain members of a category are more representative of the category as a whole than others. For instance, robins are more representative of the category BIRD than penguins or ostriches, apples are more representative of the category FRUIT than figs or olives, and so on. Second, it should show 'basic-level effects'; there are objects in categories, whose level of abstraction is conceptually most basic, and therefore members of distinct categories are maximally different from each other. Some examples of basic-level objects are:

SUPERORDINATE	tool	furniture	musical instruments
BASIC-LEVEL	hammer	chair	guitar
SUBORDINATE	claw hammer	rocking chair	folk guitar

The differences between a chair and a guitar (basic-level category) are much greater than those between a folk guitar and a classic guitar (subordinate categories). According to Lakoff (1987: 46), some of the characteristics of basic-level categories are that they are:
- the most inclusive category for which a concrete image of the category as a whole can be formed.
- the level with the most commonly used labels for category members.
- the level at which terms are used in neutral context.
- the first level to enter the lexicon of a language.

It is necessary to note here that what counts as the prototype of a category is assumed to vary across cultures (Rosch, 1977: 3); thus prototypical DOG in Japan may not be the same as that in the United States. However, the underlying processes that allow us to make use of the prototypes in our mental representations are considered to be universal as Kay and McDaniel (1978) have shown in the study of basic color terms.

Prototype theory was developed as an empirical theory of categories, but it has found fruitful applications to the study of language. Coleman and Kay's (1981) study on the English word *lie* is one of the earliest attempt to apply prototype theory to semantics. There are three findings. First, they find that there are three factors that contribute to 'liehood' of certain speech acts, i.e., falsity, intent to speak falsely, and intent to deceive. Second, there are asymmetries among these factors. That is, one or more of these factors play a more significant role than the other in determining whether a particular speech act should be called a lie or not. Third, the subjects' judgments as to whether a certain speech act should be considered a lie or not are not clear-cut, but are graded, i.e., there is a central member of the category *lie* and the liehood lessens as the characteristics of the speech act in question deviate from the prototype. They argue that semantic categories such as lie should not be represented as a set of necessary-and-sufficient conditions as linguists have traditionally done, but as the degree of resemblance to the central (or prototypical) member of the category. These findings were incorporated into a framework of "cognitive semantics" in which the use of language is viewed as a part of our cognitive activities. Various researchers (Brugman, 1981; Lakoff, 1987; Rosch et al., 1977; Fillmore, 1982) in this framework claim that we make use of a general cognitive apparatus such as prototypes in the comprehension and production of language. If this is so, it should be found in every aspect of the language. However, applications of prototype theory have been predominantly concerned with the internal structure of the lexicon.

The purpose of the present study is to show that the prototype effects are not only found at the level of the lexicon, but also at the sentence level. I will demonstrate how internal structure of the lexicon are reflected onto the degree of well-formedness of the sentences as a whole. I will also suggest methods for the analysis of the type presented here. In this respect, the present study is similar to Brugman's work (1981) on the English word *over*. In that study, she showed that there are two levels of 'prototype structure'. At the first level, the individual senses of *over* are categorized with the prototypical senses as the most exemplary of the members in the category. For one of the senses of *over* 'above', there are cases where it may or may not fit to a prototypical situation well. For example, the sense of *above* in a sentence *The light is above John's head*, the situation is the most exemplary of the senses represented by the word *above* if the light is directly above John's head. The degree of prototypicality of the situation lessens as John moves away from the light. At the second level, the senses of *over* are organized with the prototypical one fitting our sensory experience best. The fact that 'above and across' is the

prototypical sense of *over*[2]and the other senses are extensions of it supported her claim at the second level. Although she examined how different senses of *over* influence the grammaticality of the sentences, her concern in the study was primarily on the internal structure of the lexical item *over*.

I am concerned here with three senses of the Japanese polyseme *mi-ru*. The three senses which I am dealing with here are distinct but related ones, with the central one being 'to perceive a visual image (to see)'. The sense which is the closest to the central one is 'to watch', and the most deviated one is 'to examine'. These three senses are represented with different Kanji (Chinese) characters, '見', '観', '診', respectively.

Since prototype theory explains differences in the meanings of words in terms of their deviation from the central one, the determination of the central meanings of the words is crucial. Despite the obvious necessity to develop an objective measure for determining the central and noncentral senses, previous studies seem to have assumed that such judgment can rest primarily on the native speakers' intuition. For instance, in their study of the English word *take*, Norvig and Lakoff (1987) considered the sense of *take* in a sentence *The baby took the toy from its mother*, as the given central sense. They note:

> We will begin with what we hypothesize to be the central sense of *take* in The *baby took the toy from its mother*. As we will see shortly, the other senses of *take* can be represented most economically in terms of minimal variation links if we do so. Moreover, intuitively speakers judge this sense to be the most basic, and dictionaries reflect this judgment. (pp.198)

Coleman and Kay (1981) who applied prototype theory to nonconcrete categories are no exception. They also did not provide an objective measure in determining what they should consider as the central sense of the English word *lie*. Justifying their methodology, they note,

> ... our hypothesized prototype definition of lie was drawn from our experience as native participant observers in the same speech community as our subjects. From this ethnographic experience regarding word usage in ordinary speech contexts, and from a particular theory of word meaning, we inferred how a certain set of experimental data should pattern. (pp.41)

I am not trying to devalue their work here. The lack of analytical instruments in this paradigm may be reflection of its youth. My

contention is however, that if we investigate the effect of semantic prototypes on the well-formedness of sentences without such measure, the arguments are subject to circularity.

With the above discussion in mind, I propose an objective measure for determining the centrality of some senses, which complement aforementioned studies. In principle, there are two ways to determine the central sense of the lexical items under investigation.

First, we must determine which sense of the polyseme is shared by all the senses of the word. For instance, the senses of the word *mi-ru* all share the sense 'to perceive a visual image (to see),' which is the one represented by the Kanji '見'. Other senses may be seen as extensions of this. I utilized this method in determining the central sense of *mi-ru*. The three meanings share this sense, 'to perceive a visual image (to see)' I call this sense, *mi-ru*-1 in the analysis that follows. *Mi-ru*-1 is extended to the senses, 'to watch', and 'to examine', which I call *mi-ru*-2 and *mi-ru*-3, respectively.

The second method of determining the central sense is to identify what characteristics it *does not* have. From the studies by Norvig and Lakoff (1987), and Brugman (1981), we know that the central sense is the one from which the other senses are extended in various ways while they maintain links to the central one. In other words, if the sense in question is derived from another one through metonymy or metaphor, it cannot be the central sense. For instance, Norvig and Lakoff (1987) show that a sense of the English verb *take* in the sentence *John took a sniff of the coffee*, is linked to the central sense of *take* in the sentence *The baby took the toy from its mother*. They claim that the former sense is an extension of the latter through the metaphor, PERCEIVING IS RECEIVING. This second method was used to determine the central and noncentral senses of the object NPs. For instance, a word *terebi* 'TV' can have two senses, 'a material object, a TV set (the box)' and 'TV program', which are linked to each other by metonymy wherein 'the principal object stands for the principal goal of the activity' (Lakoff, 1987: 107). I take the former sense of the word 'TV' as the central sense since we can assume that the speaker refers to the visually perceptible aspects of the entities in uttering the word *mi-ru*. Accordingly, the possible senses of the word *kanja* (patient) are 'physical condition of a person' and 'a person as a "container" of the physical conditions'. The former sense is noncentral and the latter is the central sense.

Before we turn to the analysis of the data, it is necessary to look at the semantic content and the relationships of the senses. Norvig and Lakoff (1987: 199) describe the semantic content of the verb *take* with the following primitives:

Participants:

A agent: active participant or causer of an action
S source: initially has the patient
R recipient: receives the patient
P patient: object acted upon or affected by the agent
I instrument: used to transport the patient

Settings:
O origin: location where the patient started out
D destination: location where the patient ends up

The central sense of the verb *take* is described as the following:

Take-1: grab

Background conditions: R is at D, P is at O, O≠D, S≠R, A=R.

ACT: A MOVES P ALONG A PATH FROM O TO D.

CONDITION: DURING ACT, A PHYSICALLY CONTROLS P.

DEFAULTS:
Result: A receives P
A is human
P=easily manipulated physical object
I=A's arm and hand
O=near A
D=at A's body

Examples:

The baby took the toy from its mother.
The baby took the toy from the table.

As the verb of visual perception, *mi-ru* is inherently different from *take* and its senses are not fully explicable in the above manner. The primitives for *mi-ru* are:

Participants:
A agent: active actor or causer of an action
P patient: object acted upon or affected by the agent
E experiencer: an animate being whose registering nervous system is relevant to the predication (Longacre, 1976: 28)

Accordingly, the semantic content of *mi-ru*-1 is:

mi-ru-1: to perceive a visual image (to see)

ACT: E perceives a visual image.

DEFAULT: E is animate

Example:

Watashi wa sora o mi-ta.
I TOP sky ACC see-PAST
'I saw the sky.'

The extension of the sense from *mi-ru*-1 to *mi-ru*-2 can be accounted for by the addition of 'ACT is a part of C Schema.' 'The ACT is a part of C schema' can be defined as:

C=a conventional event in which E (experiencer) is a part
ACT=TO PERCEIVE VISUAL IMAGE
ACT is a part of C

For instance, in *Watashi wa yakyuu o mi-ta,* 'I watched a baseball game,' C is a conventional event GOING TO SEE A BASEBALL GAME in which E takes part to perceive a visual image of the activity (playing baseball) at a stadium.

Therefore, the semantic content of *mi-ru*-2 is:

mi-ru-2: to watch

LINKED TO : *mi-ru*-1

DIFFERENCES:
- Add ACT is a part of C schema

Example:
Watashi wa yakyuu o mi-ta.
I TOP baseball (game) ACC see-PAST
'I watched baseball game.'

The extension from *mi-ru*-2 to *mi-ru*-3 involves a profiling of the result of the ACT. The profile is the salience of an entity in a conceptualization of the situation which is being described by a phrase or a proposition. Norvig and Lakoff (1987: 1948) define the shift of the

profile as '...cases where what is backgrounded in one sense is foregrounded in a minimally related sense.' For instance, *take* in a sentence *John took the book from Mary*, differ in the profile from *take* in *John took the book to Mary*, because 'the former profiles the movement of the book to the agent-recipient John, while the latter profiles the movement of the agent John to Mary's destination. (Norvig and Lakoff, 1987: 200)' *Mi-ru*-3 differs from *mi-ru*-2 in the content of the 'ACT is a part of C schema'. 'ACT is a part of C schema' for *mi-ru*-3 is defined as:

C=a conventional event to identify problems
ACT=TO PERCEIVE A VISUIAL IMAGE
ACT is a part of C.

Therefore, in a sentence *Mekanikku ga kuruma o mi-ta*, 'The mechanic examined the car,' C is a procedure that the mechanic performs to identify problems in a car, and the act of 'seeing' is considered to be a part of this procedure. The two factors discussed above, profiling of the result and alternation in the content of the 'ACT is a part of C schema' constitute the primary difference between *mi-ru*-2 and *mi-ru*-3. The semantic content of *mi-ru*-3 is:

mi-ru-3: to examine

LINKED TO: *mi-ru*-2

DIFFERENCE:
-Result is profiled
-C=a conventional procedure to identify problems

CONSEQUENCE: A identifies problems.

Example:

Mekanikku	ga	kuruma	o	mi-ta.
mechanic	NOM	car	ACC	see-PAST

'The mechanic examined the car.'

The analysis above shows that *mi-ru*-3 is not a minimal variant of *mi-ru*-2, i.e., the extension from *mi-ru*-2 to *mi-ru*-3 involves more than one difference. Nonetheless, it is clearly the most deviated sense from the central one as shown in the following diagram:

mi-ru-1----->mi-ru-2---->mi-ru-3
central---------->peripheral

It is important to note that all senses share the ACT (E perceives visual image), which is basically the sense of *mi-ru*-1, while no other sense shares the semantic content of *mi-ru*-3.

Now we are ready to analyze the data. When the prototypical sense of *mi-ru* and the object NP with the prototypical sense are configured in a sentence, it is well-formed. Consider the following sentence:

(1) Watashi wa sora o mi-ta. (1)
I TOP sky ACC see-PAST
'I saw the sky.'

The number in parenthesis that follows the sentence indicates the sense of the verb in each sentence, i.e., the central sense, *mi-ru*-1 (1), noncentral senses; *mi-ru*-2 (2) and *mi-ru*-3 (3). The object NP *sora* 'the sky' has the prototypical sense because it cannot be derived from other senses through metaphor or metonymy.

This is also the case for sentences with the central sense of polysemous object NPs[3] configured with the central sense of *mi-ru*. Consider the following sentences:

(2) Watashi wa terebi o mi-ta. (1)
I TOP TV ACC see-PAST
'I saw a TV (set).'

(3) Watashi wa kanja o mi-ta.(1)
I TOP patient ACC see-PAST
'I saw a patient.'

In example (2),*mi-ru* has the central sense and the polysemous object NP 'TV' is interpreted as its central sense, i.e., 'material object TV'. In example (3), *mi-ru* has the central sense (*mi-ru*-1) and the object NP is interpreted as the central sense (the appearance of the patient). The examples above indicate that the polysemes *terebi* 'TV' and *kanja* 'patient' are interpreted so that the prototypicality of *mi-ru* and the object NP are kept constant. This is an interesting phenomenon since these words are not normally considered to be polysemes, and it indicates that their interpretations are 'motivated' by the multiple meanings of the verb. I will come back to this point later, but for now, let us look at other cases of 'prototypicality preserving' with noncentral senses. Following are examples of polysemous object NPs which are interpreted as having nonprototypical sense when configured with the nonprototypical sense of *mi-ru*.

(4) Watashi wa terebi o mi-ta. (2)
I TOP TV ACC see-PAST
'I watched TV.'

(5) Watashi wa kanja o mi-ta. (3)
I TOP patient ACC see-PAST
'I examined a patient.'

In (4) above, the polysemous word *terebi* 'TV' is interpreted as referring to a 'TV program' (noncentral sense) rather than 'material object TV' which is the central sense. In (5), the object NP *kanja* 'patient' is interpreted to refer to the physical conditions of a person who is being examined (noncentral sense), and the verb bears *mi-ru*-3 sense. The examples above suggest that the preservation of prototypicality in a sentence yields well-formed sentences. As we can expect from this pattern, in some cases, when there is an inconsistency in the prototypicality of the object NP and *mi-ru*, an ill-formed sentence is rendered. Consider the following sentence:

(6) *Watashi wa sora o mi-ta. (3)
I TOP sky ACC see-PAST
'I examined the sky.'

(6) is an instance of ill-formed sentence. The verb has the noncentral sense *mi-ru*-3, and the object NP has the central sense.

So far, we have seen 'full-fledged' well-formed and ill-formed sentences, i.e., sentence which are full members of the categories 'well-formed' and 'ill-formed sentences'. However, the data did not always fall into one of these categories, and there are several instances that are less well-formed or less ill-formed than the ones analyzed above. The fact that the distinction between well-formed and ill-formed sentences is not clear-cut but graded indicates that the concept of well-formed and ill-formed sentences itself has what Lakoff (1987) calls a 'radial structure'. A category with the radial structure consists of a central member which is the prototype of the category and peripheral members as extension of it. Following are examples of less prototypical sentences:

(7)? Watashi wa sora o mi-ta. (2)
I TOP sky ACC see-PAST
'I watched the sky.'

(8)? Watashi wa terebi o mi-ta. (3)
I TOP TV ACC see-PAST
'I examined a TV.'

(9)? Watashi wa kanja o mi-ta. (2)
I TOP patient ACC see-PAST
'I watched the patient.'

Mi-ru in (7) has the noncentral sense and the object NP has the central sense. The oddness of this sentence is may be rendered by the inconsistency in the prototypicality of the constituents. In order for this sentence to be well-formed, contextual information is required, i.e., the agent should be watching the sky as a part of a conventional event. (8) is another instance where the sentence may be interpreted as ill-formed unless the listener has the information about the context in which this sentence occurs. More specifically, it requires additional information in order not to be interpreted as a sentence with a different meaning but with identical phonological strings. In this case, (8) is likely to be interpreted as (4) *I watched TV*, which is a prototypical well-formed sentence, unless contextual information is given. In other words, there is an asymmetry between these sentences which makes one of the interpretation more likely than the other, but not the other way around. This is also the case in (9), where the object NP has the central sense 'appearance' and the verb has the *mi-ru*-2 sense. If no additional information is provided by the context, this sentence would be interpreted as (3) *I saw a patient*, in which the central sense of *mi-ru* is configured with the object NP of the central sense. Such instances support the claim that the concept of well-formedness is a radial category.

The following list summarizes the analysis above. In the list, the first number indicates the central/noncentral distinctions for the object NPs (1-central, 2=noncentral, 1/2=central/noncentral in polysemous NPs), the latter the centrality of *mi-ru* (*mi-ru*-1=1, *mi-ru*-2=2, *mi-ru*-3=3). The underline indicates which sense of the polysemous NP is interpreted, e.g., 1/2=central and 1/2=noncentral sense:

(1) 1--1
(2) 1/2--1
(3) 1/2--1
(4) 1/2--2
(5) 1/2--3
(6) *1--3
(7) ?1--2
(8) ?1/2--3

(9) ?1/2--2

The summary above clearly shows that consistency in the prototypicality of constituents has an impact on the relative well-formedness of the sentence. Simultaneously, it reveals that there is a pattern wherein inconsistency in the prototypicality of the object NP and *mi-ru* renders ill-formed (indicated by *) or less well-formed (indicated by ?) sentences. Also, note that *mi-ru*-3 is most likely to yield ill-formed or less well-formed sentences, whereas *mi-ru*-1 yields well-formed sentences.

The analysis above reveals three patterns. First, all 'full-fledged' well-formed sentences are composed of *mi-ru* and object NPs of the same level of deviation from the central sense. For instance, if *mi-ru* is interpreted to have the central sense, the object NP has the central sense; if *mi-ru* has the noncentral sense, the object NP has the noncentral sense, and so on. Inconsistency in prototypicality was shown to yield ill-formed or less well-formed sentences than full-fledged well-formed sentences.

Second, the interpretations of polysemous object NPs, e.g., *terebi* 'TV' and *kanja* 'patient' tend to approximate the level of deviation that the verb shows. For example, *mi-ru*-3 induces the interpretation of the noncentral sense, while *mi-ru*-1 induces that of the central sense. In other words, the prototypicality of the verb 'motivates' otherwise monosemous words to be interpreted as polysemous ones.

Finally, the concept of well-formedness itself is a radial category with full-fledged well-formed sentence wherein the prototypicality of the constituents is kept constant.

The observation above indicates a possibility that language users utilize sentences within which the deviation level of the constituents is kept constant as 'cognitive reference points (Rosch, 1975)' for well-formedness in the comprehension and production of sentences.

In this study, I analyzed data from the view point of how prototypicality of lexical items influences well-formedness of the sentence as a whole. In the analysis, it was shown that the prototypicality of constituents, especially of the verb and object NPs fully reflect onto the well-formedness of the sentence. I also argued that the concept of well-formed and ill-formed sentences themselves have prototypical (central) members and nonprototypical (noncentral) members which are asymmetrically distributed within the category.

The findings of this study, I hope, have demonstrated that prototypes are so pervasive in our cognition that we make use of them not only at the level of the lexicon, but also at the sentence level. It is also possible that such patterns turn up at levels beyond sentences.

However, there is room for modification, particularly regarding the distinction between the prototypical senseand the other senses of polysemes since the nature of what counts as the prototype is relative to the category under consideration, in itself largely determined by the pragmatic or social context. For instance, it wouldn't make much sense to ask the question, 'Were you there for coffee the other night?' if the participants did not share any information about the prototypical location and time that they have coffee. In other words, an identified prototypical sense may be ad hoc unless such context is fully specified.

Although the data analyzed in the present study is by no means exhaustive and further investigation along this line with much larger data set are expected, I believe this study has posed several questions as to the nature of prototypes in our mental representations:

-Is this phenomena specific to Japanese, or is it universal?
-How far beyond the sentence level do we make use of prototypes in the comprehension and production of language?
-How these prototypes originate?
-What factors resolve the ambiguity of the polysemous verb which in turn, determines the interpretation of the object NPs?

Further investigation into these areas must be elaborated.

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Semantic change and restructuring in modern Korean: A Case of semi-grammaticalization

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1. Introduction

This paper discusses ongoing grammaticalization phenomena in contemporary Korean, with special reference to semantic shift and restructuring. Recent studies in this area (cf. Traugott 1982, 1989) have revealed that a cross-linguistic mechanism is at work in the path of a semantic-pragmatic change (i.e. unidirectionality). Traugott (1982) notes that the path of semantic change in grammaticalization is unidirectional in that the shift in meaning moves from propositional to expressive (via textual).[1] In this paper, I discuss two instances of this type of change using synchronic data from Korean--(i) The functional and morphosyntactic changes of *-canh* which derives from a negation marker *-ci anh* and (ii) the development of the epistemic causality encoded in the conjunctive suffix *-kiey*. The results from these elements will support the cross-linguistic mechanism of grammaticalization phenomena.

The data to be presented in this paper involve an early stage of grammaticalization in that changes are in progress in spoken standard Korean. While traditional linguists have tried to separate diachronic from synchronic studies of language, in doing so they often overlook the fact that language does not evolve instantly. Rather, the process is very gradual and occurs in a step-by-step fashion. Synchronic data which at first glance appear bizarre and incomprehensible, provide the traces of earlier diachronic states (Givon 1979:264). In this regard, the grammaticalization theory provides a bridge for the gap between synchronic and diachronic studies of languages.

The first example I am going to deal with involves the contraction phenomena. Specifically, the so-called 'long-form negation' *-ci anh* in Korean is commonly contracted to *-canh* in spoken Korean. I will raise the issue of whether the contracted form *-canh* is indeed merely a phonological or stylistic variation of its original form *-ci anh*. It has been often assumed that phonological contraction or merge does not trigger any change of information carried by its original form. However, as discussed in Kawanishi & Sohn (1993), there is a clear difference between the full form *-ci anh* and its contracted form *-canh* in terms of their semantic and syntactic functions.[2]

The second data I am going to discuss concerns a semantic shift observed in the conjunctive suffix *-kiey*. *-Kiey* occurs in two different contexts, as illustrated in (1) below.

(1) a. chayk-ul ssahatwu-*kiey*/*killay pang-i picop-ta.
book-ACC stack-KIEY room-NOM crowded-DEC
"The room is very crowded for stacking the books."

b. phyenci-ka chayksang wi-ey iss-*kiey*/killay ilkepo-ass-ta.
letter-NOM desk on-LOC be-KIEY read-PAST-DEC
"I read the letter, because it was on the desk."

In the above, the semantic and syntactic roles of *-kiey* in (1a) and (1b) are quite different. Syntactically, *-kiey* in (1a) functions as a main predicate of the argument structure, whereas such is not the case in (1b). Semantically, *-kiey* is used in (1b) to express a causal relationship, but in (1a) it is not. Note that *-kiey* is interchangeable with *-killay* for the causal meaning as in (1b), but that is not the case for (1a) where there is no causal implication.

The organization of this paper is as follows: First, I will show that a grammaticalization process is at work in both instances of *-canh* and *-kiey*. I suggest that these elements represent a case of semi-grammaticalization in that the grammaticalization is an ongoing process in modern Korean.[3] I will argue that the grammaticization process observed in *-canh* and *-kiey* involves pragmatic strengthening (cf. Traugott & Kŏnig 1991), contrary to previous claims. In the past, scholars believed that grammaticalization involves semantic weakening (or bleaching). For instance, Heine and Reh (1984) characterizes grammaticalization as evolution where linguistic units lose in semantic complexity, pragmatic significance, and/or expressive value. I will show that the case of *-canh* and *-kiey* serves as a counterexample to this claim in that these elements have gained a new interactional function which was not coded in their original forms. Second, I will show that grammaticalization of *-canh* and *-kiey* creates a new morpho-syntactic feature through syntactic restructuring. The syntactic reanalyis moves toward a sentence-final position, which represents various attitudes of the speaker in Korean (cf. H. Sohn 1986).

Unlike previous studies of grammaticalization which use data almost exclusively from written sources and isolated lexicons, the present paper uses data mainly from spontaneous discourse in standard Korean.

2. From negation to interactional marker (*-canh*)

2.1 Pragmatic strengthening

Kawanishi & Sohn (1993) have shown that *-canh* is developing into a new interactional marker from its original function as a negation marker. The contracted form *-canh* cannot be treated as a mere phonological reduction of *-ci anh*, because there is a sharp contrast between the two forms in terms of their semantic and syntactic functions. Unlike *-ci anh*, the contracted form *-canh* has strong interactional functions. *-canh* is typically used to mark common ground, shared information, or for seeking agreement. Consider by way of contrasting *-canh* and *-ci anh* in natural discourse.

(2) (Army story)
Up to this point, J has been talking about his ex-girlfriend who just married a military man. H, upon learning that the ex-girlfriend's husband is still in the army, jokingly suggests that J still has a chance to get his girfriend back.

1 S: thalyengha-myen ettekhallye-ku?
escape-if what happen-Q
"What if he (the husband) escapes from army?"
---> 2 H: kwunin-i-myen chongkilyu-lul kaciko iss-*canh*-a.
soldiers-be-if guns-ACC arry-CAHN-DEC
"He would carry guns. (As you know) all soldiers do."
3 mikwuk animyen hankwuk? US army-ya? kulem kwantwe.
U.S or Korea U.S. army-Q then forget it
"Is he in the U.S. army or Korean army? He is in the U.S. army? Then forget it."
4 S: camkkanman, mikwuk-eyse-n kyelhonha-myen
wait U.S.-at-TOP marry-if
---> 5 keki ttalaka-ci anh-a?
there follow
"Wait. Doesn't the wife follow the husband to where he is to be stationed in U.S. army?"
6 ku yeca-ka ku ccok-ulo, kulekkeya,
hat woman-NOM that place-to be like that
7 ama mikwuk-un kulelkkeya.
probably U.S.-TOP be like that
"That woman might go with her husband. It is probably true. In U.S. it is probably true."

Note in line 2 above that *-canh* is used to indicate the speaker's high certainty toward his belief. The speaker H is quite sure that the hearer would agree with him. The information H provides (i.e. 'soldiers have guns.') is thus not likely to be challenged. To put it another way, the speaker's belief about the hearer's' belief is very high (cf. Givon 1982). By contrast, *-ci anh* does not carry such a function. For instance, in S's utterance at line 5, *-ci anh* is used merely to confirm his own information. The speaker makes himself more vulnerable to possible challenges to his utterance. The uncertain response of S at line 6-7 confirms this, where *ama kelelkkeya* 'probably, it is true.' is used twice in a row.

When used as question and tag formation, the difference between the long-form negation *-ci anh* and the contracted form *-canh* appears to be very subtle. However, the data such as (2) above clearly indicate that the information marked by *-canh* is shielded from challenge from the interlocutor, whereas the one marked by *-ci anh* is vulnerable to it (cf. Givon 1982:101)[4]. In particular, in example (6) below, the information marked by *-canh* is nonchallengeable, since it belongs to the first person's past experience (i.e., the speaker's territory of information).

(3) (Army story)
S: na yeysnaley kwuntay ka-lyeko hay-ss-*canh*-a.
I before army go-in order to-PAST-CANH-DEC
"(As you know), I tried to go to army before."

In the context preceding this, S said that married soliders are paid more than unmarried ones. Another speaker H expressed some reservation about S's information. To reassert his claim, S says that the information comes from his own past experience of his attempt for enlisting in the army. Speaker S does not expect any challenge to his own experience.

The characteristic of *-canh* as a marker of commitment to the certainty of propositions is further supported by example (4) below. In example (4), speaker H presents reasons why she cannot leave Los Angeles in spite of the LA riot which took place before this talk.

(4) (Korean immigrants)

1 K: isa-lul ka-ko siph-un maum-un iss-nuntey
move-ACC go-COMP want-ATTR mind-TOP exist-but
2 nay-ka yenge-ka ttali-nikka
I-NOM English-NOM poor-because
3 kuliko tto ilehkey wuli-ka tongyangin-i-nikka
and also like this we-NOM Asian-be-because
---> 4 paykin-tul sahoy-eyse sal swu-ka eps-*canh*-ayo.
white people-PL society-at live COMP-NOM impossible-CAHN-DEC
5 mal-i thonghay-yo mwe ....
language-NOM understand-POL well
"I want to move (to a different state), but because my English is poor and because we are Asians, (as you would agree with me) I can't live in white society. I can't communicate and ...."

Note in the above example that *-canh* occurs with the epistemic causal marker *-nikka* 'because' twice in its preceding clauses. The occurrence of *-canh* with *-nikka*, which is very frequently observed in colloquial Korean including the presenta data, suggests that *-canh* is used by the speaker to gain agreement from interlocutors.

Since *-canh* marks information which is not likely to be challenged, the speaker expects an affirmative response from the hearer. This is illustrated in (5) below.

(5) (High school pregnancy)

---> H: public kotunghakkyo-ey kukey manh-*canh*-ayo.
public high school-at that many-CAHN-DEC
"As you know, there are many such cases in public high schools."
S: tangyenha-ci.

"Of course."

In the context preceding this, H and S talked about pregnancy at high schools. Notice after H's utterance (i.e. 'there are many cases of pregnancy at public high schools.'), S naturally shows an affirmative response (i.e. 'Of course'), thus supporting H's statement.

Pragmatic strengthening and subjectification:

What is commonly perceived among the above examples where *-canh* is used is that there is a semantic shift toward the strengthening of the speaker's belief (SEMANTIC/PRAGMATIC STRENGTHENING). According to Traugott (1989), pragmatic strengthening concerns strategies of negotiation of speaker-hearer interaction and articulation of the speaker's attitude. The contracted form *-canh* is used by the speaker to reassert his/her belief, and to mark the information nonchallengeable. Therefore, the speaker's subjective belief-state is strengthened.[5]

The interactional function of *-canh* is essentially the expression of the speaker's belief (high certainty) about the hearer's belief. The new meaning encoded in *-canh* is a grammatical manifestation of human efforts to evoke an active speaker-hearer interaction and to strengthen the expression of the speakr involvement.

To sum up, the contracted form *-canh* has developed a new interactional/discourse function which was not coded in its original, full form. The development of the new interactional function of *-canh* is motivated by cross-linguistic grammaticalization: The semantic shifts move from less personal to more personal, from less discourse-based to more dicourse-based and speaker-oriented (SUBJECTIFICATION). The meaning shift of *-canh* is viewed as SUBJECTIFICATION, which increases the speaker's own evaulation and his/her involvement in speech contexts.

2.2 Syntactic restructuring

-canh is in the process of undergoing morpho-syntactic changes as well as semantic changes. It has been pointed out by Kawanishi & Sohn (1993) that the syntactic context in which *-canh-* occurs is quite different from that of *-ci anh*. The analysis of spontaneous discourse has revealed that the full form *-ci anh* occurs in various types of constructions, such as embedded, conjunctive, and main clauses. By contrast, *-canh* is strictly limited to a sentence-final position. Kawanishi & Sohn (1993) have suggested that *-canh* has developed a new textual function as a sentence-final modal marker alongside the development of an expressive meaning. In the course of grammaticalization, the formal reduction of *-canh-* causes it to lose its ability to occur in various morphosyntactic categories. This leads the grammaticalized form *-canh-* to diminish in morphosyntactic

autonomy and finally limits its occurrence to a sentence-final position, causing restructuring.

Syntactic restructuring is typical of changes which occur in grammaticalization process. As discussed in Heine & Reh (1984), the more grammaticalized an element is, the less is its syntactic variability (i.e. syntactic fossilization).

Evidence of syntactic reanalysis is further observed in (6) where *-canh* occurs with a negation (double negation).
-canh is in the process of becoming fossilized as a fixed sentence-final modal marker. Note that the occurrence of *-ci anh* in (6) below in the place of *-canh* (i.e. *sangkwan-ul an ha-ci anh-ayo* 'they don't care about it.') is very unlikely.

(6) (Korean immigrants)

J: mikwuk-ey iss-nun emma appa-tul-un yelyetelp sal ihwu-myen
U.S.-at be-ATTR mom dad-PL-TOP 18 years after-when
---> sangkwan-ul an ha-*canh*-ayo.
interfere-ACC not do-CAHN-DEC
"American parents stop interfering when their kids reach 18."

Fossilized expressions such as (7) below indicate that the grammaticalization process is completed.

(7) iss-*canh*-ayo.
be-CAHN-DEC
"You know that."

More evidence of the syntatic reanalysis of *-canh* is observed in tense patterns. Consider example (8) below.

(8) a. Chelswu-ka o-ci anh-ass-eyo.
NOM come-CI ANH-PAST-DEC
"Chelswu did not come."
b. Chelswu-ka wa-ss-*canh*-ayo.
NOM come-PAST-CANH-DEC
"(As you know) Chelswu came."

In (8a), the long-form negation *-ci anh* occurs between the verb stem *o-* 'to come'and past tense *-ass-*, whereas in (8b)the contracted form *-canh* must be preceded by the past tense. This clearly indicates that syntactic reanalysis takes place alongside semantic change.

As for the chronological order of restructuring and pragmatic strengthening, I suggest that the latter precedes the former in that a functional change typically precedes a morphosyntactic one (cf. Heine & Reh 1984). As the negation marker undergoes pragmatic strengthening, it also undergoes morpho-

syntactic changes and as a result, a phonological reduction takes place. This process is illustrated below.

Grammaticalization of *-canh*:

Pragmatic strenghening > sentence-final modality > contraction
| | |
Functional process > morpho-syntactic process > phonological process

3. The development of epistemic causality (*-kiey*)

Another example of ongoing grammaticalization which involves both semantic strengthening and restructuring is observed in the conjunctive suffix *-kiey* ('in doing' 'because'). *-kiey* consisting of two parts--the nominalizer *-ki* and the locative particle *-ey*, shows a semantic shift from locative to epistemic causality. Example (9) has been taken from H. Sohn (1990).

(9) a. pi-ka o-*kiey* (killay) cip-ey iss-ess-ta.
rain-NOM come-KIEY home-at be-PAST-DEC
"I stayed at home because it rained."
b. *Chelswu-nun pi-ka o-*kiey* cip-ey iss-ess-ta.
Chelswu-TOP rain-NOM come-KIEY home-at be-PAST-DEC
"Chelswu stayed at home because it rained."

(10) oythwu-lul ip-*kiey* acik nemwu ilu-ta.
coat-ACC wear-KIEY yet too much early-DEC
"It is too early to put on a coat."

(9) has the semi-grammaticalized form *-kiey*, whereas (10) is an ungrammaticalized counterpart. The unacceptability of (9b) supports the assumption of the grammaticalization process of *-kiey*. The grammaticalized *-kiey* requires the subject of the main clause to be the speaker (cf. H. Sohn 1990), as illustrated in (9a). An ungrammatical sentence such as (9b) supports the subjectifcation process involved in *-kiey* because the semantic change increases speaker involvement.

The argument for the grammaticalization of *-kiey* is further supported by its morphological form. *-Kiey* is interchangeable with *-killay* in situations where causality is subjectively perceived by the speaker, as shown in example (9a) above. By contrast, the ungrammaticalized *-kiey* is not interchangeable with *-killay*, as examples (10) and (11) illustrate.

(11) ney-ka po-*kiey*/*killay ette-ni?
you-NOM see-KIEY how about-Q
"What do you think about it?"

Syntactically, the grammaticalized *-kiey* stands in contrast with the ungrammaticalized *-kiey*. Note that the ungrammaticalized *-kiey* as in (10)

functions as the main predicate of the argument structure, whereas the grammaticalized *-kiey* itself is not the main predicate of the argument structure. Rather, the grammaticalized *-kiey* is used to specify the speaker's claim or belief (specification of the speaker's attitude).

The process of meaning change in *-kiey* is from an external to internal situation (Traugott 1989) in that the semantic shift moves toward the speaker's own subjective and evaluative judgement, increasing speaker involvement (i.e. subjectification). Supporting evidence for this claim is provided by the fact that the causal *-kiey* indicates strong epistemicity/evidentiality. Consider the following discourse data.

(12) (Plastic surgery)

---> S: tto ecikanhi cal sayngki-ess-killay
and considerably good-looking-PERF-KILLAY
paywu-lo ppophi-ess-ul theyn-tey.
actors-as be chosen-PAST-ATTR DN-be-and
halwu achimey pyensinhay-se esaykhan seyang yeca kho,
one morning change-and strange western woman nose
esayskhan seyang yeca nwun-hako nao-kekun-yo.
unnatural western woman eye-with show up-MOD-POL
"And I presume that since they were already good-looking,
they were chosen as actors. But one day they suddenly transform
themselves and show up with unnatural western eyes and noses."

In the above, the speaker S is talking about plastic surgery, which is very popular among actors in Korea. Note that the information marked by the *-killay* clause provides the speaker's ground for believing the conclusion drawn in the following clause (i.e 'they were chosen as actors.'). There is no direct cause-effect relationship between the proposition of *-killay* and that of the subsequent clause.

Let us consider more examples below from spontaneous discourse.

(13) (High school talk)

T: aytul-i kulehkey ssu-killay molla-ss-ci.
kids-NOM like that use-KILLAY not know-PAST-SUP
"Since they were using it like that, I didn't know it."

(14) (Campus life)

Y: wenlay keki ilcali eps-ess-e.
originally there job not exist-PAST-DEC
"Originally, there was no job opening."
---> han tal ceney keki cali eps- ta-killay
one month ago there job not exist-DEC-KILLAY
nay-ka tolawa-ss-nuntey

I-NOM come back-PAST-and
"One month ago, they told me there was no job opening,
so I came back...."

Note that examples (13) and (14) do not express real-world (external) causals that can be regarded as true in the real world (Traugott & Konig 1991). Rather (13) and (14) express epistemic causals which describe the speaker's feeling/attitude toward the relationship of events.(cf. S. Sohn 1992). The use of *-kiey/killay* for the epistemic causality shows that the speaker by employing *-kiey* places his focus of interest on his subjective judgement or perception. The causal *-kiey* indicates the speaker's subjective evaluation, and hence, is basically speaker-oriented.

Furthermore, the epistemic nature of *-kiey* explains why *-kiey* is commonly used for hearsay expressions. For instance, *-killay* in (14) above *cali eps-ta-killay* 'they told me that there was no job opening.' expresses hearsay, marking the source information as being hearsay. Due to its epistemic nature, *-kiey/-killay* is normally not used for causality which is directly perceivable by both the speaker and the hearer. This is illustrated below.[5]

(15) a. *kongpwu-lul an hay-ss-*kiey* nakceyhay-ss-ta.
study-ACC not do-PAST-KIEY flunk-PAST-DEC
"Because he didn't study, he failed the class."
b. *umsik-ul kuphakey mek-ess-*kiey* chayhay-ss-ta.
food-ACC hurriedly eat-PAST-KIEY get indigestion-PAST-DEC
"Because he ate in a hurry, he got an indigestion.".

Note that these sentences become grammatical when the main clauses express modality such as *-keyss* 'I think/I guess', which expresses the speaker's evaluative attitude, as shown below.

(16) a. kongpwu-lul an hay-ss-*kiey* nakceyhay-ss-keyss-ci.
"I guess he flunked because he didn't study."
b. umsik-ul kuphakey mek-ess-*kiey* chayhay-ss-kess-ci.
"I guess he got an indigestion because he ate in a hurry."

The fundamental function of the grammaticalized *-killay* is to encode the speaker's affect, i.e. expressions of the speaker's emotive and subjective evaluation.

To sum up, the grammaticalization of *-kiey/-killay* shows a shift from locative ('in doing') to epistemic causal ('because'). The semantic change is also from an external to internal (evaluative) situation, and from a propositional to expressive function. As in the case of *-canh*, what is added in the process of *-kiey*'s grammaticalization is the strengthening of the expression of speaker involvement.

Syntactic reanalysis of *-kiey*:

I have shown that the grammaticalized *-canh* develops a new textual function as a sentence-final modal. Interestingly, *-kiey* shows a very similar path of morphosyntactic change: it develops a new textual function as a sentence-final modal. An example such as (17) below, which is taken from a title of a Korean drama, shows a case of a sentence ender *-kiey*.

(17) salang-i mwe-killay.
love-NOM what-KILLAY
"What is love after all?"

In (17), the main clause is omitted. In fact, the deletion of main clauses is very common in the diachronic change in Korean, as discussed in H. Sohn (1990).

4. Conclusion

While most previous studies of grammaticalization have focused on a diachronic process (e.g. Heine and Reh 1984, Bybee and Pagliuca 1987), the present paper discussed a synchronic change in contemporary Korean, using mostly conversational data. The synchronic data in this paper supports the unidirectionality theory of semantic change. The meaning shift observed in *-canh* and *-kiey* moves from an external to internal situation, thus expressing speaker's own evaluative judgement.

The examination of contraction provides us with some insight into the mechanism of functional and morphosynatactic changes. We have seen that what appeared to be a simple phonological contraction is in fact not so.[6] A careful study of the interactional contexts in which *-canh* occurs reveals that there is a consistent semantic shift toward the speaker's subjective attitude. (i.e. the speaker's subjective evaluation towards events or states in question.) The similarities in the path of grammaticalization between *-canh* and *-kiey* are explained by the cross-linguistic mechanism of meaning shifts.

The semantic shift discussed here is toward the strengthening of the speaker's subjective belief-state. As *-canh* and *-kiey* move through the process of grammaticalization, there is an increase in speaker involvement.

Syntactically, both *-canh* and *-kiey* are developing into a new sentence-final modal, causing restructuring. In particular, the contracted form *-canh* is frozen as a single unit, developing a new grammatical feature which was not coded in its original full form.

The patterns of the grammaticalization process above support the general tendencies of semantic-pragmatic change proposed by Traugott (1989 'Subjectification'). The direction of the semantic shift in the course of grammaticalization in Korean is from the objective to 'the speaker's subjective

belief state', from less to more informative, and from less discourse-based to more discourse-based.

NOTES

List of Abbreviations:

ACC = Accusative	POL = Polite
ATTR = Attributive	PL = Plural
COMP = Complementizer	NOM = Nominative
DEC = Declarative	Q = Question
LOC = Locative	SUP = Suppositive
TOP = Topic	

1. According to Traugott (1982), the reverse direction is very unlikely to take place in any languages, as well attested by many languages.

2. For instance, consider the following example:

(i) Chelswu-nun o-ci anh-ass-eyo.
TOP come-CI ANH-PAST-DEC
"Chelswu did not come."

(ii) Chelswu-nun wa-ss-*canh*-ayo.
come-PAST-CANH-DEC
"(As you know) Chelswu came."

With a falling intonation (i) is a negative statement (i.e. "Chelswu did not come."). With a rising intonation (i) functions as a negative question (meaning, "Didn't Chelswu come?"). The latter seems to be the source of the grammaticalization of *-canh* as in (ii).

3. The term semi-grammaticalization is introduced in H. Sohn (1990).

4. The notion of challengeability is based on Givon (1982). See Kawanishi (forthcoming) for more deatails.

5. Traugott & König (1991) argues against 'grammaticalization as bleaching'. According to their view, "semantic change in the early stages of grammaticalization does not necessarily involve bleaching; on the contrary, it involves specification achieved through inferencing." This view is further supported by the Korean data under discussion.

6. Semantic shift which is triggered by a contraction is very common in contemporary Korean. For instance, it is well noted that the deletion of *-ko ha-* causes various semantic shifts, as discussed in H. Sohn (1986).

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Japanese *-te shimau* examined in the light of the 'Romance reflexive' system

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1 Introduction

There have been a number of recent studies on the Japanese verbal auxiliary *-te shimau* (Ono 1992, Ono & Suzuki in press, Yoshida this volume), all of which focus primarily on certain aspects of speaker affective stance and grammaticization.

This paper will propose an alternative perspective on *-te shimau*[1] by drawing a semantic and pragmatic correlation of this verbal construction with a certain type of reflexive found in Romance languages. In so doing, this paper will also propose a path of grammaticization different from that posited by Ono (1992) and Ono and Suzuki (in press), in an attempt to elucidate with more precision the notions of both 'speaker's attitude' (Ono and Suzuki in press) and 'subjectivity' (Yoshida this volume) as they relate to this auxiliary form.

2. Background

As is well known, the Japanese auxiliary verb *-te shimau* is derived from the transitive verb *shimau* meaning 'to finish' or 'to put something away', as in the following examples from the Koojien (1990) dictionary:

(1) *shigoto o shimau* *finish*
work ACC finish
'to finish or stop working'

(2) *omoide o mune ni shimau* *put away*
fond memory ACC heart LOC put away
'to store a fond memory in one's heart'

Shimau can also appear in a verbal gerundive construction, i.e., V1-te form + V2 (*shimau*), depicting among other relationships, that of temporal sequence, as in the following example from Martin (1975). Here, it is clear that this occurrence of *-te shimau* in (3) expresses the identical meaning as the lexical meaning of the main verb *shimau*, in (1) and (2) above.

(3) *Huyumono o zenbu aratte [sorera o] simatta*
winter things ACC all wash-TE [them ACC] put away
'I washed all the winter clothes and put them away' [Martin 533:4]

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[1]This particular paper addresses only the correlation between Japanese *-te shimau* and the 'Romance reflexive'. A concurrent study is also underway by this author which includes the Korean verbal auxiliary *-a/e pelita,* in which claims very similar to the ones involving *-te shimau* throughout this paper will also be made with respect to *-a/e pelita.*

As an auxiliary verb, *-te shimau* is a marker of terminative aspect, indicating the termination or end point of some action or some event (Soga 1983). This paper will maintain that the primary semantic notion signalled by *-te shimau* is that of completion/totality in accordance with Martin (1975), Teramura (1982), and Soga (1983). Example (4) from Soga illustrates this notion.

(4) *Kono hon o kinoo yonde shimatta.*
This book ACC yesterday read-TE SHIMAU-PST
'(I) read this book through yesterday' [Soga 166:69b]

As pointed out by a number of linguists (Alfonso 1964, Martin 1975, Teramura 1982, Soga 1983, Makino and Tsutsui 1986, Ono 1973), events marked by the verbal auxiliary *-te shimau* may also imply a sense of irreversibility of some action, the lack of speaker's control over some situation, and/or the automatic occurrence of some action or event, in addition to the core notion of completion, thus serving as a grammatical vehicle for expressing an array of emotions from regret, to pride; from guilt to happiness.

Examples (5) and (6) excerpted from Teramura (1982) illustrate how *-te shimau* is used to express various aspects of speaker attitude, with (5) indicating regret and (6) indicating what Teramura calls a feeling of *'shimeshime'*, the type of excitement that accompanies some windfall:

(5) *Damatte ireba yokatta no o, kawaisoo na koto o....hanashite shimaimashita no ne. Sonna tsumori wa nakatta n desu keredo.*

'If only I had kept my mouth shut... I said a cruel thing to you.
-TE SHIMAU
That was not my intention.'
[Teramura 154:109]

(6) *Chokin no genzai daka ga 92,000 en ni natchatta.*

'The current balance in my savings account reached 92,000 yen.'
-TE SHIMAU
[Teramura 155:112]

It is important to note in this regard that, contrary to some previous accounts, when *-te shimau* does convey aspects of speaker attitude or affective stance, it is not strictly a negative attitude. Teramura uses the utterance in (6) to illustrate the use of *-te shimau* in contexts where there is no sadness, regret, nor any other negative feeling; rather what this auxiliary is signalling here, according to Teramura, is the speaker's reaction to some unexpected happenstance.

Ono (1992) examines *-te shimau* and another related verbal auxiliary *-te oku* from the standpoint of grammaticization. In the case of *shimau*, Ono posits a grammaticization from the lexical verb to its current auxiliary form, the latter of which developed three grammaticized uses, i.e., frustative, perfect, and evidential/non-volitional.

Ono and Suzuki (in press) examine *-te shimau* in oral discourse and have categorized all tokens of its occurrence into the following list of pragmatic meanings: 'inability to undo', 'automatic', 'speaker's negative attitude', and 'speaker's guiltily positive attitude'. One of the basic claims of the Ono and Suzuki analysis is that these four pragmatic meanings have been grammaticized from the meaning of 'to put away'/'to finish' from its lexical verb *shimau*. In this respect, they hypothesize a particular order of development, with 'inability to undo' and 'automatic' each being equally close semantically to the original lexical meaning[2]. 'Speaker's negative attitude' and 'speaker's guiltily positive attitude' seem to follow consecutively from the meaning of 'inability to undo'.

Yoshida (this volume) considers *-te shimau* as a purely optional morpheme, claiming that its use falls exclusively under the rubric of subjectivity. This analysis regards all tokens of *-te shimau* to be motivated to some degree or another by a violated expectation. Yoshida's hypothesis is limited to a designated set of oral narrative data (both story recall and personal) and she seems to restrict her claim of violated expectation as applicable to the genre of oral narrative only.

3. *-Te shimau* in Japanese vs. the reflexive in Romance

As noted in section 1 above, this paper will provide an alternative analysis of both the semantic and pragmatic functions of *-te shimau* as it is used in modern Japanese by drawing a crucial parallel with certain aspects of the 'Romance reflexive', using examples from both Spanish and French. However, while both modern Spanish and French exhibit the 'Romance 'reflexive phenomenon, Spanish does so to a far greater degree, providing the strongest evidence from among Romance languages in general for viewing *-te shimau* as a 'Romance' reflexive type marker.

3.1 The 'Romance reflexive'

The 'Romance reflexive' differs from a 'true' reflexive and a 'true' reciprocal in the following general way: 'True' reflexives and reciprocals have overt accusative objects, such that the subject and the object are co-referential as in (7) a) and b):

(7) a) *(Yo)* *me* *golpié*
I (SUB) me (OBJ/RFLX) hit PAST
'I hit myself' **true reflexive**

---

[2]The following is a reproduction of the grammaticization model for *-te shimau* posited by Ono and Suzuki (1992):

put away/finish > inability to undo > speaker's negative attitude > guiltily positive attitude
> automatic

b) *(Ellos)* *se* *ven*
they (SUB) them (OBJ/RFLX) see PRES
'they see each other'[3] **true reciprocal**

The 'Romance reflexive', on the other hand, has no obvious direct object, as illustrated in (8):

(8) *Se* *acabó* *la* *gasolina*
(REFLX) run out PST the gasoline (SUBJ)
'The gas ran out' or 'We ran out of gas'.

With 'Romance reflexives', then, according to Garcia (1975:3), 'instead of a direct object referring back to the subject, we have no direct object at all; the verb, correspondingly, is "intransitive", rather than the "transitive" of the regular reflexive.' The notion of transitivity (cf. Hopper and Thompson 1980) as it applies to the 'Romance reflexive' will also play a crucial role in the explication of the verbal auxiliary *-te shimau.*

3.1.1. A note on 'Middles':

In discussing the distinction between the 'true' reflexive and the 'Romance reflexive', Garcia also mentions that traditional linguistic accounts consider the 'true' reflexive as involving the active voice and transitive verbs, while the 'Romance' reflexive involves the 'middle voice' (cf. Lenz 1935). While Kemmer (1988) has also shown a strong connection between the 'middle voice' and the 'Romance reflexive', this paper will use the terminology of 'Romance reflexive' for the majority of instances referring to the phenomenon which compares *-te shimau* and the 'Romance reflexive', since Japanese has its own type of 'middle system' that cannot be attributed in whole to the construction of *-te shimau.*

For the purpose of this paper, the terminology of 'middle' will be used in the broadest sense as designated by Lyons (1968:373): 'the "action" or the "state" affects the subject of the verb or his interests', with some slight modification. Since it will be shown in Section 4 that *-te shimau* is an aspectual marker which resists a stative reading, the definition of middle for this version of the paper will be even further simplified to indicate that the 'action in question affects the subject of the verb.'

3.2 Intransitive verbs--motion: 'to go', 'to fly'

While *-te shimau* may be applied to a wide range of verbs in Japanese, there are a limited number which tend to attract this auxiliary far more frequently than others. The verb *iku* ('to go') is one such verb. Examples (9) a) and b) illustrate the basic semantic difference between the bare main verb *iku* with no auxiliary and *iku* with *-te shimau* attached.

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[3]This sentence can also be interpreted as a true reflexive, meaning 'they see themselves (e.g., in the mirror'). In any case, the co-reference between subject and object still holds, as evidenced in the example.

(9) *Imamura-san wa doko ni iru n desu ka?* Where's Mr. Imamura?

a) *Moo gakkoo ni ikimashita yo.* He's already gone to school.
IKU PST

b) *Moo itte-shimaimashita yo.* He's gone/He left.
IKU-TE SHIMAU PST

(9a) mentions Mr. Imamura's destination, while (9b) indicates simply that he has gone and is no longer here. This use of *iku* + *-te shimau*, in contrast with *iku* only, is considered by Alfonso (1966) as an obligatory usage in order to differentiate the two types of motion: 'going to some goal destination' vs. 'going away'/'leaving', i.e., 'completely absenting one's self from some source location.'

A parallel semantic distinction also exists in Romance languages, as illustrated below with examples from Spanish and French. Note that the meaning change from 'to go' vs. 'to go away'/'to leave' is accomplished by adding a reflexive marker in each case.

(10) Spanish:

a) 'to go'	*ir*	*va a la escuela.*	'(She) goes to school.'
b) 'to leave'	*irse*	*se va.*	'(She)'s leaving.'

(11) French:

a) 'to go'	*aller*	*Elle va à l'école*	'She goes to school.'
b) 'to leave'	*s'en*[4] *aller*	*Elle s'en va.*	'She's leaving.'

In examples 9a), 10a), and 11a), the combined notion of 'going' + 'destination' is relevant. In 9b), 10b), and 11b), what is relevant is simply that the subject is gone from the immediate area under discussion. Thus, all of the b) utterances distinguish themselves from their a) counterparts in terms of an aspectual difference as well as a deictic one. 9b), 10b), and 11b) all signal a change of state within a motion event, referring not only to the end point of the action of 'going' but also to the irrelevance of an explicit or implied destination.

It would appear, therefore, that in all three languages the notion of directionality is a crucial element in the expression of motion using the verb 'to go', with the destination being either explicit, inferred, inferable, or implied in order for such utterances containing these verbs to be grammatical. Consider 12a), b) and c) below in which no mention whatsoever, either explicit or implicit, exists with regard to destination:

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[4]In French, the particle *en*, literally meaning 'from there' (i.e., direction away from a source) is obligatory with only certain verbs. Kemmer (1988:218) posits that 'it may be that the original overtones of change of state, perhaps shared by *se* and *en*, came in time to be expressed by *se* alone, and that the directionality so transparently provided by *en* came to be associated with and expressible by *se* in these constructions.'

(12) (for the restricted context in which no destination is expressed, implied, etc.)

J: a) **Moo ikimashita* '(He) already went.'
S: b) **Ya fué* '(He) already went.'
F: c) **Il est déjà allé* 'He already went.'

Interestingly, the identical distinction holds for the imperatives in all three languages, as illustrated in (13) below:

(13) A) Japanese
a) *paatii ni ike* 'Go to the party'
b) **Ike* (destination not expressed/implied)
c) ***Itte shimae*** 'Go away'; 'Get outta here'

B) Spanish
a) *Ve a la fiesta* 'Go to the party'
b) **Ve* (destination not expressed/implied)
c) ***Vete*** 'Go away'; 'Get outta here'

C) French
a) *Va à la soiree* 'Go to the party'
b) **Va*[5] (destination not expressed/implied)
c) *Va t'en* 'Go away'; 'Get outta here'

Many of the same conditions surrounding the verb 'to go' also apply across the three languages for the verb 'to fly', although the grammatical requirement involving directionality as evidenced with the verb 'to go' is less stringent, as will be demonstrated in Section 6.2.1.

(14) Japanese
a) *tobu* 'to fly'
b) ***tonde shimau*** 'to fly away' (i.e., *-te* form of *tobu* + *shimau*)

(15) Spanish
a) *volar* 'to fly'
b) *volar**se*** 'to fly away'

(16) French
a) *voler* 'to fly'
b) ***s'en voler*** 'to fly away'

Again, without the marker *-te shimau* in Japanese or the reflexive markers in Spanish and French, the verbs in 14a), 15a) and 16a) all designate the act of

[5]The expression *vas-y* (formal, *allez-y*) is perfectly grammatical and occurs frequently in spoken contexts; However, note that the *y* (signalling direction towards a goal) would still be required in order for the utterance to be grammatical.

flying only. There is no indication of either change of state or beginning/end points relative to this motion.

In both verbs, 'to go' and 'to fly', as in many other verbs of motion in the three languages, the difference between the bare verb and its counterpart marked by either the reflexive in Romance languages or *-te shimau* in Japanese is an aspectual one, with a strong relationship to spatio/temporal deixis. In all cases, the notion of completion/totality becomes salient with *-te shimau* and the 'Romance reflexive' marker.

Additionally, it must be noted here that in the cases of both Japanese and Spanish, the versions given in (14) b) and 15) b) both express a kind of non-volitionality. In order to express the notion of 'to fly away' involving a volitional entity, both languages seem to require the addition of the verb 'to go' as in the Japanese: *tonde **itte** shimaimashita* and the Spanish: *se **fué** volando.*

3.3 Lexically transitive verbs: 'to eat', 'to take', 'to steal':

A similar phenomenon involving completion/totality occurs with such transitive verbs as 'to eat', 'to take', and 'to steal' in both Japanese and Spanish. As for French, the reflexive does not act in the same way with this type of verb.

While these verbs are lexically transitive in the sense that they involve at least 2 participants, bear in mind that the subject and object of such sentences are not co-referential, i.e., *comer + se* does not mean 'to eat oneself'. In these cases, the addition of *-te shimau* in Japanese or the reflexive in Spanish intensifies the lexical meaning for each respective bare verb as follows: 'to eat' > 'to eat up', 'to take' > 'to take away', 'to steal' > 'to steal (emphatic), as in (17) - (19).

	Japanese	Spanish	
(17)			
	a) taberu	comer	'to eat'
	b) tabe**te-shimau**	comer**se**	'to eat up'
(18)			
	a) toru	llevar	'to take'
	b) totte **shimau**	llevar**se**	'to take away'
(19)			
	a) nusumu	robar	'to steal'
	b) nusun**de shimau**	robar**se**	'to steal ' (emphatic)

4. 'The Transitivity Hypothesis'

As noted in earlier sections, the notion of transitivity is a crucial one in explicating both *-te shimau* and the 'Romance reflexive'. In their seminal work, Hopper and Thompson (1980) re-examine the traditional notion of transitivity, dissecting it into 10 component parts. In this model, each of these components contribute proportionally to a scalar conception of transitivity, which replaces the traditional dyadic distinction of transitive vs. intransitive. Accordingly, an action

or event might be more transitive or less transitive, depending upon the quality of each component.

For example, the following components represent a cardinally transitive verb, i.e., a verb which ranks 'high' on the transitivity scale in all 10 categories: A) 2 or more participants, B) action, C) telic, D) punctual, E) volitional, F) affirmative, G) realis, H) agency, I) object is totally affected, J) object is highly individuated. An interesting fact is that the lexical verb *shimau* 'to put away' / 'to finish' is just such a cardinally transitive verb.

Hopper and Thompson illustrate how the notion of punctuality (item D in the above paragraph) contributes to the transitivity of an event by citing two examples from Spanish.

(20) a) Juan durmió (toda la noche).
slept all the night
'John slept (all night)

b) Juan SE durmió (*toda la noche)
slept all the night
'John went to sleep (*all night). [Hopper & Thompson 266:46]

(21) a) La paja ardió (toda la noche)
the straw burned all the night
'The straw burned all night'

b) La paja SE ardió (*toda la noche)
the straw burned all the night
'The straw caught fire (*all night) [Hopper & Thompson 266:47]

In these two examples, Hopper and Thompson illustrate how the reflexive marker *se* in Spanish denotes a punctual action (D above) 'as opposed to a non-punctual state', increasing the transitivity of the *se* marked clause over the non *se* marked one.

What is extremely interesting in this regard is the following: Not only are the two verbs used in these examples, *dormir* > *dormirse* and *arder* > *arderse* prime examples of the 'Romance reflexive' in Spanish, they also convey the identical semantic distinction in Japanese between *neru* 'to sleep' > ***nete shimau*** 'to fall asleep' and *yakeru* 'to burn' and ***yakete shimau*** 'to burn up'. Thus, it is not only the feature of punctuality that is involved with this phenomenon, there is also a definite increase in telicity (C above), with an orientation to the endpoint of the action). Interestingly, *-te shimau*, just like *se*, would yield an equally ungrammatical reading to the Japanese version of (21) b) as illustrated in (21) b'):

(21) b') wara ga yake**te** **shimaimashita** (*hito ban juu)
straw SUBJ burn-**TE** **SHIMAU PST** (*one night through)
'The straw burned up (*all night long).

This fact underscores the findings in Section 3.2 that *-te shimau*, like the reflexive *se* indicates some type of change of state.

Furthermore, in analyzing these verbs generally as 'Romance reflexives', and remembering Garcia's characteristic of such as having no co-reference between subject and object, we may find it necessary when analyzing this type of verb to alter item I on Hopper and Thompson's list of components to read: 'Total affectedness of the subject' (rather than 'total affectedness of the object), bearing in mind, too, the definition we are using for the 'middle voice' as given in 3.1.1.[6] By applying such alteration, the claim that these forms result in an increase in transitivity is all the more substantiated.

Another componential category in which a change takes place in these examples is that of volitionality (E above), only here, it is a decrease, not an increase which occurs. Using the verb pair *dormir* > *dormirse* and *neru* > ***nete shimau***, both of which mean 'to sleep' > 'to fall asleep', one can sense a feeling of non-controllability and non-volitionality behind the event, in addition to the telicity, punctuality, and the total affectedness of the patient.

5. A new model for grammaticization of *-te shimau*

As noted in Section 2, the grammaticization model hypothesized by Ono and Suzuki (in press) begins with the lexical verb *shimau* and its meaning of 'to put away' / 'to finish'. According to their model, the pragmatic meanings of 'inability to undo' and 'automatic' derive most closely from the lexical meaning, with the speaker's explicitly attitudinal meanings deriving from the meaning of 'inability to undo'. Their model contains at least 2 major drawbacks: One is that it seems rather difficult, if not impossible to assign tokens of *-te shimau* from the data into one particular category or another, since there appears to be no category with discrete limitations which would enable one to accomplish such a task. The second, and perhaps more crucial one, is that all categories in their model relate somehow to speaker attitude or affective stance, and there is no provision whatsoever for objective uses of the auxiliary. Conversely, the model does not account for the fact that the lexical verb *shimau* can be used in a highly emotionally charged way, hence, subjectively as in the utterance *Shimatta!*, meaning something similar to 'Dammit!', since the model in question only allows for a grammaticization of subjective uses once it has reached the stage of being an auxiliary verb.

A partial schematic representation of the alternative model that this current study proposes is given in 22):

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[6]Miyagawa (1989:41-42) illustrates this same phenomenon involving the thematic role of the subject as Theme rather than as Agent in his discussion of ergative verbs. According to Miyagawa, this 'Theme subject' NP actually originates in the object position as a constituent of the VP.

(22) Partial alternative grammaticization model for *-te shimau*

PROPOSITIONAL MEANING	>	EXPRESSIVE MEANING
	('OBJECTIVE')	('SUBJECTIVE')
main verb	auxiliary	auxiliary
shimau	***-te shimau***	**-te shimau**
COMPLETE	COMPLETION	COMPLETION
PUT AWAY	TOTALITY	TOTALITY > HYPERBOLE
FINISH		

As the above model illustrates, there is a near identical path of grammaticization for both objective and subjective uses for *-te shimau.* The implications of this model are twofold: 1) While it may be tempting to attribute each and every use of *-te shimau* in particular discourse types and genres to a subjective reflection of the speaker's affective stance, it has been noted in Section 3.2 that not every use of *-te shimau* in spoken and/or written discourse is optional, nor is its every use subjective. Consequently, this model provides for the grammaticization of the *-te shimau* auxiliary first into an objective use and then into a subjective one, following Traugott's (1989:35) claim that 'meanings tend to become increasingly based in the speaker's subjective belief state/attitude toward the proposition'. 2) This alternative model bases itself on the core semantic notion of COMPLETION for the lexical verb *shimau*, which allows for a more scalar interpretation of the grammaticized auxiliary, with some usages being unequivocally objective, some unequivocally subjective, and an entire range of usages in between. Accordingly, this model also allows for certain dialectal tendencies (as noted by Teramura 1982) in which speakers tend to use (or overuse) *-te shimau* for the purpose of intensification, vividness, etc. in exceedingly high frequencies; much like the English 'totally' used informally among young people as in 'My dad totally freaked when I asked him to borrow his car'.

5.2 OBJECTIVE COMPLETION / TOTALITY

As noted above there are cases in which the verbal morpheme *-te shimau* as well as the 'Romance reflexive' marker are obligatory from a purely grammatical standpoint (examples 9 through 13) and from a purely semantic standpoint (examples 14-19). In all of these instances, as we have mentioned, there is a certain notion of totality involved, i.e., 'to go away', 'to fly away', in the sense that the entity in question is completely gone from the source location. Thus, from an unequivocally objective viewpoint, the type of deixis involved in this type of utterance containing either *-te shimau* or the 'Romance reflexive' marker, would be a purely spatio-temporal deixis rather than an emotional one.

(23) below illustrates another type of objective use of *-te shimau*, which also indicates the notion of totality. This example is excerpted from a selection of the cooking school portion of *'Shufu no isshuukan no danwa no shiriyoo'(Data from a week in the life of a housewife)* Ide (1984:139) :

((preparing a dessert))

(23) A: *nama kuriimu irete ii desu ka zenbu?*
raw cream pour in-TE alright COP Q all of it
'can I pour in all of the sweet cream?'

B: *zaatto irete* ***shimatte*** *kekko desu*
all at once put in-**TE** **SHIMAU** splendid COP
'Sure, pour it all in'

Note the adverb *zenbu* 'all of it' in speaker A's utterance and the onomatopoetic adverb *zaato* 'all at once' in B's utterance, both of which explicitly underscore the totality notion. The utterance constitutes an instruction by the cooking school teacher to pour the entire contents of the sweet cream into the mixture. Any argument here insisting on the speaker's attitude as a motivation for *-te shimau* would be an extraordinarily fragile one. An argument insisting on some violation of speaker expectation would be impossible.

5.3 SUBJECTIVE COMPLETION / TOTALITY

Item (24) below provides the schematic representation of the remainder of this model which is based on the notions of completion and totality but from a subjective viewpoint, and is intended as a right-branching supplement to the schema shown in (22):

(24) Grammaticization model of *-te shimau* (continued)

> **EXPRESSIVE MEANING**
> **('SUBJECTIVE')**
> COMPLETION
> TOTALITY > HYPERBOLE
> irreversibility
> spontaneous occurrence > lack of control over agent (other)
> breaking resistance > lack of control over experiencer (self) > winds up doing
> emotional expressions (both positive and negative)
> unexpected occurrences
> no alternative for future action
> utter lack of alternative resulting from completed action

This model in its entirety is intended to subsume the models as well as the interpretations of meanings and motivations of the *-te shimau* auxiliary proposed by Ono (1992), Ono & Suzuki (in press) and Yoshida (this volume). The following sections will demonstrate the model using various data from both Spanish and Japanese.

6. The data

In an attempt to conduct an in-depth study of the auxiliary verb *-te shimau* and its relationship to the 'Romance reflexive' as well as a study which succeeds in projecting *-te shimau* from both objective and subjective perspectives, two basic types of data were used: One children's story for Japanese, Spanish, and English and oral narratives in both Japanese and Spanish.

Because of an obvious parallel in the story line with some of the grammatical features surrounding *-te shimau* and the 'Romance reflexive', the first data set consists of the story of "Goldilocks and the 3 Bears", with a Japanese version, "Sanbiki no kuma", and a Spanish version, "Ricitos de oro y los tres osos".

The second data set consists of two types of oral narratives in both Japanese and Spanish, i.e., a) the 'Pear' narratives (which are story recall narratives) and b) personal narratives. For the Japanese data in both cases, 19 of the existing 'Pear' narratives by Clancy (1980) were used for a), and 11 of the existing Iwasaki (1988) narratives were used for b). In the case of Spanish, since no appropriate oral data were available, new data for both a) and b) have been and continue to be collected and transcribed for the purpose of this study. At the time of this writing, the Spanish data consist of 9 'Pear' narratives and 4 personal narratives.

The results that will be presented in the following sections represent preliminary results only. More data are needed in both Japanese and Spanish, and since the study will also be carrying over to Korean, corresponding Korean language data will also be collected, transcribed, and analyzed.

6.1 "Goldilocks and the 3 Bears"

While there are a far greater number of reflexive tokens in the Spanish version, there are 5 occurrences which parallel both the objective and subjective types of usages of *-te shimau* in Japanese. The Japanese story contains a total of 6 tokens of *-te shimau* :

(25) a) Spanish:
- (2) *comerse* 'to eat up' [Goldilocks ate up baby bear's porridge]
- (1) *romperse* 'to break' [baby bear's chair broke when G sat in it]
- (1) *lastimarse* 'to get hurt' [G didn't get hurt after she fell from chair]
- (1) *dormirse* 'to fall asleep' [G, in baby bear's bed]

(25) b) Japanese:
- (1) ***yorokonde shimau*** [7]'to be delighted' [G, when saw bears' porridge]
- (2) ***tabete shimau*** 'to eat up' [G ate up baby bear's porridge]
- (1) ***ochite shimau*** 'to fall down' [G, when sat in baby bear's chair]
- (1) ***nemurikonde shimau*** 'to fall fast asleep' [G, in baby bear's bed]
- (1) ***nuite shimau*** 'to break the bottom out of' [G, re: baby bear's chair]

[7]It might be interesting to note that this verb also has a counterpart in Spanish, *alegrarse*, which is expressed by using the reflexive.

What each of these 11 verb tokens share, at least minimally, is the following: 1) notion of totality, 2) punctual action as opposed to a non-punctual state, and 3) telicity, with an orientation toward the termination/end point of the event. One can begin to see, in examining just this small sampling of verbs, that a progression along a subjectivity scale is, in fact, plausible, if not altogether necessary. Those verbs in which the notion of totality is the strongest, i.e., in the case of *comerse* and ***tabete shimau*** ('to eat up'), where the porridge was in fact totally consumed and where actual visible proof existed (i.e., all of the bowls were full at the time when the bears went out for a walk, and only the baby bear's was empty by the time they came home), could be construed as leaning heavily toward the objective side of the continuum. On the other hand, a verb like *yorokonde* ***shimau*** (from *yorokobu* 'to be delighted'), in which the notion of totality is implied but certainly not visible nor in any way provable, would seem to lean heavily toward the subjective side of the continuum; not even mentioning the fact that the lexical meaning of this verb is also extremely subjective.

6.2 Oral Narratives

6.2.1 Objective *-te shimau*

As noted in Section 6, the Japanese oral narrative data consist of the story recall 'Pear' data by Clancy (1980) and the personal danger-of-death narratives by Iwasaki (1988). An analysis of 19 Pear narratives yielded a total of 106 tokens of *-te shimau*. The 11 personal narratives yielded a total of 51.

For the Pear narratives, of the 106 total tokens, a full 35% involved some form of the verb *iku* 'to go', as in the following example:

(26) ((From narrative #1))
booshi ga tobasareta wake, koronda toki ni ne? a sono...
...motte kichatta otoko no ko no..
...de sono otoko no ko ga ***itchau*** *n da kedo*
and that boy SUBJ go-**TE SHIMAU** PRT cop PRT

'his hat was blown of when he fell, right?, so the boy brought it back...
and then that boy **left...**'

Note that this very same utterance, without *-te shimau*, would yield an ungrammatical Japanese reading, as in (26') [even though the reading in English does not sound too bad]:

(26')...**de sono otoko no ko ga* *iku n da kedo*
and that boy SUBJ go PRT cop PRT
'and then that boy goes...'

Thus, in response to Ono and Suzuki (in press) and Yoshida (this volume), it must be made clear that the notion of deixis in these and many other examples pertains primarily to a spatio/temporal deixis rather than to some type of emotional

or speaker-centered deixis, as in the Benveniste (1971) framework of subjectivity or to an S perspective, from the Iwasaki (1993) framework. A claim that this use is motivated by 'violated expectations' or that its meaning is somewhere near 'inability to undo' or 'the speaker's negative attitude', would be substantially weakened by this one basic principle of Japanese grammar, among other factors. Utterances like those in (26) should rather be considered as leaning more toward the objective side of the subjectivity continuum.

As noted in Section 3.2 involving the verb 'to fly' and its counterparts in the three languages, while the verb 'to go' obligatorily requires some type of directionality, the verb *tobu* 'to fly' in Japanese does not, as noted in the following examples. Bear in mind that the verb form in question in (27) is *tobu* **-TE** form + ***shimau***, while the form in (27') is simply the bare verb *tobu*, both of which are grammatically acceptable:

(27) ((from narrative #3))
...korogachatta toki ni, booshi ga tonjatta n da.
tumble-TE SHIMAU PST when TM hat SUB fly-**TE SHIMAU** PST PRT cop
'when he fell, his hat flew away'

(27') *...korogatchatta toki ni, boshi ga tonda n da.*
tumble-**TE SHIMAU** PST when TM hat SUB fly PRT cop
'when he fell, his hat flew'

Since an opposition in the meanings of *tonde shimau* (verb *tobu*-TE form + *shimau*) vs. *tobu* is acceptable from a syntactic as well as a pragmatic and semantic point of view, one could argue reasonably well that the choice of one over the other could in fact be motivated by a factor involving speaker attitude, thus having this verb pair rank just slightly lower than the *iku*-type verbs on the objective side of the scale. However, the primary difference in such choice would still involve the notion of 'totality' in terms of 'fly' vs. 'fly away', and although this could be construed as slightly less objective than *iku*, it is still rather strongly objective from a very general standpoint. This verb pair can be compared to the case of 'eat' vs. 'eat up' as examined in the 3 Bears data since the notion of totality is still on the objective side of the scale: the event could easily be construed as one which marks totality based on visible evidence, i.e., the hat was not merely blown out of place and represented as totally blown off (hence a much more strongly subjective notion); it was blown off altogether.

In fact, since the Pear film was viewed by each interviewee it is actually possible for the linguistic analyst to determine exactly which verbs involve visible and verifiable totality, thus the greater the likelihood of the token belonging to the objective use of *-te shimau*, and which might belong to the more subjective side, since the verbs in question do not lend themselves readily to any type of empirical evidence.

Examples of the potentially objective verbs from the Pear story narratives include: a) verbs of taking away or stealing: *nusunde shimau* 'to steal away', *gamete shimau* 'to *steal away* [slang]', *totte shimau* 'to take away', *totte itte shimau* 'to take away', *motte itte shimau* 'to take away' b) verbs describing the boy's hat flying off: *tonde shimau* 'fly away', *tobasarete shimau* 'to be blown away', *torete*

shimau 'to be blown away' c) boy falling from bike: *taorete shimau* 'to fall down', *koronde shimau* 'to fall down', *taoshite shimau* 'to fall down', d) pears falling from basket: *otoshite shimau* 'to drop down', *barabara ni natte shimau* 'to roll all over', *koborete shimau* 'to tumble down', *korogete shimau* 'to roll out' *korogatte shimau* 'to roll out'. While this is not an exhaustive list of verbs from this category, it can be clearly understood that the notion of totality is salient in all of these cases, particularly since it is also very salient in the actions as described in a) through d) above.

This is also in line with observations by Makino & Tsutsui (1986:404) and Teramura (1982:154-155), who note that *-te shimau* often occurs with adverbs such as *sukkari* 'completely', *zenbu* 'all', *kanzenni* 'completely', etc. Example (23) given earlier and examples (28) and (29) taken from the Pear narratives illustrate just this tendency:

(28) from Narrative #3
kago goto zenbu totchatta wake
basket whole all take-**TE SHIMAU** PST PRT
'(He) took the whole basket'

(29) from Narrative #8
yoonashi ga zenbu, futa ga nai kara
pears SUBJ all cover SUBJ exist NEG since
ba--tto zenbu koborete shimatte
ONO all fall-TE SHIMAU CONN
'...all the pears, since there's no cover, they all spilled out..'

It appears,therefore, on the basis of the above observations as well as on the data involving the verb *iku* as illustrated in (26) and (26') that 89% (94 of 106 total) of the verbs marked with *-te shimau* fall within the range of objective uses of this auxiliary. The Iwasaki data, by contrast, shows a more inverse proportion, with a far greater number of subjective uses, as will be illustrated in more detail in Section 6.2.2

Perhaps the most interesting observation in the Spanish data, from a linguistic point of view, is that of the 95 total tokens of reflexive verbs used in the Pear narratives, only 3 involve the 'true' reflexive or reciprocal (2 tokens of *golpearse* [8]'to hit one's self' and 1 token of *hablarse* 'to speak to each other'). The remaining 92 reflexives from this data set are all of the 'Romance' type; and of these 92 'Romance reflexive' tokens, 43 (or 47%) are used in describing the identical episodes that the *-te shimau* construction described in the Japanese versions. These verbs include: *irse* 'to go away', *caerse* 'to fall', *llevarse* 'to take away', *tirarse* 'to knock over', *tropezarse* 'to bump into', and *toparse* 'to bump into'[9]. Issues concerning the degree of objectivity/subjectivity surrounding the

[8]Even this usage is a borderline case, since the verb is used here in the sense of 'to get hurt', rather than the literally reflexive meaning of 'to hit one's self', which seems to imply a far greater degree of intentionality/agency.

[9]A fuller and more detailed semantic, pragmatic, and aspectual analysis between these Spanish verbs and their Japanese counterparts describing the same scenes and same events will be conducted

Spanish verbs in these will not be addressed in this particular paper, since the overall grammatical requirements of the 'Romance reflexive' are quite distinct from those surrounding *-te shimau*, and a full description of these factors would extend far beyond the scope of this version of the study.

6.2.2 Subjective uses of *-te shimau*

Examples from the Japanese Pear Stories data of the subjective use of *-te shimau* signalling a consequence of totality, but not literal totality, include the verb *kega shite shimau* 'to get hurt', *wasurete shimau* 'to forget', and *mitorete shimau* 'to be attracted by'. Here it is most clear that these tokens are unequivocally reflections of some type of speaker attitude, since the notion of totality is expressed in a hyperbolic fashion. Using the example of *kega shite shimau* 'to get hurt or to get all banged up', while the boy did suffer a full and complete fall from his bike, he did not by any stretch of the imagination suffer from total bodily injury. In fact the extent of his injury is clear in the film. He scraped his leg a little in the dirt.

The same rationale holds true for the verb of forgetting: *wasurete shimau.*'I completely forgot', which, in actuality, signals the exact opposite of its own hyperbolic meaning--'I have forgotten for the moment' rather than 'I have suffered complete and irreversible memory loss'. Incidentally, this verb is the only verb in the Pear data which has a first person subject. The remaining 105 all refer to the 3rd person entities who are characters and/or props in the film and who are otherwise unknown to the speakers.

Conversely, the vast majority of subjects in the Iwasaki data are either directly first person subjects or they relate to some 3rd person entity that is in some way close to the speaker and the speaker's narrative. This notion is actually crucial in the discussion of subjectivity as a motivation for *-te shimau* since in these narratives the speaker is the only person who has the authority over and sole ownership of the information and story details at hand. Hence, it can be claimed in this regard, that, with the exception of any obligatory use of *-te shimau* to designate the spatio/temporal deixis of the entity in relation to the source location in question, the speaker's choice of the bare verb vs. the *-te shimau* marked verb in the Iwasaki data is inherently more likely to be subjective. More generally stated, if the type of 'subjectivity' being referred to in an a particular linguistic analysis is based on Benveniste's (1971) framework, then this notion of deixis, be it spatio-temporal, person deixis, emotional deixis, etc., must be at the very core of such analysis. It follows from here that personal narratives are subjective, by the very definition of the term itself.

As noted in Section 6.2.1, the 11 personal narratives in Japanese contained 51 tokens of *-te shimau.* In examining the semantics of these *-te shimau* -marked verbs, not only does the scalar notion of subjectivity begin to emerge, but certain

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in a more expanded version of this study. It must be made clear, however, at this point, that although there are striking similarities between the two languages, many differences exist as well, and it is not the intention of the author to suggest a rigid one-to-one correspondence between the Japanese verbs marked by *-te shimau* and Spanish verbs with a 'Romance reflexive' marker.

elements along the path of grammaticization as depicted in (24) above also come to light. Here, exhibiting an inverse distribution from the Pear narrative data, we find far fewer (if any) instances of verifiably objective totality, replaced by an entire range of descriptions depicting subjective totality, lack of control, emotional expressions, no alternative for future action, and utter lack of alternative resulting from completed action. The following set of examples will illustrate just this type of progression. (30) contains an explicit marker of totality/intensity *makkura* 'pitch dark'.

(30) From Iwasaki Narrative #13
kaerenakatta. moo makkura n natchatte
return NEG PSR already pitch dark become-**TE SHIMAU** CONN

michi wakaranakatta-n desu kara.
roads know NEG PST COP because

'I couldn't get back, because it had already become pitch dark
and I couldn't see the roads...'

The excerpt in (31) is a direct quote by the narrator's father, who says of his own condition, that he has become so thin. The adverbial *konna ni* 'this thin' expresses a relative notion, not an absolute one. This very collocation of a notion expressing relativity, *konna ni,* with an expression of absolute totality *-te shimau*, represents a slight progression along the subjective grammaticization path away from the primary semantic notion of totality.

(31) From Iwasaki Narrative #15
konna ni yasechatte naa,
this much become thin-**TE SHIMAU** CONN EXCL
sorede, nanka yami-joozu no shinibeta da to ka itte,
and sick skillful die unskillfully QUOT QP say-TE

'He said, "I have gotten so thin. I'm good at getting sick, but not at dying."'

Perhaps the most telling example is the following, in which the verb *iku* + *te shimau* appears. Here, instead of the purely spatio-temporal deixis that we saw with this construction in the Pear narrative data, the excerpted utterance is indeed colored with overtones of speaker attitude, and the construction comes to mean 'you wind up going' rather than 'go away' or 'leave', the latter of which expresses an obligatory directional as we saw in the earlier discussion.

(32) From Iwasaki Narrative #13
hitotsu machigaeruto taihen na n desu yo.
one make mistake serious matter COP PRT
mukoo no yama ni itchau kara ne.
over there mountain to go-**TE SHIMAU** because PRT

'If you make one mistake, you're in trouble,
because you wind up on other mountains.

Here, there is no need for an obligatory directional since one exists explicitly within the utterance, i.e., *mukoo no yama ni* 'on [to] the other mountains'. In fact, for this very reason, this use of -te shimau is not obligatory, and the bare form of *iku* can be used in a well formed grammatical utterance. The only element that would be missing from such an utterance, however, would be that of the speaker's affective stance.

The two final examples also clearly illustrate a rather broad jump from the notion of cardinal totality to expressions of 'no alternative for future action'. In (33), the *-te shimau* utterance is accompanied by the expression *moo shooganai* 'there's nothing that can be done about it' [lack of control on the part of the speaker], while in (34) this attitude is merely implied. Incidentally, both of these utterances are excerpted from Narrative #12, which has the highest frequency of *-te shimau* tokens from among the total data set, i.e., 12 tokens within a single narrative by a single speaker. In this narrative,the speaker had purchased a round trip airline ticket using her friend's name, since the discount is only available to persons under 21. She was extremely nervous throughout her travel from Boston to Rochester, thinking she might get caught at one point or another, since she was using a false identification card. (33) is an excerpt from the incident when her bags came out onto the luggage carousel with her own name written all over them rather than the name of the person on the ticket:

(33) *moo sugoi asetta wake*
EM very worry PST SE
sorede moo shooganai dechatta kara
so EM no alternative (they) come out-**TE SHIMAU** PST because

'I was getting so nervous. Then I couldn't do anything else
because they (the bags) came out already'.

Example (34) could be construed as one of the strongest examples in these data which demonstrates a sharp turn from the original meaning of totality that the auxiliary *-te shimau* signals. It is a strong example because the verb used (*kau* 'to buy') stands out remarkably from the rest. It is one of the very few lexically transitive verbs whose meaning in this case does not intensify a totality meaning. Rather, it expresses a feeling such as we saw in (33) of *moo shooganai,* i.e., a kind of lack of control over the situation, although this latter expression of feeling is only implied, and this through the *-te shimau* marking. What is particularly striking in

this regard is that the verb *kau* 'to buy' lexically implies both volitionality as well as control.

(34) *...mo konna keiken shitaku nai kara to omotte,*
this kind of experience do-want NEG since Q think-TE
moo kaeri wa moo basu de kaetta no...
return TOP bus by return PST SE
...soshitara kondo hora oofuku kippu katchatta deshoo
then this time INJ round trip ticket buy-**TE SHIMAU** PST right?

'...Since I didn't want to have this kind of experience during the return flight, I took the bus home...but I had bought a round trip ticket, right?'
[...so I had to cancel it and cash it in...]

Not only does this example illustrate one of the broadest shifts from the totality meaning of *-te shimau*, it serves as a strong counter example to the claim that all tokens of *-te shimau* are motivated by a 'violation of expectation', since such an interpretation within this context would not stand up to logical reasoning.

Thus, by virtue of the examples from both the Pear data and the personal narrative data it has become clear that not every usage of *-te shimau* is subjective, and that when *-te shimau* is used subjectively, it is capable of expressing an entire range of feelings and attitudes, all of which derive more or less strongly from the core semantic notion of totality, and all of which are then situated along a scale of both objective and subjective interpretations.

7. Conclusion

In this paper I have attempted to elucidate the functions of the verbal auxiliary *-te shimau* by establishing certain parallel relationships with the 'Romance reflexive', touching lightly upon the concept of the 'middle' voice. In establishing such a relationship, it has been demonstrated that while *-te shimau* might appear on the surface to be an unequivocally subjective grammatical construction, its function is in fact far more complex from the point of view of its deictic forces. *-Te shimau*, like certain instances of the 'Romance reflexive' marker, is actually obligatory in certain contexts, particularly with reference to spatio-temporal deixis, thus exhibiting a much broader type of use than has been previously discussed by discourse linguists. Rather than subsuming all uses under the rubric of subjectivity, it has been demonstrated that objective uses of *-te shimau* also can and do occur, and that both objective and subjective uses derive from the core semantic meaning of completion and totality, an element which is also shared to a certain degree by the 'Romance reflexive.'

The notion of transitivity has also been interwoven into the discussion as an element crucial to the concept of the 'Romance reflexive' in general and has been extended as an equally crucial concept for a more complete understanding of the functions of *-te shimau* in Japanese. Additional evidence supporting the relationship of *-te shimau* to the 'Romance reflexive' can be found in a basic analysis of the verb types within each data set: in the Iwasaki data, a full 80% of the verbs marked with *-te shimau* are intransitive verbs; in the Pear data, 62% are

lexically intransitive, with an additional 16% that are semantically transitive verb compounds consisting of a transitive main verb and the intransitive auxiliary verb *iku* 'to go' (i.e., *motte iku* and *totte iku*, both of which have literal meanings similar to 'to take and go').

The larger version of this study incorporates the Korean aspectual marker *-a/e pelita*, which derives from the lexical verb 'to throw away'. It also proposes an analysis of the grammaticization paths involving the 3 languages (i.e., Japanese, Korean and Spanish) from the standpoint of the core meaning of totality, viewing the progression from objective uses through the extremely subjective uses in which the speaker's attitude appears to be the most distant from the original conception of totality.

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The affective auxiliary -CHAU: Language socialization and grammaticization

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1. Introduction

The goal of this paper is to analyze the use of an auxiliary -chau in mother-child conversational data, focusing on its form, frequency, meanings and the way it is used in interaction. I will argue that -chau is a powerful tool of socialization, with which the mother regulates her child's behavior, or teaches the child how to display affect. I will also briefly discuss the possibility of considering language acquisition from the viewpoint of grammaticization.

-Chau is the contracted form of -te-shimau. -Te is a verb inflection marking the continuative form, which does not indicate any particular tense or aspect, but rather serves as the non-final form in sequences of concatenated verbs and in conjoined clauses (Clancy 1985:383). In modern Japanese, the -te form combines with the verb shimau 'put away/finish', and the combination has been grammaticized as an auxiliary -te-shimau. The fact that -te-shimau has further been contracted to -chau may be seen as a sign of grammaticization (Ono 1992).

Ono and Suzuki (in press) claim that, in adult conversational data, the auxiliary -te-shimau/-chau is used to indicate at least four distinct meanings, which are semantically related to its original verbal meanings 'put away/finish', because they indicate orientation to the endpoint of an event:

(1) <INABILITY TO UNDO> the speaker shows that the event described in the clause has reached the point that the speaker cannot undo it
(2) <SPEAKER'S NEGATIVE ATTITUDE> the speaker displays his/her negative attitude about the situation which has (or will) become impossible to undo
(3) <SPEAKER'S GUILTILY POSITIVE ATTITUDE> the speaker indicates that s/he feels guilty about having a positive attitude about a situation in which only the speaker benefitted and no one else
(4) <AUTOMATIC> the speaker projects that the situation has occurred without his/her control or volition

In adult conversational discourse, -te-shimau often occurs as the contracted form -chau, and in fact, the latter is much more frequent.

Hereafter, the auxiliary -te-shimau/-chau will be referred to as SHIMAU/CHAU, representing the two general categories of forms. CHAU, the form contrasted with SHIMAU, is distinguished from its non-past variant chau, written in lower case, which in turn, contrasts with the past variant chatta.

In acquisition studies, it is shown that children first acquire the contracted form CHAU as a unitary suffix (Clancy 1985, Rispoli 1981). Rispoli (1981) glosses chau 'vivid non-past', and chatta 'vivid past'. However, the meaning and context of the use of CHAU per se in the process of language acquisition has not been investigated to my knowledge. In this study, I will investigate the following questions: 1) What is the early meaning of CHAU in acquisition data, 2) What is the context in which CHAU is used? 3) What does the meaning of CHAU imply about the notion of language socialization? 4) Do the acquisition data contribute to the notion of grammaticization?

In the next section, I will illustrate the data and method used in this study. In Section 3.1, I will discuss the mother's (= M) and the child's (= Y) use of CHAU in terms of form and frequency. In 3.2., I will look at the types of verbs which occur only with CHAU and those that occur without CHAU, and I will examine some semantic characteristics of the verbs that tend to co-occur with CHAU. In 3.3, I will analyze the verbs which occur both with and without CHAU in the data in order to illustrate the meaning of CHAU in M's speech and in Y's speech. Using the results from Section 3.2 and 3.3, it is argued that Y most frequently uses CHAU to mark the speaker's negative affect, and that that is what we see in M's input. In Section 4, I will focus on the context of the use of CHAU, relating the negative affective meaning of CHAU to the issue of language socialization. The analysis of what types of events tend to be perceived as negative shows how M structures and presents the view that she wants Y to acquire in order for him to be an competent member of the society. I will argue that M is using CHAU as a powerful means of socialization. In Section 5, I will summarize the discussions in terms of language socialization and briefly mention the possibility of language acquisition research from the viewpoint of grammaticization.

2. Data and method

I have used 6 transcripts of monthly tape-recordings of interaction between a child Y (1;11-2;4) and his mother, M.[1] We will be primarily focusing on Y's use of CHAU to M and M's use of CHAU to Y in this paper, since they engaged in interaction everyday, and M's speech constituted the most significant amount of linguistic input to Y compared to any other family members or researchers who were present at the time of recording. In other words, we will exclude the sibling's and researchers' utterances from our analysis.

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[1] I thank Pat Clancy for making transcripts available, and sharing her thoughts and ideas on this project.

Even though Y's articulation of verbs was at times unclear, and so marked in the transcripts, I counted them in the analysis whenever one of the following conditions was satisfied: (1) M's following utterance repeats and clarifies what Y said, (2) Y's utterance of the problematic portion is close enough to the adult pronunciation of the verb to be predictable from the context.

3. Analysis

3.1. Frequency

There are total of 85 tokens of CHAU and 2 tokens of SHIMAU in our data. 65 tokens of CHAU are used by M to Y, and 20 tokens of CHAU are used by Y to M. Y uses only CHAU, and M uses CHAU in 65 out of 67 cases.[2] Table 1 shows the forms and frequencies of CHAU used by Y and M:

	Y's speech	M's speech	Total	
chatta (past)	17	44	61	(70.1%)
chau (non-past)	3	20	23	(26.4%)
chatte (continuative)	0	1	1	(1.1%)
shimainasai (imperative)	0	2	2	(2.2%)
total	20	67	87	(100%)

Table 1: Forms and frequencies of CHAU used by Y and M

Chatta, the past form of CHAU, is the most frequent form in both Y and M's speech. Table 1 suggests that even though chau and chatta are the contracted versions of multiple morphemes, they are indeed produced by M and acquired by Y as an unitary suffix (Clancy 1985, Rispoli 1981). Y was capable of combining several verb stems with CHAU. In adult conversational data (Ono and Suzuki in press), we also find that CHAU is the dominant form compared to SHIMAU. The following table shows the forms and frequencies of CHAU and SHIMAU:

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[2] The only two exceptional cases when M used shimau were the imperative form shimainasai (tabechainasai is possible, but M did not use it):

M: sassato tabe-te-shima-i-nasa-i 'Finish eating quickly.'

	CHAU variants		SHIMAU variants		TOTAL
	FORM	NUNBER	FORM	NUMBER	
past	chatta	16	shimatta	5	21
non-past	chau	29	shimau	1	30
present resultative	chatte iru	1	shimatte iru	1	2
conditional	chattara	3	shimattara	1	4
continuative	chatte	11	shimatte	-	11
alternative (... or)	chattari	1	shimattari	-	1
politeness suf. -masu	chaimashita	-	shimaimashita	1	1
total		61		9	70
		(87.1%)		(12.8%)	(100%)

Table 2: Forms and frequencies of CHAU and SHIMAU in adult conversational data

As expected, adult conversational data shows more complexity and diversity of verbal suffixes than the acquisition data. In terms of the frequency of CHAU in both acquisition and adult conversational data, we notice that the past form chatta is dominant in acquisition data whereas the non-past chau are more frequent than chatta in adult data.

The salient similarity between the acquisition data and the adult data is that the contracted form, CHAU, is much more frequent than SHIMAU in both data. This tendency is even stronger in the acquisition data than in adult data. Therefore, CHAU is acquired as a unitary suffix in early conversation, then later SHIMAU appears.[3] To put it in different terms, the most grammaticized form seems to be acquired first, as far as the acquisition of CHAU/SHIMAU is concerned.

[3] At least two speculations can be made on this point:
1. The emergence of shimau has to do with the child's familiarity with certain genres. For example, shimau may be preferred over chau in books.
2. Shimau and chau are associated with slightly different meanings respectively in the process of acquisition. For example, shimau has more to do with the speaker's negative attitude, whereas chau can indicate both negative and non-negative meanings.
We need more tokens of shimau to make these speculations into a hypothesis.

3.2. Verb stems of CHAU: co-occurrence, non-occurrence and verb semantics

In order to investigate the early meaning of CHAU itself, i.e., the meaning of CHAU presented to the child (and possibly understood by the child), it is important to see whether there is some clear pattern in co-occurring verb stems. I coded types of lexical verbs (i.e. verb forms without -teru and other -te suffix) and types of verbs which take CHAU: some verbs occur only with CHAU (hereafter "CHAU verbs"); some verbs never occur with CHAU (hence "non-CHAU verbs"); and some verbs occur either with or without CHAU ("either" verbs). In this section, I will show that CHAU verbs and non-CHAU verbs differ with respect to semantic charactersitcs.

3.2.1: Y's CHAU verbs and non-CHAU verbs

First, let us look at Y's data. Table 3 illustrates the types of CHAU verbs:

korobu '(person) to fall'; *kowasu* 'to break'; *ochiru* '(e.g. toy car) to fall on the ground'; *okkochiru* '(e.g. toy car) to fall on the ground'; *oreru* '(e.g. branch of a tree) to break'; *suteru* 'to throw away'; *yabuku* 'to tear (e.g. paper)'

Table 3: Y's CHAU verbs

On the other hand, Table 4 shows the list of Y's non-CHAU verbs:

airon kakeru 'to iron'; *ageru* 'to give'; *aru* '(thing) to exist'; *aruku* 'to walk'; *asobu* 'to play'; *chigau* '(rejection)'; *chu suru* 'to kiss'; *fuku* 'to wipe'; *ijiru* 'to touch/play with'; *ikareru* 'to be able to go'; *ireru* 'to put in'; *iu* 'to say'; *kaeru* 'to go back'; *kaku* 'to write'; *kega suru* 'to get hurt'; *kiree (ni) naru* 'to become clean'; *kuru* 'to come'; *migaku* 'to polish'; *miru* 'to look'; *naku* '(animal) to cry'; *naoru* '(thing) to get repaired'; *narabu* 'to line up'; *naosu* 'to repair (thing)'; *naru* 'to work' (as in koo naru 'work in this way'); *nokkeru* 'to pile up'; *nomu* 'to drink'; *noru* 'to be on'; *okiru* 'to get up'; oku 'to put'; *owaru* 'to finish'; *taberu* 'to eat'; *tomeru* 'to stop (thing)'; tobu 'to fly'; *tsukuru* 'to make'; *umareru* 'to be born'; *wakaru* 'to understand'; *yaru* 'to do'

Table 4: Y's non-CHAU verbs

We notice that Y's CHAU verbs involve total affectedness of the argument: the subject in the case of intransitive verbs (korobu, ochiru, okkochiru and oreru) and the object in the case of transitive verbs (kowasu, yabuku and suteru). The

affected arguments of these verbs are strongly associated with a person or object experiencing physical harm (e.g. korobu, ochiru, okkochiru), or are associated with an object which doesn't function fully as the result of the action expressed in the stem (e.g. kowasu, oreru, yabuku, suteru). As we will see in the later discussion of language socialization, these verbs occur in the context of informing the child which situations or actions are viewed as negative.

Y's non-CHAU verbs are much more heterogeneous in their semantic characteristics. Kega suru is the only example which has semantic characteristics similar to the list of CHAU verbs. In other words, we can see a strict semantic distinction in Y's speech between the types of verbs which co-occur with CHAU and those which do not.

3.2.2: M's CHAU verbs and non-CHAU verbs

Let us now turn to M's CHAU verbs and non-CHAU verbs. Table 5 is the list of M's CHAU verbs, and Table 6 in the list of M's non-CHAU verbs:

> *akiru* 'to get bored'; *butsukaru* 'to crash'; *hagu* 'to take off (a blanket)'; *kaze hiku* 'to catch cold'; *kizu ga tsuku* 'to get scratched'; *hareru* 'to get swollen'; *korobu* '(person) to fall'; *kowareru* 'to get broken'; *kuttsuku* '(thing) to stick (to something)'; *mottekuru* 'to bring'; *nakunaru* '(thing) to get lost, invisible'; *okkochiru* '(thing) fall on the ground'; *oikakerareru* 'to be chased'; *oitekuru* 'to leave (thing)'; *otosu* 'to drop (thing)'; *suteru* 'to throw away (thing)'; *wareru* '(thing) to break'

Table 5: M's CHAU verbs

Notice that three of Y's CHAU verbs are included in M's list of CHAU verbs: korobu, okkochiru, suteru. As we can see, the CHAU verbs in M's input also involve transitive verbs which indicate total affectedness of the object (hagu, otosu, suteru) or intransitive verbs which indicate total affectedness of the subject (e.g. butsukaru, kaze hiku, kizu ga tsuku, hareru, nakunaru, wareru). Some of these verbs inherently indicate physical harm or a negative physical state (e.g. kaze hiku, hareru, kizu ga tsuku, korobu, kowareru) of the arguments. In other words, we see that these verbs have socially negative connotations. If we compare Table 3 and Table 5, it is possible to conclude that the type of verbs that M and Y use only with CHAU are extremely similar semantically.

One difference between Tables 3 and 5 is that M combines CHAU with some verbs which are morphologically complex. This is not seen in Y's CHAU verb combinations: for example, we see mottekuru occurring as mot-te-ki-chatta (have-CONT-come-chatta), oikakerareru occurring as oi-kake-rare-chatta (chase-

run-PASSIVE-chatta) in M's data.

Table 6 shows M's non-CHAU verbs:

ageru 'to give'; *akeru* 'to open'; *amaru* 'to become extra'; *arau* 'to wash'; *aru* '(thing) to exist'; *aruku* 'to walk'; *asobu* 'to play'; *chigau* '(rejection)'; *dekiru* 'to be able to do X'; *doo shita* 'what's going on'; *fuku* 'to wipe'; *fukeru* 'to be able to wipe'; *haku* 'to put on (shoes or pants)'; *haru* 'to put (tape or bandage) on (thing)'; *hashiru* 'to run'; *ikeru* 'to be able to go';
iku 'to be able to go'; *ireru* 'to put in'; *iru* '(person) to exist'; *iru* 'to need (thing)'; *iu* 'to say'; *kaeru* 'to go home'; *kawaru* 'to take turn'; *kega suru* 'to get hurt'; *komaru* 'to be in trouble'; *kuru* 'to come'; *mawaru* '(thing) to turn'; *mieru* 'to be visible'; *migaku* 'to polish'; *miru* 'to look'; *morau* 'to receive'; *motsu* 'to carry'; *Noun + suru* 'to do X'; *naku* 'to cry'; *nameru* 'to lick'; *naoru* 'to recover'; *narabu* 'to line up'; *noboru* 'to climb'; *nokkaru* '(thing) to put on top'; *nokkeru* 'to put (thing) on top'; *nomaseru* 'to make (someone) drink'; *nomu* 'to drink'; *noreru* 'to be able to ride'; *noru* 'to be placed on top, to ride'; *nureru* 'to get wet'; *oboeru* 'to memorize'; *oku* 'to put on'; *omochi o tsuku* 'to pound steamed rice into rice cake'; *omoidasu* 'to remember'; *omou* 'to think'; *onaka suku* 'to be hungry'; *owaru* 'to finish'; *oyogu* 'to swim'; *sasu* 'to poke'; *sawaru* 'to touch'; *tabesugiru* 'to eat too much'; *toberu* 'to be able to fly'; *tsukaeru* 'to be able to use'; *tsukuru* 'to make'; *tsunagu* 'to link, to connect'; *umareru* 'to be born'; *utau* 'to sing'; *wakaru* 'to understand'; *yabuku* 'to tear (e.g. paper)'; *yareru* 'to be able to do'; *yaru* 'to do'; *yogosu* 'to make something dirty'

Table 6: M's non-CHAU verbs

M's non-CHAU verbs shown in Table 6 are semantically heterogenous. We see few verbs which could belong to the list of CHAU verbs (e.g. kega suru, komaru, onaka suku, yabuku, yogosu), and the majority of verbs are semantically different from M's CHAU verbs listed in Table 5. Therefore, in M's data, as well as Y's data, we see the semantic distinction between CHAU verbs and non-CHAU verbs.

3.3. Contrastive analysis of "Either" verbs: with CHAU and without CHAU

In this section, I will focus on several "Either" verbs which occurred both with and without CHAU. I will focus on M's data in this section, since at this stage of language acquisition, it is not certain whether Y has internalized the meaning of CHAU so that he can use it appropriately and productively. Many

instances of Y's CHAU in the data seemed to me to be repetitions of utterances, including CHAU, which he had most likely heard in previous conversational discourse with M. I will contrast the use of the verb form with and without CHAU in order to approach the meaning of CHAU as closely as possible. I will argue that the early meaning of CHAU presented to Y in M's input is that of a marker of the speaker's negative affect towards the situation described by the verb.

From now on, a form of a verb without CHAU is called "the plain form", and a form of the same verb with CHAU is called "the CHAU form". First, I will present the list of verbs which occurred both with and without CHAU in M's data (Table 7). In order to make the contrast as clear as possible, I will compare the plain form and the CHAU form of the same tense (i.e. past or non-past). For that purpose, the table is organized in the following way: the first column is the frequency of the non-past plain form of the verb, the second column is the frequency of the CHAU form verb with the suffix chau, the third column is the frequency of the plain form of the verb in the past tense, and the fourth column is the frequency of the verb with the suffix in the past tense chatta. The fifth and the sixth column represent the totals:

	NON-PAST		PAST		TOTAL	
	plain	chau	plain	chatta	plain	CHAU
hairu 'to fit, enter'	1	-	3	1	4	1
iku 'to go away'	25	-	34	4	59	4
kiru 'to cut (oneself)'	-	-	1	1	1	1
kowasu 'to break (thing)'	-	-	2	2	2	2
naru 'to become'	3	3	7	3	10	6
ochiru '(thing) to fall on the ground'	1	-	1	2	2	2
oreru '(e.g. branch of a tree) to break	-	-	1	1	1	1
taberu 'to eat'	14	3	11	4	25	7
toru 'to take away'	1	1	1	4	2	5
wasureru 'to forget'	0	-	1	1	1	1

Table 7: "Either" verbs in M's speech[4]

[4] Examining the list of "either" verbs in M's speech (Table 7), we notice that the high frequency verbs in M's speech (iku, naru, toru) occur in Y's speech as well (except for taberu), which suggests the close relationship between M's input and Y's production in terms of the kind of verbs which allow both plain and CHAU forms.

The verbs in M's speech in Table 7 include verbs of physical harm (kiru) and verbs indicating total affectedness of the arguments (e.g. kowasu, ochiru, oreru, toru, naru) which is similar to the list of CHAU verbs we have seen in Table 5. The clear difference between the list of CHAU verbs and the verbs which can occur with or without CHAU is that the latter include verbs that are more frequent in daily conversation, e.g. iku and taberu, or frequent and also semantically light in content, e.g. naru.

In the following, I will contrast the verbs which occurred with and without the suffix CHAU in M's speech. We will focus on 3 frequent verbs in M's data, naru, taberu, and iku, with special attention to the contrastive pairs: natta vs. natchatta, tabeta vs. tabechatta, and itta vs. itchatta.

3.3.1. natta 'became' vs. natchatta

The majority of tokens of natta in M's speech are used in the context of kiree ni natta 'became clean'. This is also the case for natta in Y's speech:

e.g. 1: ((Y is wiping his toy car))

Y:	un kiree natta.	'(The car) has become clean'
M:	kiree ni natta?	'Has (it) become clean?'
A:	kiree ni natta?	'Has (it) become clean?'
M:	un. gokuroosama	'OK. Good job'
Y:	kiree natta. ne.	'(It) has become clean, right?'

Natchatta in M's speech includes examples which are clearly associated with a negative situation:

e.g. 2: ((reading Kuma no puusan 'Winnie the Pooh'))

M: ara! puusan onaka ga ippai de derarenaku natchatta.
'Oh! Pooh cannot get out because (his) stomach has become-chatta too full'

Y: oicho, oicho tte.
'(Pooh is trying) saying yoisho, yoisho'

M and Y are looking at the picture of Pooh who has eaten too much honey and gotten stuck instide because his stomach has grown big.

Out of 10 instances of the plain forms of naru in M's data, we find only 2 examples which occurred in utterances describing events that are considered to be negative from the adults' point of view. 8 instances are positive, for example, kiree ni naru 'to become clean', ha o migaku to doo naru no 'what happens if (you) brush your teeth?' (in talking about cavities).

On the other hand, 5 out of 7 instances of the CHAU forms of naru

occurred in describing events that are considered to be negative from the adults' point of view, for example, bacchiku naru 'become dirty', itai itai naru 'to become painful and so on. In M's speech, the plain form and the CHAU form of naru occurred in two opposing contexts: positive and negative.

3.3.2. tabeta 'ate' vs. tabechatta

Taberu is the first verb which M productively used both with and without CHAU in talking to Y. Taberu is also the most frequent verb taking both non-past chau and past chatta.

The plain form tabeta in M's speech occurred in the context of M talking about or asking Y about the past experience of eating:

e.g. 3: ((M and Y are talking about lunch))

Y:	gohan da.	'meal'
M:	ah gohan na no?	'Oh, (are we) having a meal?'
	yotchan kyoo gohan tabeta?	'Have you **eaten** (=had) a meal today?'
	gohan **tabeta**?	'Have (you) **eaten** (=had) a meal?'

The CHAU form, tabechatta, in M's speech occurred in the context of M's negative judgement about Y's act of eating:

e.g. 4 ((Y asks M for some sweets))

M:	aru ka naa.	'Are there any (sweets)?'
Y:	yotchan no kore	'This is mine'
M:	nai n ja nai ka naa.	'(They) are gone (I'm afraid)'
Y:	kore.	'This one'
M:	nai n ja nai ka na.	'(I'm afraid) (they) are gone.'
	hora moo nai,	'See, (they) are gone,'
	yoctchan ga minna **tabe**chatta kara.	'because (you) have **eaten**-chatta (all of them).'

6 out of 7 tokens of taberu + CHAU occurred in the context in which M was characterizing Y's (or Pooh's) act of eating in various negative ways, such as "eating other people's food", "eating up all the cookies in the container", "eating too much". On the other hand, the majority of plain forms of taberu (22 out of 25) refer to some eating activity but give no negative connotation. In other words, the suffix CHAU seems to indicate negative affect, as far as the verb taberu is concerned.

3.3.3. Iku, with special attention to itta vs. itchatta

M used 34 tokens of itta in her speech. Almost all of them occurred in the context of talking about the past experiences of Y or someone else's (e.g. Father, Sister, Grandfather or Patriciasan) trips to various places:

e.g. 5 ((Talking about Y's trips))

M:	yotchan kinoo doko e **itta** n datta kke?	'Y, where did (you) **go** yesterday?'
Y:	un?	'(pardon)?'
M:	doko **itta**?	'Where did (you) **go**?'
Y:	un?	'(pardon)?'
M:	doko **itta**?	'Where did (you) **go**?'
Y:	un?	'(pardon)?'
M:	kawa **itta** deshoo. kawa.	'(You) **went** to the river, (didn't you). River.'

M used itta in referring to someone's past experiences, and itchatta in referring to an object in the context of interaction moving away from M and Y. Please compare e.g. 5 and 6:

e.g. 6. ((Y and M playing with Origami))

M:	kaeru. pyon. pyon.	'Frog. (jump) (jump)'
	pyon pyon buubuu? buuuuun.	'(jump) (jump) XX? XX'
Y:	**it**chatta. ((pushes away))	'(The frog) **is gone**-chatta'
M:	**it**chatta. baibaai.	'(The frog) **is gone**-chatta. Bye.'
Y:	kaette kita.	'(It) has come back.'

As a total of iku, there are 59 tokens of the plain form, and 4 tokens of the CHAU form in M's speech. The CHAU form seems to occur in the context in which the referents in the speech context move away from the speaker. Almost all the plain iku occurred in the context in which M and Y talked about someone's trip to school etc,. Iku plus CHAU is not associated with context indicating negativity, but rather, completion of the movement of going away.

3.4. Summary of 3.2-3 with reference to the adult data

In 3.2, I have shown the verbs which only occurred with CHAU ("CHAU verbs") and never occurred with CHAU ("non-CHAU verbs") in Y's speech and M's speech. Most CHAU verbs in Y's speech were included in M's speech as well. The CHAU verbs of both Y and M show one semantic characteristic in common: total affectedness of the argument(s). All CHAU verbs indicate physical

harm towards a person or damage of an object. The majority of non-CHAU verbs do not share this characteristic of CHAU verbs.

In 3.3, I have focused on "Either" verbs: the verbs which occurred both with and without CHAU. I have contrasted the plain form and the CHAU form of 3 verbs in M's data. It is worth noting that naru and taberu in M's data show curious discrepancies between the plain forms and the CHAU forms: M used the CHAU forms in referring to an action or event which was viewed as negative from the adults' point of view and involved Y or a story character. M's use of the plain forms of these verbs are not associated with such negative contexts. The notion of negativity of action or event does not seem to be relevant in the case of iku, but rather, completion of the movement of going away seems to be a relevant factor.

Judging from the semantic characteristics of the CHAU verbs and the contrastive analysis of several verbs, we can conclude that the adult meaning of 'the speaker's negative attitude' is the most frequent meaning of CHAU in M's input. The meaning of CHAU we have seen in the contrastive analysis of iku, what I tentatively called "completion" in the previous section, seems to be related to the adult meaning of 'inability to undo', but I need more tokens of iku to draw any conclusion. We did not find any example of CHAU expressing the adult meanings 'guiltily positive attitude' or 'automatic' either in input or in the child's production. Ono and Suzuki (in press) mention that the negative sense of CHAU is felt stronger for native speakers, and the guiltily positive sense is felt more recently. Because it appears to be the most accessible meaning for the native speakers, these acquisition data suggest that the meaning of CHAU, negative attitude toward an action or event, may have been its earliest meaning, possibly.

4. Target of socialization: the context of CHAU

In this section, I will primarily focus on M's use of CHAU, and pay close attention to the context in which M used CHAU to Y. As we have seen in 3.2, and some of the verbs in 3.3, CHAU often occurred with verbs or within utterances indicating a negative event from adults' point of view: physical harm, damaging an object, or other socially discouraged behaviors. I suspect the reason why we find CHAU with these verbs, and not with others, is related to the idea of language socialization: M presented these events with CHAU so that Y would perceive it as socially negative as well. Therefore, we will now shift to M's use of CHAU, and see what types of event she displayed to Y as socially negative. By doing so, I will argue that M uses CHAU as a powerful tool of socialization with which she socializes Y to become an appropriate member of society.

I have analyzed 67 tokens of M's utterances containing CHAU from the perspective of socialization, i.e. what M tried to teach Y when she used CHAU

with verbs. I have found three major types of targets of socialization that M was trying to achieve by using CHAU: (A) teaching Y socially appropriate behaviors by talking about socially discouraged behaviors using CHAU, (B) teaching Y types of physical (=body) conditions that are perceived to be negative by using CHAU, and (C) teaching general knowledge about how the physical world is structured by using CHAU in referring to events/actions which destroy the structure. For each type, I have attempted to list a target statements which conveys what M wants Y to know as a future competent member of society. The following is the list of target statements and examples (Numbers in parentheses after the English translations are the number of examples of that category; some are counted twice under different categories):

4.1. Type A: Teaching Y socially appropriate behaviors

4.1.1. How to handle your toys

(a) Breaking your toys is not good
---> Don't break your toys (11)
e.g.((to Y playing with toy phone))
M: hora hora **kowarechau** yo. gan gan gan tte yattara. ne. **kowarechau** kara. yoshinobu. yoshinobu. hora hora kizu ga **tsuichau** kara.aaa.
'Look, look, (the phone) will **break**-chau, if you go bang, bang, bang. You see. (It) will **break**-chau. Y. Y. (Stop, stop) (it) will **have**-chau a scratch. Oh no.'

(b) Losing your toys, or leaving them somewhere is not good
---> Don't leave them or lose them (3)
e.g.
M: yotchan no densha wa, yotchan dokka **oitekichatta**.
doko e oitekita no? **nakunatchatta**.
'Yotchan train, Yotchan **left**-chatta (it) somewhere. Where did (you) leave (it)? (It) **is lost**-CHATTA.'

(c) Throwing your toys away is not good ---> Don't throw your toys away (1)
e.g.
M: dareka ga **sutechatta** ka naa. yotchan omocha suteru?
'Did someone **throw**-chatta (the toy) away (I) wonder. Yotchan, do (you) throw away toys?'

(d) Making your toys dirty is not good ---> Keep your toys clean (1)
e.g. ((Y wants M to tape car))
M: kore wa ne, kore ano, ehon ga kireta toki ni koko haru no yo. kiree ni. buubuu ni hattara batchiku **nat**chau desho.
'This (=Scotch tape), this (thing) uhm, is for taping a picture book when (it) tears apart. (Tape fixes the book) Neatly. If you put (tape) on (your toy) car, (it) will **get**-chau dirty (you see).'

4.1.2. How to eat

(a) Eating a lot is not good ---> Don't eat too much (4)
e.g. ((Y and M are looking at Pooh's book))
M: doozo tte usagisan kondake ageta no ni.
'(Saying) "please", the rabbit gave (Pooh only) this much (honey).'
Y: un. doozo. 'Yeah. Please.'
M: puusan wa kore, kore minna kooshite motte tte aguaguaguaguagu tte **tabe**chatta no yo. nee. ne. onaka ga suiteta no kanaa.
'Pooh hold this (=urn) and **ate**-chatta up this whole thing (=honey). See. See. Was (he) hungry, (I/we) wonder.'

(b) Eating other's food is not good ---> Don't eat other's food (1)
e.g.
M: usagisan no hachimitsu aguaguaguagu tte minna **tabe**chatta no. yotchan mitai ne? kuishinboosan da nee. kore dake de ii no ni ne.
'(Pooh) **ate**-chatta up the rabbit's honey. (He) is like you Yotchan, huh? (He) is a big eater, huh. This much is enough (for him don't you think).'

(c) Leaving food stuck on your teeth is not good ---> Keep your teeth clean (3)
e.g. ((Y and M are talking about brushing teeth))
M: ame taberu to doo nan no, ame
'What happens when (you) eat candy, candy'
Y: dame yo.
'No good.'
M: dame, haa koko ni **kuttsui**chau no.
'No good, (it) will **stick**-chau to your teeth here.'

(d) Taking other's food away is not good -
--> Don't take food away from others (1)
e.g.
M: oneesan ni ageta no mata **tot**chatta noo?
'Have (you) **taken**-chatta away (the food you) gave to Big sister

(=Researcher) again?'

(e) Taking your food first before others is not good ---> Share food with others before you take your own (1)
e.g.
M: (naze) jibun de saki **tot**chau no? oneechan ni wa? oneesan ni doozo tte.
'Why do (you) **take**-chau your own (portion of food) first? What about Big sister (=Researcher)? (You should say) "please" to Big sister.'

4.1.3. Others

(a) Boredom is not good ---> Don't get bored (1)
e.g.
M: ne, moo **aki**chatta no ne?
'(Hey), (you) **are bored**-chatta already, right?'

(b) Forgetting the name of an object is not good
---> Don't forget the name of an object (1)
e.g.
M: kore nan da yotchan kore wa. kore.
'What is this Yotchan, this. This.'
Y: un? 'm?'
M: **wasure**chatta? kore naani? shiranai?
'Have (you) **forgotten**-chatta? What's this? (You) don't know (it)?'

4.2. Type B: Teaching Y about "negative" physical (=body) conditions

4.2.1. Types of negative physical conditions

(a) catching cold (1)
e.g.
M: dakara, "kushun". kaze **hii**chau no ne. nee.
'That's why (you go) "sneeze". (You) **catch**-chau cold. (You see).'

(b) cutting yourself (1)
e.g. ((M, Y, Y's sister talking about picture of rabbit with bandage on ear))
M: ah soo ka soo ka kega shita no. huuun.
'Oh, (I see I see) (the rabbit) is injured.'
S: sore de **kit**chatta no yo yotchan.
'(The rabbit) **cut**-chatta (itself) with it, Yotchan.'
M: **kit**chatta no ne. '(The rabbit) **cut**-chatta (itself).'

(c) stomachache (2)
e.g.
M: un. kami kami. ne. kami kami shite kara. ne. onaka itai itai **nat**chau kara.
'Yeah. Chew chew. See. After (you) chew, (you swallow). OK?
(Otherwise) (you) will **get**-chau a stomachache.'

(d) swollen/big stomach (1)
e.g. ((Y and M looking at Pooh's book))
M: yotchan no onaka koofuu ni konna ni **hare**chatta no ne. hachimitsu tabesugita no kanaa?
'Yotchan's stomach **has swollen**-chatta so much like this. (I wonder) if (you) have eaten too much honey.'

(e) falling (2)
e.g.
M: yotchan, kinoo kooen itte nani asonda?
'Yotchan, what did (you) play at the park?'
Y: anma, anunaa tte ((he fell down at the park))
'dangerous, dangerous ((=he fell down at the park))'
M: abunai, abunai tte **koronj**atta no?
'did (you) **fell**-chatta saying 'dangerous'?
P: koronjatta no?
'Did (you) fall-chatta?'
M: **okkot**chatta no nee. kaidan karaa.
'(You) **fall**-chatta, right? From the stairs.'

(f) losing nose (1) (cf. Clancy (1986) "Empathy Training")
e.g. ((Y and M looking at Snoopy without a nose))
M: maa, kawaisoo. snoopy, itai, itai tte yutta n ja nai ka na. kore **tot**chatte nee.
'Oh, pitiful. Snoopy must have said 'Ouch, ouch' (I wonder). (You) **took**-chatte this off.'

4.2.2. Protecting yourself from negative physical conditions

(a) Stripping off your blanket is not good (1)
e.g.
M: yoru nenne suru toki "peen" tte minna **hai**jau deshoo.
'(You) **strip**-chau off (your blanket) when you sleep at night.
: ...
: dakara, "kushun". kaze **hii**chau no ne. nee.
'That's why (you go) "sneeze", and **catch**-chau cold. See.'

4.2.3. Negative outcome of negative physical conditions

(a) Getting stuck in a hole/opening (and not being able to get out becuase of having a big stomach is not good (2)
e.g. ((Y and M are looking at Pooh's book))
M: puusan hayaku oide yo. uncho, uncho tte hippatta kedo puusan onaka ga konna. mite kono oshiri. hora. konna ni ookii kara ne derarenaku **nat**chatta no.
'Pooh, come quick. (The boy?) pulled (Pooh) but (Pooh)'s stomach is this (big). Look at this bottom. Look. (He) has **become**-chatta unable to come out because (his bottom) is so big.'

4.3. Type C: general knowledge about the physical world

4.3.1. Organization of physical objects
(a) Things on a table (or bunk bed) are supposed to stay in place, and are not supposed to fall (6)
e.g.
M: ara, **ochi**chatta yo, yotchan. ochinai yoo ni irenakya ne.
'Oh, (it) **fell**-chatta off, Yotchan. (You) have to put (it) so that (it) won't fall off.'

(b) There is a limit on the number of things Y can put in a space (e.g. table, bunk bed) (1)
e.g. ((Y is trying to put toy cars on the bunk bed))
M: muri ja nai yotchan. **okkot**chau mon.
'Isn't it impossible, Yotchan. (The cars) will **fall**-chau.'

(c) Cars are not supposed to crash into one another (1)
e.g. ((Y and his sister are playing with cars))
M: **butsukat**chatta. '(The cars) **crashed**-chatta.'

4.3.2. Others

(a) Ice cream melts, so eat quickly (1)
e.g. ((Y and M are playing with pretend ice cream))
M: aisu. aaa, jaa kore saki tabeyoo. tokechau kara ne. munya munya munya munya yotchan mo taberu?
'Ice cream. Oh, then let's eat this first. Otherwise, (it) will **melt**-chau. Lick, lick, lick, lick, will (you) eat also?'

(b) Cookies break (and make a mess??) if you drop them (1)
e.g. ((Y requests cookies from M))
M: ah otoshitara **ware**chau yo.
'Oh, if (you) drop (the cookie), (it) will **break**-chau.'

(c) We age once a year, not in a few weeks (1)
e.g. ((M hears Y say he is five. M lets him know that he is still only two))
M: patriciasan konai uchi ni moo mitsu mo toshi **tot**chatta n da tte. nee.
'(Yotchan) says while'Patricia is gone (=2 weeks), he **gained**-chatta three years. Right, (yotchan)?'

4.4. Summary of Section 4

The three major targets of socialization (Type A "socially appropriate behaviors", Type B "negative physical conditions", and Type C "how things are in the physical world") are important sources of knowledge for a child to survive. Type A amounts to 41% of total CHAU in M's data, followed by Type B (23.8%), and C (16.4%).

As for Type A, the majority of M's target statements about socially appropriate behaviors involves how to treat toys (23.8% of the total tokens of CHAU) and how to eat (14.9% of the total tokens of CHAU). Toys are one of the first things that belong to Y in this world. Y needs to know what it means to own things, and use them properly in order to live with his family members and peers, using and sharing things. Teaching how to eat is also important, since Y needs to share with family members and others, and also needs to eat everyday in order to maintain good health. Type B is important for survival as well, since Y has to be able to monitor his health by himself. Teaching Y what undesribale things can happen t his own body is an important part of M's socialization. Type C gives general knowledge about the physical world surrounding Y. M's verbal instructions assist Y in conceptualizing his experiences with materials and people so that Y can deal with similar situations better the next time. 57 out of 67 tokens of CHAU in M's data (85%) are counted at least once as clearly serving at least one of socialization functions mentioned above. The other cases include the verb iku and some other contextually unclear examples. Therefore, CHAU is considered to be one of the powerful tools of socialization, with which M systematically displays to Y which actions are considered desirable in the society, what needs to be careful of concerning his own body, and how things around him are supposed to be.

5. Conclusion

This paper has shown that the auxiliary CHAU, which is claimed to have several distinct meanings in adult conversation, seems to start as a negative affect marker in mother-child interaction. It is argued that CHAU is one of the morphological tools that the mother uses in socialization, in trying to teach the child how to behave, how to take care of his own body, and how the world around him is structured. The analysis of CHAU from the aspect of language socialization has not been previously attempted to my knowledge. The data show that M displays for Y what types of events are perceived as negative, and the majority of tokens of CHAU in M's input reflects M's targets for socialization.

Another point I have tried to explore is the possible overlap between the developmental (acquisition) process and the grammaticization process of a morpheme. We have seen that in the mother-child interaction, the most grammaticized form (the smallest form) is dominant, more so than in adult conversation. In addition, the meaning of CHAU in the acquisition data is highly skewed toward negative affect, which is said to be the most salient meaning among native speakers. Whether the order of development of other meanings of CHAU may reflect the frequency of several distinct meanings in the adult input, or eventually, adult conversation remains a question for future research.

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Expectation motivating the use of the auxiliary *shimau* in Japanese spoken narratives

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1. INTRODUCTION

In teaching a foreign language, the most difficult thing for a teacher to do would be to make students realize that words and expressions in one language do not necessarily have a one-to-one correspondence in another language. That is, expressing a word in one language may take a different form, such as intonation or tone, in another language. Teaching Japanese in the U.S., I have encountered many occasions in which after I did my best explaining certain words or structures, my students still ask me "So, what's the meaning in English?" The auxiliary *shimau* is one of these troublesome linguistic devices for the learners of Japanese to grasp the exact meaning and apply in a real situation. While I have experimented with various approaches to explain this auxiliary in a teaching situation, it has made me realize that its surrounding environment, i.e., context, is indispensable in explaining it. In this paper, by examining it in real discourse, I will attempt to explore the use of *shimau.*

Japanese has a verb *shimau*, which means 'to put away/finish'. *Shimau* (or its variants *chau* or *jau*[1]) has been grammaticized as an auxiliary as in example (1):

(1) completion of a situation
ano ko wa moo otona ni natteshimatteiru
that child TOP already adult DAT become:SHIMAU:TE:STA[2]
'That little girl already became an adult woman.'

Shimau here indicates that the situation has reached the point of no return.

Recent studies (Fujii 1992, Iwasaki in press, Ono and Suzuki in press) have recognized that *shimau* marks the speaker's various attitudes. Ono and Suzuki claim that the meaning of *shimau* has moved from the domain of semantics into pragmatics along with its grammaticization from the verb to an auxiliary. For example, in (2), *shimau* indicates the speaker's negative attitudes such as regret or criticism:

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[1] *Shimau* has phonological variants *chau* and *jau*. The past and continuative forms, so called *TE* form, are listed in Table 1.

Table 1: *Shimau*'s phonological variants

plain	past	continuative
shimau	shimatta	shimatte
chau	chatta	chatte
jau	jatta	jatte

[2] I have loosely followed Iwasaki (1993) in glossing my data. The following abbreviations are used: EMP (emphatic), FRG (fragment), INJ (interjection and hesitation), IT (interactional element), NML (nominalizer), ONM (onomatopoeia), SE (sentence extension), SOF (softening word).

(2) speaker's negative attitude (regret/criticism)
watashi wa chigau basu ni notteshimatta
I TOP wrong bus on ride:SHIMAU:PST
'I took a wrong bus' (Makino, 1986:404)

In (3), *shimau* indicates that the speaker is not responsible for the event.

(3) automatic occurrence of an event without the speaker's control or volition
California de toru shashin tte minna yoku torechau mon
California in take photos TOP all well takeSHIMAU SE
'(the photos) taken in California all come out great'
(Ono and Suzuki in press).

One thing to note here is that in these examples, *shimau* shows the speaker's orientation to the endpoint of an event.

While previous studies have focused on the meanings of *shimau*, i.e., the outcome expressed by *shimau* as it occurs in spontaneous conversation, in this study I investigate what triggers the speaker to use *shimau*, i.e., the motivation of the use of *shimau*, in the previously unstudied genre, spoken descriptive narratives. I claim that all the uses of *shimau* in my data are triggered by violation of the speaker's various expectations, such as when an event is projected as going against the speaker's social norms or logical reasoning, or unexpectedness, such as an event happening beyond the speaker's imagination. In other words, when the event reaches an endpoint, the speaker gives an evaluation of it, and only when the event is interpreted as unexpected to the speaker, can his/her unexpectedness be reflected by the use of *shimau*.

2. DATA

In this study, two types of Japanese spoken narrative data are used; 18 story-recall narratives, hereafter referred to as Pear narratives, collected by Clancy (1980)[3], and 16 personal narratives collected by Clancy, Iwasaki, and Szatrowski or taken from TV talk shows. In the former narratives, the subjects were asked to recount the plot of the so-called Pear Film (Chafe 1980, a brief summary of the story is given in Appendix A) to an interviewer, while the speakers of the latter narratives were asked to relate their own life-and-death experiences[4] or the most impressive moment in their lives.

I did not expect any occurrence of *shimau*, the marker of the speaker's various attitudes, in Pear narratives, because in contrast with personal narratives, recounting a film is considered an objective task. Surprisingly, however, in the 18

[3]This is a part of the project conducted by Chafe (1980). In this project, interviewers of various language groups first watched the same seven-minute non-verbal film with sound effects. Then, they were told to reproduce the film in their native languages; Clancy collected the Japanese data for this project.

[4]The topic and style of Clancy and Iwasaki's interviews followed Lobov's life-and-death interviews (personal communication).

Pear narratives, 95 tokens of auxiliary *shimau* are found, while the 16 personal narratives contain only 52 examples of *shimau*. Among the 95 usages of *shimau* in the Pear narratives, 91 cases are used to describe the Pear story, while the remaining 4 appear off the storyline, such as the speakers' comments or interpretation of the film. Similarly, in the personal narratives, of the 52 *shimau* occurrences, 51 cases are used to describe the personal experience story, whereas the remaining 1 token is for the speakers' comments.

3. DATA ANALYSIS

The notion of expectation in narrative has been pointed out by Tannen (1979). Finding a wide range of expectations expressed by various linguistic devices in the English and Greek Pear narratives, Tannen introduces the notion of expectation as the way we measure new experiences against what we know of the world from prior experience; expectations enable us to see connections between things in the past, present, and future. She claims that expectations 'operate on all levels, from the broad level of context and activity (interview, subject of experiment) to ideas about episodes and actions, to objects and people'(Tannen 1979:166).

I also found the notion of expectation useful in the analysis of *shimau* in the Japanese spoken narrative data. While Tannen proposes a wide range of "underlying expectations" in the story-recall task by examining various linguistic cues, I use the notion of expectation in order to explain the underlying motivation in the use of a particular morpheme, *shimau*. Thus, instead of looking at expectations in the frame of a special narrative task, various types of expectations, such as social, cultural, and cognitive expectations, underlying the use of *shimau* in a narrative will be discussed.

It seems that *shimau* occurs when the event reaches an endpoint, which may or may not have a consequence, and when the event itself is projected to have violated or to have gone beyond the speaker's expectations according to his/her prior experience, such as social norms and world knowledge. In other words, the events described with *shimau* commonly contain the following two characteristics: the event reaches a point of no return, and the event violates or goes beyond the speaker's expectations.

First, let us examine the first characteristic of the use of *shimau*. As its lexical meaning suggests, *shimau* always marks an orientation to the endpoint of an event, even when it is used as an auxiliary. Both the Pear and personal narratives contain many examples of *shimau* which emphasize that the event marked with *shimau* has been completed, that is, the event reached a point wherein the participant(s) in the event can no longer do anything about it.

For example, (4) is the scene in which the main Pear Story character, the so-called "bikeboy", leaves the plot. While the story still continues, as shown in the following sentence, this most prominent character's departure is viewed as irreversible.

(4) Pear--speaker #7

sono jitensha ni notta otoko no ko wa toko toko
that bicycle LOC riding male GEN child TOP ONM

aruite itchatte, ...de sorede hanashi ga kawatte,
walk go:CHAU:TE and then story NOM change
'the boy on the bicycle
walks away,...and the scene changes,'

The emphasis on this irreversible characteristic in the use of *shimau* is also found in personal narratives as shown in (5) and (6).

(5) Personal--speaker #10
shitara gasorin ga
then gasoline NOM
nakunatchatta no yo
exist:NEG:become:CHAU:PST SE IT
'then gas became empty,'

(6) Personal--speaker #13
moo makkuran natchatte
EMP pitch dark become:CHAU:TE
michi wakaranakatta-n desu kara.
way know:NEG:PST-SE COP because
'It had already become pitch dark, and
I couldn't see the roads, so...'

In (5), the speaker talks about when he runs out of gas while driving on the freeway. (6) is the scene in which the speaker gets lost in the mountains and feels uneasy about not being able to find her way back to her tent. In describing the troubled states, both (5) and (6) emphasize that the events have reached a point of no return. That is, at the time when the event occurred, the speaker realized that he no longer had gas in his car, in (5), or that it was no longer light enough outside to walk around, in (6). As the above examples show, this irreversible characteristic of an event constitutes one necessary part of *shimau*. In fact, Ono and Suzuki categorize this aspect of *shimau* as the "inability to undo" and regard it as one of the prior meanings of *shimau* in the process of its grammaticization from a verb to an auxiliary.

While the endpoint orientation is a fundamental factor in the use of *shimau*, it also requires another factor: *shimau* occurs in the events which violate or go beyond the speaker's expectations. Close examination of all the tokens of *shimau* in my data indicates a wide range of the speakers' expectations:

SHIMAU IS MOTIVATED BY THE VIOLATED EXPECTATIONS/ UNEXPECTEDNESS:

(A) about social norms
(B) by logical reasoning
(C) through the event that goes beyond the speaker's imagination
(D) through the event happening as an automatic/natural response
(E) about narrative task

As mentioned earlier, different from the categories of expectations that Tannen suggested in the frame of the story-recall task, the above types are

socioculturally and cognitively perceived expectations underlying the use of *shimau*. In the following, I will examine how each type of violated expectations/unexpectedness motivates the use of *shimau*.

3.1. SOCIAL NORMS

The first type of the violated expectations/unexpectedness which are reflected in the use of *shimau* is social norms, namely social behaviors and regulations which the society of the speaker expects any members, including him/herself, to know and follow. One of the clearest examples of this type occurs in the description of the theft in the Pear Film. In fact, this scene contains the most frequent use of *shimau* in the Pear narrative data: 27 out of all the 95 tokens (28.4%) of *shimau*, spoken by 13 out of 18 speakers, occur in this event. See example (7), in which the boy on the bike steals the pear basket and rides away:

(7) Pear--speaker #1
...jitensha no mae ni... kago... tte yuu ka,
bicycle GEN front DAT basket QT say Q
...nidai ga aru n da keredo,
rack NOM exist NML COP but
...soko ni tsukete ne,
there DAT attach IT
nde shiranpurishite mottecchau wake.
and do:ignoring take:CHAU SE

'...there is like a basket or rather,
...a rack in front of the bike,
...(the bikeboy) load (the basket) there,
and (he) steals (it) away as if nothing has happened.'

We live in a society in which one does not condone taking someone else's possessions. Besides, the bike boy first appears in the film as an ordinary child on his bike. Comparing this event with our social norms and socially expected behaviors, we do not anticipate him to be a thief. As a result, it is easy to understand that the theft violates the speakers' expectations. It seems that *shimau* in this event is motivated by the boy's socially unacceptable, and thus unexpected, nature of the event.

The connection between the violation of social expectations and the use of *shimau* becomes clearer when contrasting the theft with some other scenes in the same Pear Film which contain socially expected behaviors. In the scenes following the bikeboy's fall from his bike in which three boys help him in (8), and return the bikeboy's hat which was blown away in (9), no instances of *shimau* is found, although all 18 speakers mention the scene in (8) and 16 mention the scene in (9).

(8) Pear--speaker #1
...sono otoko no ko ... sannin ga ne
that male GEN child three NOM IT
... koo ... tasukete ne
like this help IT

...koo... nashi o kago ni ... ireteyatte,
like this pear ACC basket DAT put in:AUX
... soide ...koo zubon no hokori nanka hataiteageru no.
and like this pants GEN dust like dust:AUX IT

'...the three boys,
...uhm...helped (the boy),
...uhm...put the pears in the basket (for him),
...and ...uhm (they) dusted (the boy's) pants (for him).'

(9) Pear--speaker #4

... de sono sannin gumi no hitori ga,
and that three group GEN one NOM
... sono booshi o motte,
that hat ACC carry
otoko no ko tokoro e motteteageta no,
male GEN child place to bring:AUX SE

'... and one of the threesome,
... carries the hat and
brings it to the boy'

These behaviors such as helping others when one sees someone in trouble in front of him/her, and bringing a thing back to the owner if the owner is still at hand, not only fit into social norms, but also are expected things to do. Thus, as in (8) and (9), when the event is projected to fulfill social expectations, it is not marked with *shimau*.

Another example of the violation of the speaker's expectations of social norms which is reflected in the use of *shimau* is revealed in off-line comments in the Pear narrative. In the last scene of the Pear Film, the pearpicker sees the 3 boys pass by him eating his pears, but he lets them go, wondering about the pears they are eating. One speaker describes the scene this way:

(10) Pear--speaker #5

...kekkyoku...sore wa... jibun no nashi ka doo ka
eventually that TOP self GEN pear Q how Q
wakannai tte yuu n de,
know:NEG QT say NML COP
...damatte misugoshichatta tte,
silently let go:CHAU:PST QT

'...well...(the pearpicker) was not certain whether they
(the pears) are his or not,
...(he) let them(the three boys) go in silence,'

The speaker projects that it is expected for the pearpicker to find out how these boys got his pears. That is, in a society in which taking someone's possessions without asking is considered going against social norms, one, in this case the pearpicker, has the right and is expected to stop the boys and inquire about the pears, especially since he is fairly certain about where the pears come from. Because the pearpicker

lets them go instead, the speaker's social expectations towards the pearman becomes violated and reflected in the use of *shimau*.

3.2. LOGICAL REASONING

The second type of expectations which motivates the use of *shimau* is seen in the event in which logical reasoning becomes violated. In (11), giving a narrative about her experience of an air raid during World War II, the speaker first talks about how her family survived the air raid, and then mentions what she noticed in the situation as following:

(11) Personal--speaker #5
honde shit minna atsui atsu tte
and FRG all hot hot QT
mizu n naka e tobikonda shito
water GEN inside to jumped into people
wa yakechatta wake.
TOP burn:CHAU:PST SE

'those who screamed "Oh hot!"
and jumped into the water
got burnt to death.'

Under normal circumstances, going into water should protect one from fire, which means survival in this case. In (11), however, the speaker describes that those who felt hot and jumped into the water were burnt to death, surprisingly. Here, what one expects logically does not work. On the contrary, the unexpected result is found. Thus, when the situation contains an event that goes against logical reasoning, the violated expectation is displayed in the use of *shimau*.

Another example of violated expectation by logical reasoning is found in the scene in which the same speaker as in (11) talks about running away from the fire during the air raid. As she and her father, who had been sleeping at the time of the air raid, run away from the flames of the fire, they carry their futons, as described in (12):

(12) Personal--speaker #5
kaze wa sugokatta desu yo.
wind TOP was fierce COP IT
moo atashitachi futon
EMP we bed clothes
ko mo shotte
like this EMP carry on back
nigeta-n da kedo
escape-SE COP though
futon wa tobasare:chau.
bed clothes TOP fly:PSS:CHAU

'the wind was very strong.
We carried our futons
on our shoulders like this
and escaped, but

the futons were blown away'

A futon, 1-2 inches thick, stuffed with cotton and used for matress as well as a blanket, is pictured as a heavy and thick thing that one usually has to carry on one's back. However, the speaker experiences that even the futon is blown away in the strong wind. While it is not certain why they decided to carry their futons with them as they escaped to a safer place (possibly to use them as protection from fire and smoke or simply because their futons are very valuable to them), the fact something as heavy and thick as a futon can be blown away goes against the speaker's logic. Because the event does not meet her logical reasoning, it is perceived as unexpected, and thus led to the use of *shimau.*

3.3. EVENTS THAT GO BEYOND THE SPEAKER'S IMAGINATION

The two types of expectations examined thus far are based on appropriateness in the light of social norms and probability in a logical mind. In other words, they reveal that we build expectations based on our world knowledge. However, things could happen that are beyond one's imagination. *Shimau* is often used in this kind of situation, i.e., when what one never dreamed of happens.

In the Pear narratives, besides the theft scene, the description of the following three scenes contain the highest number of *shimau* usages: the scenes in which the pears roll out (12 out of 95 tokens; 12.6%), the boy's hat is blown away (13 tokens; 13.7%), and the boy falls off his bike (14 tokens; 14.7%). (See Appendix B) What is in common in these three scenes are that these events happen out of the blue.

First, the scene in which the stolen pears roll out of the basket as the boy falls off his bike is commonly described as below:

(13) Pear--speaker #1
... de sono otoko no ko no
and that male GEN child GEN
... jitensha ga taoreta to dooji ni,
bicycle NOM fell with same time at
.. nashi ga barabarani natchau no.
pears NOM ONM become:CHAU IT

'... and when the boy's
... bike fell simultaneously,
... the pears scatter all over.'

The stolen pears have been in the basket since the beginning of the film up until the time when the boy falls off the bike. If the boy's fall had not happened, the configuration of the pears sitting in the basket would have continued till the end. However, the collection of pears in the basket is disturbed by the boy's fall. In other words, the unit created from the beginning has radically changed its configuration with the boy's fall. Thus, it is assumed that this unit being disrupted is perceived as something that the speaker never dreamed of happening.

Another example of a "never dreamed of" event is found in the scene in which the bikeboy's hat is blown away by the wind:

(14) Pear--speaker #2

... ano...surechigau toki ni,
well pass when at
patto booshi ga tore:chau no,
ONM hat NOM come off:CHAU IT

'... well...when (the bikeboy) passes (the girl on the bike),
the (boy's) hat comes off,'

When the boy is riding on the bicycle, his hat is on his head, and that has been the normal state. When his hat is blown away, and the "unity" of the boy's head and his hat is disturbed, it is perceived by the speakers as something they never imagined to happen.

The other common example in the Pear narratives that show the speakers' "never dreamed of" type of reaction is the scene in which the boy falls from the bike after hitting a stone. For example:

(15) Pear--speaker #14

...okkina ishi de tsumazuite,
big stone INST fall off
...bata tto taorechau-n desu yo ne
ONM QT fall:CHAU-SE COP IT IT

'...(the boy's bike) falls off with a big stone,
...and (he) falls, (you know)?'

The boy has been perceived to be physically healthy up until this scene, so the speaker projects that his injury is something that she never thought of happening.

These examples illustrate that a referent moves in an extremely unexpected manner, i.e., the disturbance of the totality of the object and the surrounding environment, which under normal circumstances, one would never imagine to happen. Thus, this extremely unexpected nature of the events motivates the occurrence of *shimau*.

The same phenomenon is also found in many cases in personal narratives. For instance, the speaker of (16), who lived in the U.S. for a while, pretends to be an American when he goes back to Japan. One day, in order to find his way to his friend's house, he stops by at a local police box, where none of the policemen could speak English. Then the following event happens.

(16) Personal--speaker #11

soshitara soo yutteru aidani nee
then so say:STA while IT
mei sono em pii ga jiipu de
FRG INJ M.P. NOM jeep INST
kichatta no yo
come:CHAU:PST SE IT

'and while (I) was saying that,
that MP
had arrived in a jeep.'

Since the Japanese police could not talk to the speaker, they called the Millitary Police, which the speaker had never dreamed of. Later in his narrative, the speaker mentions that the MP came not to help him but to inquire about where in the U.S. he had come from and ask him for a visa and so on. The speaker pretends to be an American just for fun, and never imagined that this would cause such trouble. As is seen in his use of *shimau* three more times in the scene in which the MP comes in a jeep, this event was such a surprise for the speaker, which goes beyond his imagination, that he probably could not help marking it with *shimau*.

Another speaker expresses her "never dreamed of" experiences in the use of *shimau*. The speaker's narrative is about when she used her friend's ID to buy a "Stand-by" ticket, a discount ticket, to go to Rochester. When she gets off the plane at La Guardia Airport in New York to change flights, she finds her luggage unloaded, despite the fact that she had checked it in for Rochester.

(17) Personal--speaker #12

de oritara nee
and get off:TARA IT
nani o machigaeta ka
what ACC made mistake QT
watashi no nimo nimotsu ga
I GEN FRG luggage NOM
detekichatta wake
come out:CHAU:PST SE

'and when (I) got down,
with some mistake
my bags come out from the plane.'

Especially since she was scared of getting caught for using a false ID to buy her ticket, it was dreadful for her to see her luggage unloaded, in which case she had to check it in again. She never dreamed of this kind of things happening especially when she did not have valid ID, and even worse, when she left her own name tag on her luggage. In describing this unexpected, never imagined event, she reflects her extreme surprise in the use of *shimau*. It is found that just as the speaker of (16), the speaker here repeatedly describes this particular event using *shimau*.

3.4. EVENT HAPPENING AS AN AUTOMATIC/NATURAL RESPONSE

When an event takes place automatically and naturally without the speaker's volition or control, it is often marked with *shimau*. Ono and Suzuki treat this usage of *shimau* as one of the meanings of *shimau* and call it "automatic occurrence without speaker's volition or control". As this category suggests, whether the speaker attempts to control the event or not, the event marked with this type of *shimau* is characterized with its spontaneous, and thus uncontrollable and unexpected nature.

The first is the case in which the event occurs beyond the speaker's control. In (18), the speaker, the same speaker as in (17), who uses a false ID to buy a discount ticket, tries to imitate her friend's signature at the ticket counter.

(18) Personal--speaker #12
anoo nakanaka nee
INJ not easily IT
ano yappari tanin no sain,
INJ expectedly someone else GEN signature
sono toki ni naru to ne,
that time DAT become when IT
te ga furuechatte
hand NOM tremble:CHAU:TE
dekinai wake
can:NEG SE

'it's very...
difficult (to imitate) someone's signature,
when the time comes
my hand just shook and
I couldn't sign it...'

Despite her attempt here and her earlier practice of signing her friend's name, she describes that she simply cannot do it in front of the people at the ticket counter. Against her will and out of control, her hand shakes and ends up signing something that does not even look like the one on the ID, as in (19).

(19) Personal--speaker #12
... zenzen ne,
at all IT
so mibun-shoomeesho ni
FRG identification card LOC
shitearu sain to ze( )
do:STA signature with FRG
shichatta wake
do:CHAU:PST SE
nanishiro mo superingu mo
EMP EMP spelling also
machigatchatte ne,
make mistake:CHAU:TE IT

'not at all
(I) signed (a completely different)
signature from the one on the ID.
even mixed up the spelling, and...'

When she was asked to sign at the counter, she automatically responded to the situation as above, all of which she did not expect to happen, and thus her unexpectedness is reflected in the uses of *shimau*.

While *shimau* is found when an event automatically occurs without the speaker's control, it is also in the case in which the event happens as a natural, automatic response to the situation regardless of the speaker's volition. In the Pear

narratives, some speakers mark the event in which the bikeboy gets attracted to the girl with *shimau* as below:

(20) Pear--speaker #3
onna no ko ga kite,
female GEN child NOM come
soshite, sono hito ni mitorechatta wake.
then that person DAT get attracted:CHAU:PST SE
mitorechatte
get attracted:CHAU:TE
yoko muichatta no yo
side turn:CHAU:PST SE IT

'the girl came and
then (the boy) was attracted to that person
was attracted and
looked sideways'

While she rides by him, not even paying attention to him, the bikeboy is perceived by the speaker to be attracted to her. As people naturally look back when they recognize someone, the boy in (20) does the same thing, as expressed in *yoko mui-chatta* "looked sideways". In the narrator's eyes, this boy's being attracted to the girl and as a result turning his head sideways are treated as spontaneous responses to the situation. Although his looking away causes an accident later on, these events naturally and unexpectedly happen, which is revealed in the use of *shimau*.

A similar kind of use of *shimau* is also found in personal narratives. The first example is from a TV interview program in which the guest actress talks about her father's death. She recalls the time when she visited her father in the hospital for the very last time. Immediately after she and her family had arrived home from the hospital, the following event happened:

(21) Personal--speaker #15
go fun go ni ne, denwa ga kimashite,
five minute after at IT telephone NOM come
sakki nakunarimashita, nante,
a while ago died SOF
ano oneesan kara denwa arimashite,
INJ older sister from telephone exist
bikkurishichatta n desu yo.
be surprised:do:CHAU:PST SE COP IT

'five minutes later, the telephone rang,
there was a phone call from My sister
saying, "(Father) has just passed away," and
(I) was surprised.'

In her earlier narrative, the speaker mentions things that they did at the hospital that day such as take a picture, and things that they talked about such as how thin he became. Hearing the news of her father's death, who she had just seen

a while ago, her immediate response was a simple surprise. She was shocked to hear that her father passed away. Her response to this sudden news was spontaneous and non-volitional, which is thus unexpected, so this event is marked with *shimau*. In fact, several cases of *shimau* with emotive expressions such as *komaru* and *yowaru* "be in trouble" besides *bikkurisuru* "be surprised" as in example (21) are found in personal narratives.

The last example of automatic/natural response to the event is taken from the TV talk show in which an actor gives a narrative about his most impressive moment during the war. Once when he went to Manchuria, he ran into an old farmer who also came from Japan. Although they had no place to stay but in an office, this farmer refused to stay there and insisted on staying on a farm since he was a farmer. When they finally found one neighboring farmer who offered him a place, this old man put his bag down, took off his hat, sat down on the floor, and mentioned the following:

(22) Personal--speaker #16

mago ga ... okuni ni goyakkaininatteorimasu
grand child NOM your country by be taken care of:STA:POL
arigatoogozaimasu tsu yuu-n desu yo
thank you very much QT say-SE COP IT
boka naichatte ne
I cry:CHAU:TE IT

'he said, "your country is
good to my grandchild (who is living here).
Thank you very much.
I started crying (seeing that), and'

Seeing him sitting down the floor with his head on the ground and hearing the thankful words for his grandson, the speaker could not help but cry. Moved by the humble attitude that this old farmer expressed, the speaker's spontaneous response to this event was simply to cry. Since the speaker could neither anticipate nor control the way he reacted, the unexpected nature of his reaction to the situation triggers the use of *shimau* here.

3.5. THE STORY-TELLING TASK

The four types of violated expectations or unexpectedness I have discussed so far are seen in description of the events. However, the notion of violated expectations/unexpectedness is not limited to the narrative content. As Tannen points out that Greek and English speakers build expectations about telling a fluent narrative in the story-recounting task, the Japanese Pear narratives and personal narratives also reveal the speaker's expectations about telling a coherent and fluent narrative. In (23), for instance, at the beginning of a narrative, *shimau* is used with the verb *wasureru* 'to forget':

(23) Pear--speaker #6

Interviewer: watashi mitenai kara wakannai no yo,
I haven't seen so don't know SE IT

Speaker : ...de ... e wasurechatta.
and uhm forget:CHAU:PST

Interviewer: I don't know because I haven't seen it.
Speaker : ...and...well I forgot.

As a subject of an interview, the speaker usually expects himself to succeed in giving a fluent narrative. Contrary to this expectation, a pause and a hedge in (23) indicate that the story-telling is disturbed, i.e., this example reveals the violation of the speaker's expectation of herself as a fluent story-teller. It seems that *shimau* is motivated by this unexpected happening.

A similar example is also found in a personal narrative in which the speaker marks her uncertainty about the object that she is talking about, using the same verb *wasureru*.

(24) Personal--speaker #6
soide a ano sorekoso
and FRG INJ indeed
takuan da ka umeboshi
pickled radish COP or pickled plum
da ka wasurechatta kedo
COP or forget:CHAU:PST IT
moratte ne
receive IT

'and indeed,
(I) forgot if it was pickled radish or pickled plum
(I) got them also.'

Although the information here is nothing crucial to her narrative of looking for her relatives after Tokyo was bombed, the speaker expects herself to know everything about what she talks about. Since the fact that she could not remember exactly what she received in this situation violates her expectation as a fluent narrator, she reflects her violated expectation in the form of *shimau*.

4. DISCUSSION

Thus far, I have discussed the two factors in the use of *shimau*, namely the endpoint orientation and violation of expectations/unexpectedness of an event, and five types of violated expectations/unexpectedness: (A) about social norms; (B) by logical reasoning; (C) through the event that goes beyond the speaker's imagination; (D) through the event happening as a automatic/natural response; (E) about narrative task. Although I divided the various kinds of expectations into the above five types, it is not my intention to assign each usage of *shimau* to a particular type. Actually, it is likely for many instances of *shimau* to be able to fit into multiple categories. In fact, the five types that I proposed deal with different dimensions of expectations. For example, (A) is concerned with social aspect of expectation, while (E) is determined by a culturally defined "narrative task". (B) and (C) seem to deal only with the cognitive dimension of expectation based on an individual's prior experience and his/her world knowledge, but all individuals experience and

build knowledge within the frame of their society. Thus, invisible social norms and expectations are reflected in the expectations categorized in (B) and (C). (D) can be said to be related to spontaneity and controllability, rather than social or cultural aspects of expectation. As a result of a spontaneously or uncontrollably happening event, unexpectedness is brought out, which is often revealed in affect-loaded expressions, such as surprise, trouble, and crying.

Due to the different dimensions that each type deals with, assigning a token of *shimau* to more than one type of violated expectations/unexpectedness is quite possible. For instance, in addition to violating social norms, the theft in the Pear narratives may be viewed as a "never dreamed of" event for the speaker, especially since the boy first appears in the film just as an ordinary boy. Or it could be projected as contrary to logical reasoning, because under normal circumstances, the little boy would not succeed in stealing a whole basketful of pears while the pearpicker is still around. Thus, instead of dividing all of the various kinds of violated expectations/unexpectedness into five categories and assigning each case of *shimau* to one category, I propose various types of violated expectations/unexpectedness that deal with various dimensions of expectations and the possibility of multiple types of violated expectations/unexpectedness for individual case of *shimau.*

While this study mainly addresses the motivation of the use of *shimau,* and its meanings were not particularly discussed, it seems necessary to talk about how the motivation, i.e., the five types of violated expectations/unexpectedness, affects the meanings previously claimed. When an event occurs, by examining it in the light of social and cultural norms and expected behaviors, the speaker gives an evaluation of the event. Only when the event is evaluated as unexpected, which could be either extremely positive or negative, is it marked with *shimau.* In other words, it is natural to have a negative meaning such as criticism or regret when the event is perceived as extremely negative and marked with *shimau.* At the same time it is also possible for *shimau* to convey a quite positive meaning such as accomplishment although no instance of this type appears in my data. Since various kinds of positive and negative meanings are generated at the point in which the speaker gives an evaluation of an event, it is natural that *shimau* reflect the corresponding meanings.

On the one hand the speaker evaluates an event according to the social and cultural norms and expectations. On the other hand an event may be cognitively perceived, such as in the cases of (B) and (C). In that case, the speaker's various attitudes such as surprise or sympathy are likely to be expressed by the use of *shimau.* Although one should not discuss the speaker's attitudes without including whose point of view the speaker is taking, many of the tokens of *shimau* in the Pear narratives do seem to imply affect.

Finally, I would like to mention how a particular genre can affect the use of *shimau.* It was my prior question why the Pear narratives, which seem to be done rather as an objective task, contain more instances of *shimau* than in the personal narratives. Here, the nature of the Pear film seems to play an important role. The Pear Film contains a series of events, many of which could be perceived as unexpected happenings, such as the theft, the boy's fall, and the pears rolling out. Due to this unexpected nature of events, they tend to be marked, and as a result, the frequent use of *shimau*, one of the markers of violated

expectations/unexpectedness, is assumed. On the other hand, when the speaker gives a personal narrative, it usually contains one or possibly two climaxes but not many. That is, most speakers give a backgrounding information, such as when, how, or why the event took place, and gradually move to the main event. Thus, unless the speaker's experience is full of unexpected events, personal narratives tend to have fairly low numbers of *shimau* tokens (average 3.25 tokens of *shimau* per narrative). The exception is the speaker who talks about using a false ID to buy a discount plane ticket. Her narrative contains a total of 12 examples of *shimau*, and this seems to result from the fact that unexpected happenings occur one after another, similar to the Pear narratives. Thus, we see the tendency that the more a narrative contains unexpected events, the more it is likely to have the use of *shimau*.

5. CONCLUSION

I have claimed that *shimau* needs two elements: the endpoint orientation to an event and violated expectations/unexpectedness of the event. All tokens of *shimau* in my data confirm the claim made by previous studies that the events described with *shimau* indicate the endpoint. Also, it is found that *shimau* is triggered by various types of violated expectations/unexpectedness: social, cultural, and cognitive dimensions of expectations. It is thus concluded that in spoken narratives, the notion of expectation is closely related to the use of *shimau*.

There are a few things that the current discussion did not deal with. Recalling how certain types of narrative affect the use of *shimau*, all the claims and observations that I made in this study are limited to two types of spoken narratives: story-recall and personal narratives. Therefore, it is possible to find a different result when examining a different genre such as conversation or child language, although intuitively the two components of *shimau*, endpoint orientation and violated expectations/unexpectedness, seem to occupy the core position of the motivation of *shimau*.

In addition, while I briefly mentioned how motivational factors and previously studied meanings correlate with one another, their full relation is still not clear, as can be seen in some of the types of violated expectation/unexpectedness that I have proposed which are treated elsewhere as the meanings of *shimau*. Further research is necessary to clarify their interrelation in various genres.

This paper is intended as a contribution towards an understanding of the social, cultural, and cognitive factors underlying the pervasive use of morphemes such as *shimau*.

APPENDIX A.

The Pear Film opens with a man picking pears in a tree. While he is busy picking pears, another man passes by leading a goat. Next comes a boy on a bicycle, who rides off with a basket of the pear man's pears. On the road the boy passes a girl on a bike; distracted by her, he bumps into a rock and falls from his bike with the pears. Then three other boys appear on the scene, help the bike boy put his pears back, and send him on his way. As this threesome leave the scene, they discover the bike boy's hat on the road where it fell during his accident, and return it to him. In exchange, the bike boy gives them three pears. The threesome continue down the road, and pass by the pear man. The pear man, who has in the meantime discovered his loss, watches in puzzlement as the threesome pass by eating his pears (adapted with slight modification from Clancy and Downing 1987:55).

APPENDIX B.

I divided the narratives into narrative events as shown in the left column of Table 1. 18 narrative events were identified as a change in character, place or time within a single narrative.

Table 1: Major events in the Pear Film and the distribution of *shimau*

Identified events*	how many sp's mentioned the events	how many sp's use *shimau* in the events	how many tokens of *shimau* are used in the events
1. setting description	5	0	0
2. man picking pears	18	0	0
3. man with a goat (or goat) passing by	13	1	1
4. bicycle boy passes by, steals pear basket	18	13	27
5. he bikes on	1	0	0
6. girl passes by	17	3	3
7. boy looks away (distracted)	11	3	6
8. hat blown away	11	9	13
9. boy falls (because of stone)	17	12	14
10. pears roll out	10	10	12
11. boy gets hurt	4	3	3
12. 3 boys help him	18	0	0

13. boy and 3 boys split			
a) 3 boys leave	6	2	3
b) boy leaves	4	3	3
c) they split	2	0	0
14. 3 boys find boy's hat, returns to boy	16	0	0
15. they receive 3 pears in return	17	1	1
16. boy and 3 boys split once again			
a) boy leaves	3	2	2
b) they split	2	1	1
17. 3 boys walk toward the pear tree	7	0	0
18. pear man comes down, notices 1 basket missing	17	0	0
19. 3 boys pass by, eating pears	18	1	1
20. pearman sees them going off, wondering	14	1	1
Others (off-line comment and interpretation)	-	-	4
TOTAL tokens of *shimau*			95

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