Language Contact: the linguistic aspect of bilingualism

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　千里国際学園の中では、日常的に日本語と英語の2言語使用-バイリンガリズムが観察される。ふたつの言語が接触したときに、何が起こっているのかということを社会言語学的な観点（2002年難波、研究紀要記事参照）や心理言語学的な観点から分析することもできるが、今回は、言語学的な観点からの分析を試みた。

Second Language Acquisition（第2言語習得）の分野

日本語と英語の違いを語彙と文法の面から比較分析することで、日本人学習者が英語を学習するときに直面する問題点に説明を与えることができる。

1- 英語を学び始めて、多くの学習者が行うストラテジーは、ある単語の日本語の訳語をあてはめて覚えるということである。たとえば、dog=犬　といった具合に。しかし、この方法は、"on=上"といった、不正確な一対一対応をしてしまう危険性も持っている。本研究では、鈴木孝夫(1973)が指摘した"かたい"という形容詞の英語と日本語での違いについて、辞書での定義を出発点にして、さらにコーパス(データベース)を使って、データを集め、 Collocation (どんな語と組み合わされるか)のしかたを調べた。英語コーパスは、最大の語彙数を持つ Collins Cobuild Corpus、日本語コーパスは、Google（サーチエンジン）と青空文庫（版権のきれた文学作品を集めたウェブサイト）を利用した。

2- 上級レベルの日本人英語学習者でも、困難を感じるのが、英語の冠詞である。英語を母語として話すものにとって、あまりにも基本的で、普段意識することもない冠詞であるが、そのシステムがどのようになっているかをあきらかにし、日本語で代用させることの難しさを説明しようと試みた。

Bilingual First Language Acquisition（2言語同時習得）の分野

3- 生まれたときから、日本語と英語の二つの語を同時に習得していくこどもの、ケーススタディで得られたデータをもとに、二つの言語の習得の順番にどのような共通点と、相違点があるかを、発音の面からと、文法の面から観察し、さらに Language Transfer (二言語間の影響・干渉)がないかどうかを検証した。文法については、Interpersonal Function(対人的機能)の面からの分析を行った。
　英語と日本語という文法的にも、音声学的にも相違点のかなり多い二つの言語が接触したときに、どういうことが起こっているのかを見るのは、興味深いことである。頭の中では同じことを考えていても、それを言葉にするシステムは、かなり違うということを知った上で、日本人学習者が英語を学ぶときに、あるいは、われわれ教員が教えるときに、どんな点に注意をはらうべきかを明らかにすることは、必要だと考えられる。

参考文献
鈴木孝夫(1973)*ことばと文化*　東京：岩波出版社

Contrastive Analysis of English and Japanese Adjectives meaning 'not soft'

The English lexical set of adjectives "HARD, FIRM, SOLID, STIFF, TOUGH" and the Japanese adjective "KATAI" with four different orthography share the meaning of 'hard' as in 'not soft'.   Two sets of adjectives are compared syntactically and semantically in this paper.
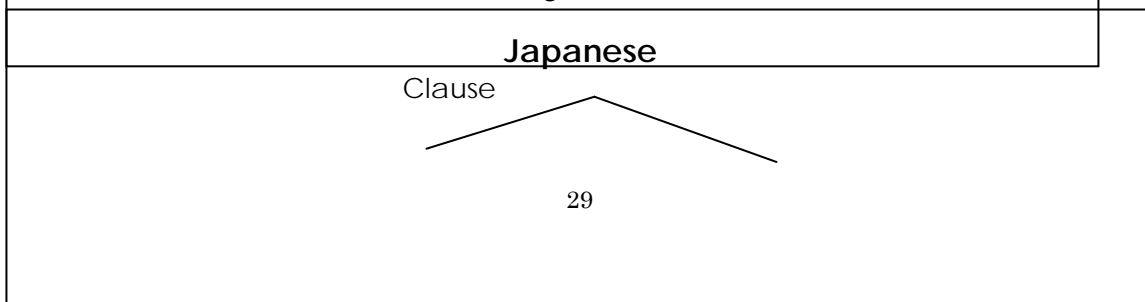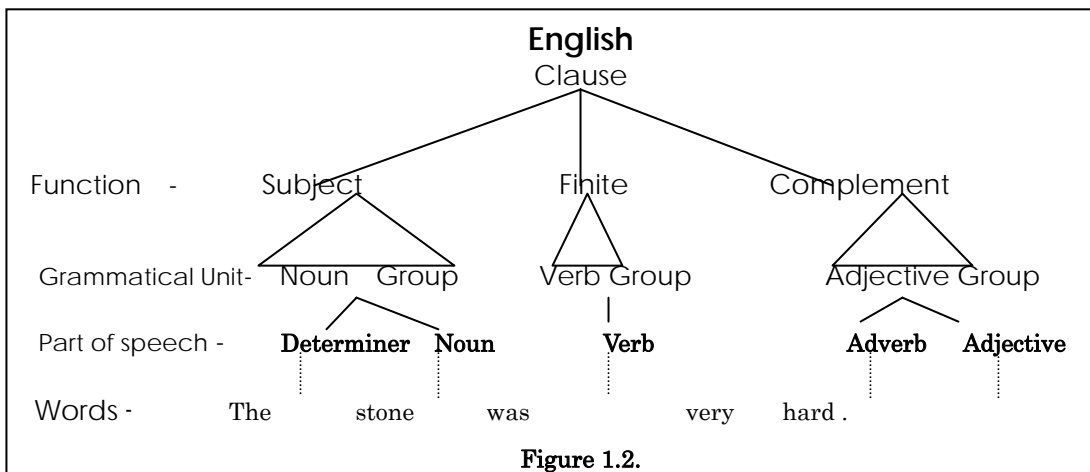
1. Contrast the Syntax of English and Japanese adjectives

There are two salient locations for adjectives to take place in the clause. One is in the noun group and premodifies the head noun which is called Attributive. (Quirk, et al., 1985) Both languages have this usage.(vid. Figure1.1)
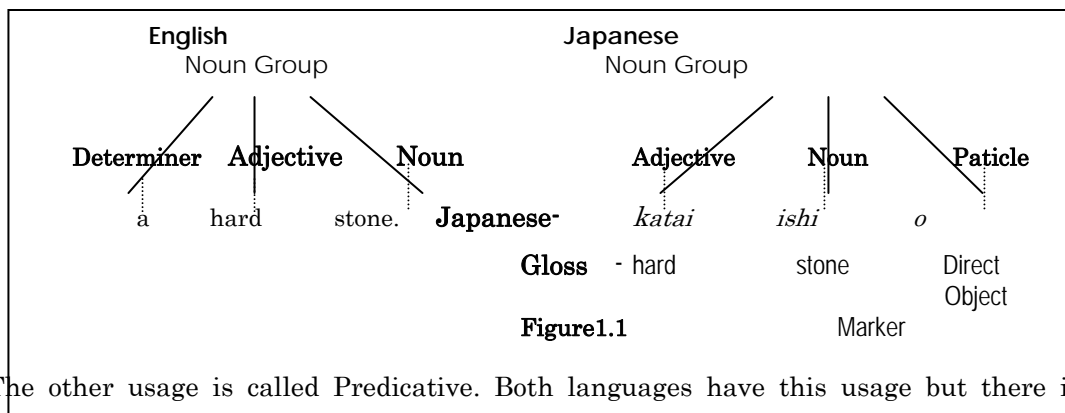
Figure1.1

The other usage is called Predicative. Both languages have this usage but there is a significant

difference in the two. With English the adjective comes after the verb and works as a Complement of the Subject of the clause. (vid. Figure 1.2.)

Figure 1.2.

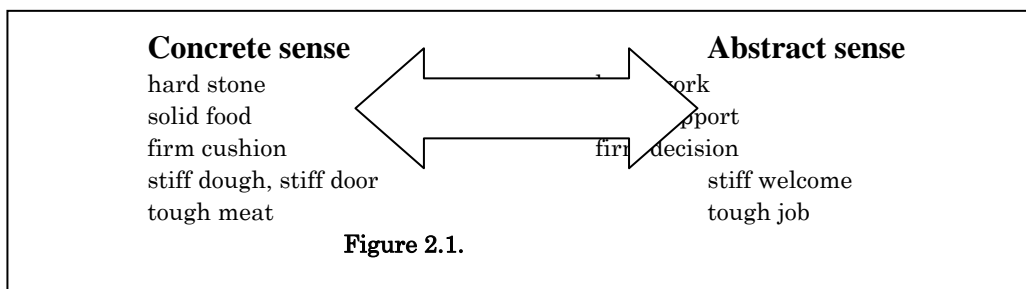| Fuction	-	Subject			Complement+Finite-ness		
Grammatical Unit-		Noun Group			Adjective Group		
Part of speech -	**Determiner**	**Noun**	**Particle**	**Adverb**	**Adjective**		**Particle**
Japanese-	*sono*	*ishi*	*wa*	*totemo*	*katakat-*	*ta*	
Gross	The	stone	Topic Marker	very	hard		Past Tense Marker

Figure 1.3.
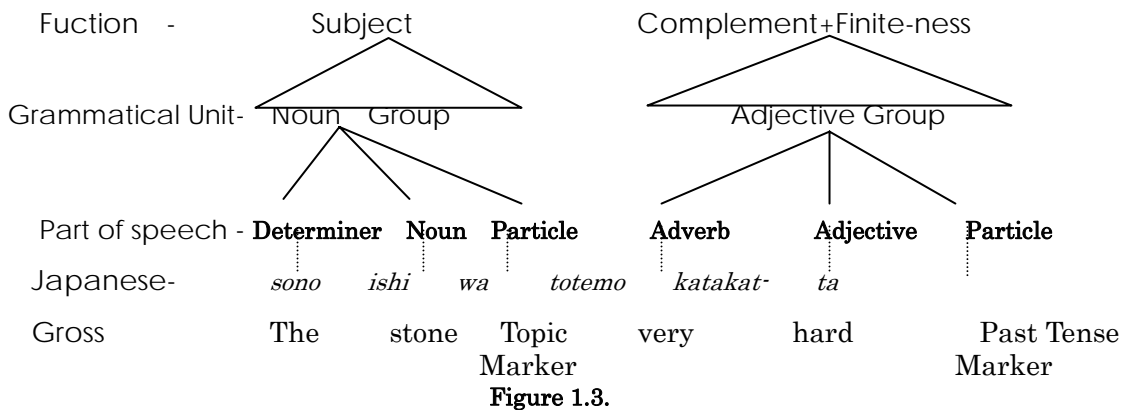
With Japanese clauses, Predicative adjectives work as Finite as well as Complements therefore there is no verb phrase when Predicative adjectives are in the clause. The adjective group has finiteness and the adjective changes its form according to the following particle.(Figure1.3.) When there is a Predicative adjective in the English clause, the verb works as copular and it doesn't have a meaning but it has a finiteness.

2.Contrast the Semantic field of English and Japanese adjectives
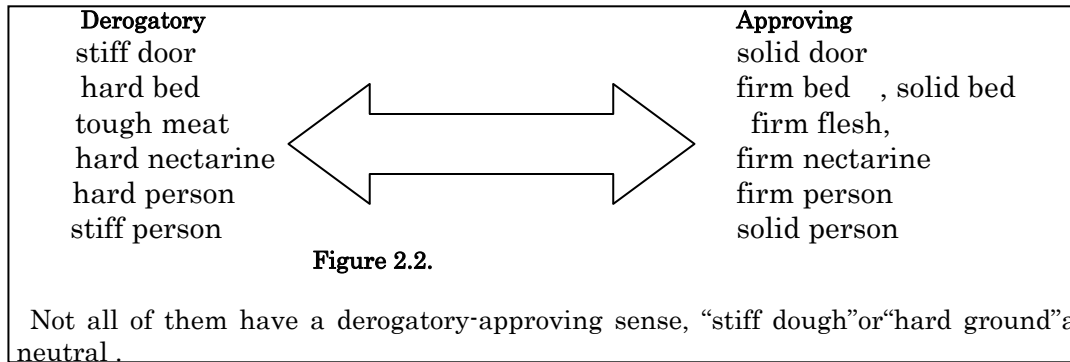
2.1. The semantic field of English adjectives

To explore the range of semantic fields of English adjectives, Componential and collocational Grids (vid. Appendix-I)(Rudska et al, 1982)are devised by construing the definition of the dictionaries(OALD and LDOCE) and Cobuild Corpus (vid.appendix-II for a sample).

Two notions to characterise each semantic component are devised. One is to identify concrete-abstract-ness. Each word has some components which describe concrete feature such as shape or structure of things and also other components which describe abstract features such as human's attitude or behaviour.(vid. Figure 2.1)

Concrete sense	**Abstract sense**
hard stone	...ork
solid food	...pport
firm cushion	fir. decision
stiff dough, stiff door	stiff welcome
tough meat	tough job

Figure 2.1.

The other notion is 'Derogatory-Approving'(definition from OALD). For example "hard bed"is uncomfortable therefore 'derogatory' and "firm bed" is comfortable therefore

'approving'.(vid.Figure 2.2)

Derogatory		Approving
stiff door		solid door
hard bed		firm bed , solid bed
tough meat		firm flesh,
hard nectarine		firm nectarine
hard person		firm person
stiff person		solid person

Figure 2.2.

Not all of them have a derogatory-approving sense, "stiff dough"or"hard ground"are neutral .

2.2. The semantic Field of Japanese adjectives

KATAI has four orthography called "kanji' which are :硬い=*KATAI*-(A), 固い=*KATAI*-(B), 堅い=*KATAI*-(C), 難い=*KATAI*-(D). *KATAI*-(A),(B),(C) share the meaning of 'hard as in not soft' and also have their own semantic fields. Each kanji expresses its own meaning.(vid.Figure 2.3.).

硬い *KATAI-(A)*   1-surface is hard stone or mineral is hard 2-stiff(face, attitude)
[origin of kanji 硬= '石'(stone) + '更'(more and more)→hard stone]

固い *KATAI-(B)*   1-tight, keeping shape 2-not changeable   firmly determined
3-stubborn and not flexible
[origin of kanji 固= '囗'(country) + '古' (old)→old country]

堅い *KATAI-(C)*   1-good quality and strongly made 2-serious and reliable
[origin of kanji 堅= '臣'(retainer) + '又' (hand) + '土'(fortress)
→strong fortress]

難い *KATAI-(D)*   1-difficult [origin of kanji 難= '黄'(gold) + '隹' (bird) →golden phesant]

Figure 2.3 (based on Dai-ji-rin ,Kenkyusha's Japanese-English Dictionary Origin of Kanji is

quoted from Miyamoto,1988)

The same componential and collocational grids as English adjectives are employed to characterise each semantic field of the four Japanese *KATAI*s.(vid.Appendix-II) They can also be categorised by the 'concrete –abstract' and'Derogatory-Approving ' notion.

2.3. Contrast the semantic fields of two languages

In order to identify how English and Japanese adjectives correspond, a cross-language grid

is devised.

A set of components and collocations shared by words of different languages are indicated and 'concrete-abstract'and 'Derogatory-Approving 'features are also identified.

		硬い *KATAI*-(A)	A D	固い *KATAI*-(B)	A D	堅い *KATAI*-(C)	A D	難い *KATAI*-(D)	A D
HARD	Def CE	touch of surface / *hard stone*							
	Def AE							difficult, tiring / *hard work*	**D**
FIRM	Def CE			tight, fixed, strong / *firm grip, firm foundation*	**A**	not yield when pressed / *firm cushion, firm flesh*	**A**		
	Def t AE			definite / *"firm decision"*	**A**				
SOLID	Def CE			not liquid or gas / *solid food*		well made, not hollow / *solid furniture , solid wood*	**A**		
	Def AE			reliable, stable / *firm person*	**A**	unanimous / *solid support*	**A**		
STIFF	Def CE			body,(+) thick and hard to stir / *stiff neck, stick dough*					
	Def AE	serious and tense / *stiff smile*	**D**						
TOUGH	Def CE			food is too hard to cut or chew / *tough meat*	**D**				
	Def AE							difficult, hard / *tough job*	**D**

Def = Definition   **CE**= Concrete Example   **AE** = Abstract Example
A=Approving **D**=Derogatory   **Figure2.4**

The cross language grid points out the followings

- STIFFand HARD correspond with 硬い=*KATAI*-(A). STIFF has a Derogative sense and hard might be used in a Derogative sense.

- FIRM strongly corresponds with 固い=*KATAI*-(B) and also堅い=*KATAI*-(C) in a 'not too soft' sense.

- SOLID corresponds with 堅=*KATAI*-(C) strongly and also with 固い *KATAI*-(B) in a 'non-liquid or gas' sense.

- 固い=*KATAI*-(B) has the sense of concentration or tight-ness.

- English Word corresponds with Derogatory-ness more than Japanese words But each Japanese word have both Approving and Derogatory component.

- Although the kanji 堅 has one +derogatory sense in Japanese as in "katai story" meaning 'serious and boring story' which doesn't correspond to the English adjectives here, it is has many '–derogative' i.e. 'good' meanings therefore it is used for boys name.

- All Approving abstract components have a similar meaning which is steady and reliable.

- 難い *KATAI-*(D) strongly corresponds with the abstract meaning of HARD and TOUGH which are Derogatory.

   The lack of phonemes in Japanese is compensated by kanji. In this study different kanjis work as the different words in Japanese.

Reference

Aozora Bunko Library http://www.aozora.gr.jp

Asahi Newspapers http://www.asahi.com

Couild Direct Corpus

Daijirin Japanese Dictionary http://dictionary.goo.ne.jp

Google Search Engine http://www.google.com

Hornby,A.S.(1995)*Oxford advanced learner's dictionary of current English fifth edition* Oxford: Oxford
        University Press.

Longman's Dictionary of Contemporay English Electronic Dictionary Version London : Longman

Masuda,K(ed) *Kenkyusha's new Japanese-English dictionary* . Tokyo, Kenkyusha

Miyamoto, Y.(1988) *New Kanji dictionary : a component approach to study Kanji* .Tokyo:Nihongo Institute:

Quirk,R et al.(1985) *A comprehensible grammar of the English language.* London: Longman

Redzja, B et al.(1981) *The Words You Need*. Hongkong: Macmillan

Wierzbicka,A.(1987) *English Speech Act Verbs: a Semantic Dictionary* London: Academic Press

Appendix I   Componential and Collocation Grid

Appendix-II   A sample of collocational frequency chart

1.	the	the	a	NODE	**favourite**	of	the
2.	to	with	old	NODE	**game**	and	a
3.	of	of	the	NODE	**grip**	to	to
4.	and	to	law	NODE	**games**	in	and
5.	\<p\>	and	no	NODE	**commitment**	on	in
6.	in	a	s	NODE	**believer**	for	\<p\>

7.	a	<p>	any	NODE	**ground**	<p>	said
8.	it	an	his	NODE	**evidence**	that	has
9.	with	is	and	NODE	**hand**	with	of
10.	has	s	but	NODE	**favourites**	is	he
11.	he	by	of	NODE	**decision**	has	his
12.	1998	have	with	NODE	**friends**	from	was
13.	s	for	very	NODE	**action**	but	is
14.	there	in	security	NODE	**offer**	at	which
15.	by	was	holiday	NODE	**fans**	are	that
16.	from	from	accountanc	NODE	**control**	will	been
17.	is	on	on	NODE	**clash**	the	s
18.	for	at	are	NODE	**support**	about	it
19.	have	has	engineerin	NODE	**boss**	s	an
20.	not	had	computer	NODE	**foundation**	as	have
21.	at	based	london	NODE	**line**	it	will
22.	his	make	legal	NODE	**belief**	he	this
23.	top	been	for	NODE	**price**	i	for
24.	we	his	to	NODE	**header**	which	as
25.	on	become	in	NODE	**conclusion**	said	they
26.	that	take	take	NODE	**start**	a	i
27.	had	brisbane	british	NODE	**rivals**	</h>	what
28.	but	keep	sportswear	NODE	**indication**	this	their
29.	also	top	car	NODE	**match**	was	are
30.	i	as	ground	NODE	**agreement**	had	be
31.	sunday	<h>	insurance	NODE	**stand**	internatio	not
32.	now	it	consulting	NODE	**policy**	when	</h>
33.	will	but	accounting	NODE	**orders**	they	on
34.	up	that	or	NODE	**referee**	who	you
35.	based	british	make	NODE	**erection**	against	yesterday
36.	my	m	research	NODE	**views**	after	<h>
37.	weather	another	lottery	NODE	**intention**	robertson	with
38.	as	last	<h>	NODE	**showdown**	by	good
39.	year	made	this	NODE	**mccullough**	have	ibrox
40.	t	london	has	NODE	**cup**	co	at
41.	today	two	had	NODE	**mr**	between	any
42.	they	be	based	NODE	**body**	waterhouse	top
43.	after	get	became	NODE	**league**	were	one

"of". Tot freq:1323275. Freq as coll:108. t-sc:6.2142. MI:1.3147.
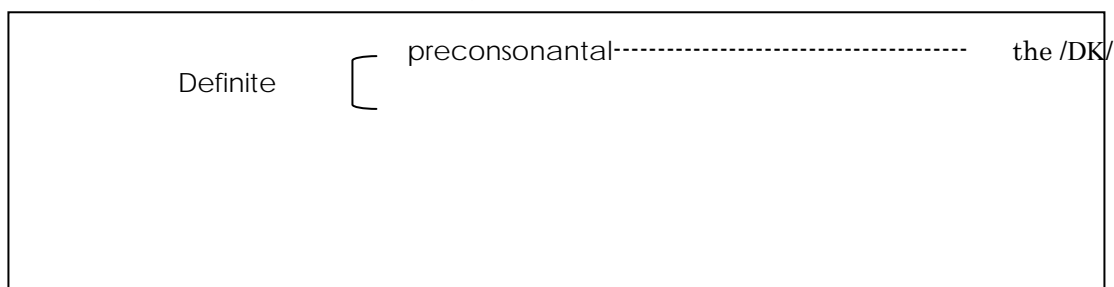NODE = "firm"

The difficulties Japanese Learners Confront in Learning Articles in English

1. Description of the form and the function of English articles

1.1. The system of English articles
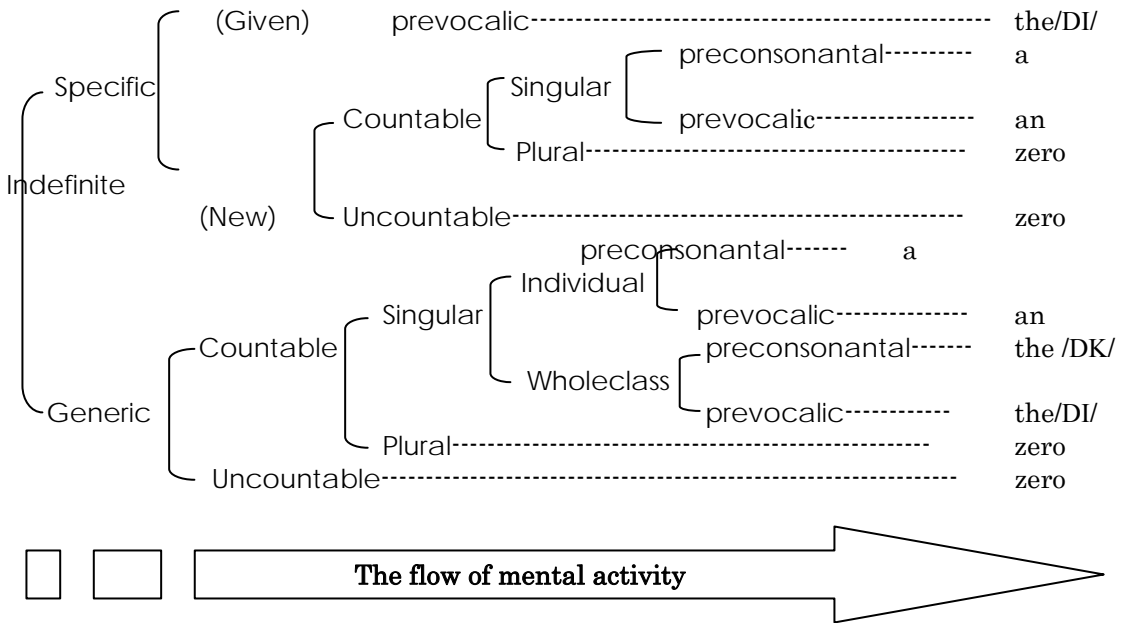English articles are chosen through the system below.

Definite　　　preconsonantal-------------------------------------- the /DK/

Figure-1　The English Article system　based on Mizuno (1999)

1.2. Definite reference

　If an addresser assumes that a noun group can be identified by the addressee, the definite article "the" is deployed. (vid. Figure-1 and Figure-2)

Figure 2　　The system of definite reference　(based on Lock 1996, Young 1993)
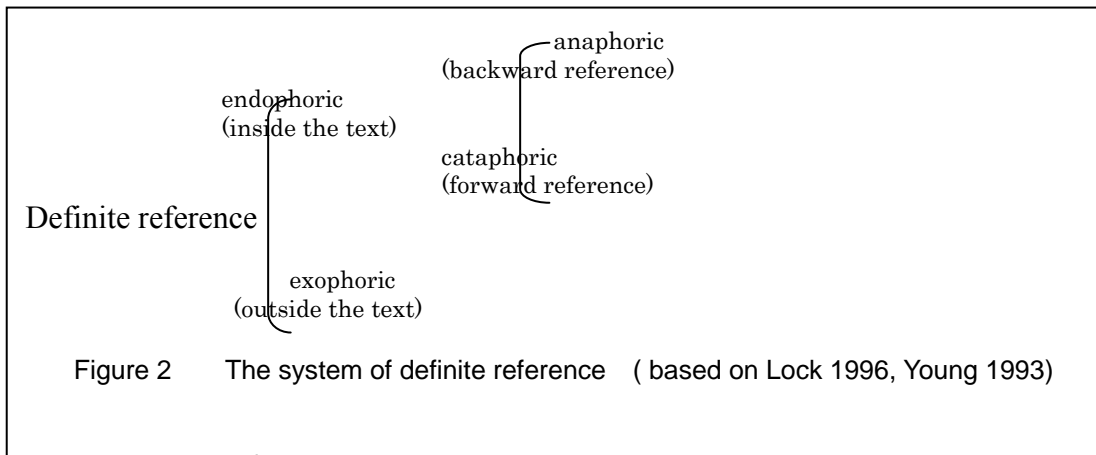
1.2.1. Endophoric Reference

　When a noun group is identified in the situation of thesis(Young 1993) , i.e. within the text (endophoric reference), the reference will be either backward (anaphoric reference) or forward (cataphoric reference)

　　e.g.　He lived in a small house.　　The house was built by his grandfather.

　　　　　　　　　　　←　　　　　　　

　　　　　　　backward (anaphoric)reference

The president of Mexico is to visit China.

⟶

    forward (cataphoric)reference

    "The president" is specified by post modifiers "of Mexico" with cataphoric reference.

There are three means of endophoric referencing : (Young 1993, Quirk et al 1985)

1) Direct reference - repetition of the identical word

    e.g. I talked to a man. The man turned out to be my son's teacher.

2) Indirect reference – by using associated words such as superordinates, hyponyms and meronyms

    e.g. There is a hotel near the station. The manager is a good friend of my father's.

3) Comparative reference – by comparison

    e.g. He has two sons. One lives in London. The other lives in Tokyo.

1.2.2. Exophoric Reference

The noun group can be identified in the situation of utterance.(Young 1993) The situation might be immediate.

    e.g.   Could you pass me the pen ?

The situation can be extended to the community or the culture in which the addresser and the addressee belong to. The referent in this case is the general knowledge of the world .

    e.g. Do you know the prime minister announced his resignation?
         The sun set over the mountain and it got dark.

1.3. Indefinite Reference

If an addresser assumes the addressee can't identify the noun group, indefinite articles are deployed. The information is new to the addressee. If the noun group is countable and singular "a" "an" is deployed. If it is not singular, the"zero" article is deployed.

1.3.1. a, an

The usage of indefinite articles

```
         ┌─ particular (first mention) use          There lived a tiger near the village.
         │              ┌─ labelling use          She is a nurse.
         └─ non particular
                        └─ any use                I want an apple.
```

1.3.1.1. Particular reference

The indefinite articles "a/an" are deployed when the noun group refers to a particular entity which the addressee can not identify.

e.g. There lived <u>a tiger</u> near the village.

The indefinite article indicates that this noun group is mentioned for the first time in the situation of   thesis.

An indefinite reference is also possible with comparisons.

e.g. I lost an umbrella last week.   I lost <u>another one</u> yesterday.

1.3.1.2. Non particular reference

Indefinite articles can also be used when the referent is not a unique entity.

One usage is "labelling".

e.g.   She is a nurse.

"a nurse" doesn't refer to a particular nurse. Here the indefinite article functions as labelling or classification.

The other usage is "any" .

e.g. I want an apple

"an apple" can be any apple.

1.3.2. The zero article

The zero article also has a particular reference.

e.g. There are pencils on my desk.

e.g. He had coffee just now.

 Non particular usage includes "any" but doesn't include "labelling" .

e.g. Would you like chips or peanuts with your drink?

e.g. I'll have coffee please.

1.4. Generic Reference

A reference to the whole group rather than a specific member can be expressed with all the articles.

* the zero article + plural noun   e.g.   Monkeys are mammals.
* a/an + singular noun   e.g.   A monkey is a mammal.
* the zero article + mass noun   e.g.   Coal is a mineral.
* the + singular noun   e.g.   The monkey is a mammal.

Examples from Young (1993)

There are slight differences between the usage of articles.

* zero+plural noun   - refers to every specimen of the class
* a/an+singular noun   - refers to any specimen from the class
* zero+mass noun   - refers to the class of substances.
* the + singular noun   - refers to a technical classification of things such as musical instruments.

2. How the Japanese language presents the function of the English articles

In Japanese definiteness and countability are not recognized in unmarked utterances therefore the "nil"article (Mizuno 1999) is the unmarked form of the noun group.

2.1. The definite reference

In translation the Japanese demonstrative determiner "*sono*" is often used as an equivalent of the English definite article "the".

e.g.   He keeps a dog and a cat.   The cat is bigger than the dog.

Translation   *Kare wa inu to neko o katte iru.*   <u>*Sono*</u> *neko wa* <u>*sono*</u> *inu yorimo ookii.*

Gloss   He   TM   dog   and   cat   DM   keep   The   cat   TM   the   dog   than   big

(TM= Topic Marker   DM= Direct Object Marker)

2.1.1. Endophoric reference

2.1.1.1.Anaphoric reference

Since "*sono*" is employed for anaphoric references in Japanese(Kuno 1973), most of the anaphoric references in English can be expressed in Japanese by using "*sono*".

(1) Direct references can be expressed with "*sono*".

e.g.   There is a hotel near the station.   <u>The</u> hotel has 20 rooms.

Translation   *Eki no chikaku ni hoteru ga aru*   *Sono hoteru niwa 20 heya ga aru*

Gloss	Station	of	near	in	hotel	SM	exist	The	hotel	TM	20	rooms	SM	exist

(SM= Subject Marker)

(2) Indirect References can be expressed with "*sono*".

e.g.　There is a hotel near the station.　.

Translation	*Eki*	*no*	*chikakni*	*hoteru*	*ga*	*aru*
Gloss	Station	of	near	hotel	SM	exist

The manager is a good friend of my father's

Translation	*Sono shihainin*	*wa*	*watashino*	*chichi*	*no*	*ii*	*tomodachi*	*da*
Gloss	The manager	TM	my	father	of	good	friend	StM

(StM= Statement Marker)

(3) Comparative references cannot be expressed with "*sono*".

e.g.　He has <u>two sons</u>.　　　　　<u>One</u> lives in London.　　.

Translation	*Kare*	*niwa*	*hutari*	*no*	*musuko*	*ga*	*iru.*	*Hitori*	*wa*	*rondon*	*ni*
sundeiru.
| Gloss | | He | TM | wo | of | son | SM | exist | One | TM | London | in | live |

<u>The other</u> lives in Tokyo

Translation	**Mou**	**hitori**	**wa**	**tokyo**	**ni**	**sundeiru**
Gloss	More	one	TM	Tokyo	in	live

2.1.1.2.Cataphoric reference

The Japanese language doesn't have postmodifiers, therefore, in the translation, English postmodifiers become premodifiers and "*sono*"functions as an anaphora in Japanese utterances.

e.g.　I like the car they bought

Translation	*Watashi*	*wa*	*karera*	*ga*	*katta*	*sono*	*kuruma*	*ga*	*kiniittiru*
Gloss	I	TM	they	SM	bought	the	car	DM	like

When "the" refers to a finite clause, the use of "*sono*" in the translation is plausible, however when it refers to prepositional phrases the use of "sono"is not appropriate.

e.g.　The president of　Mexico　is　to visit China.

Translation	*Mekishiko*	*no*	*daitoryo*	*wa*	*chugoku*	*o*	*houmon*	*suru*
kotoninatteiru
| Gloss | Mexico | of | president | TM | China | DM | visit | be | to |

2.1.2. Exophoric reference

In the immediate situation of utterance, the Japanese demonstrative "*sono*" is employed only when it refers to an entity which is near the addressee. Although the English demonstratives "this" and "that" indicate the notion of proximity(vid. Figure-4) "the" isn't
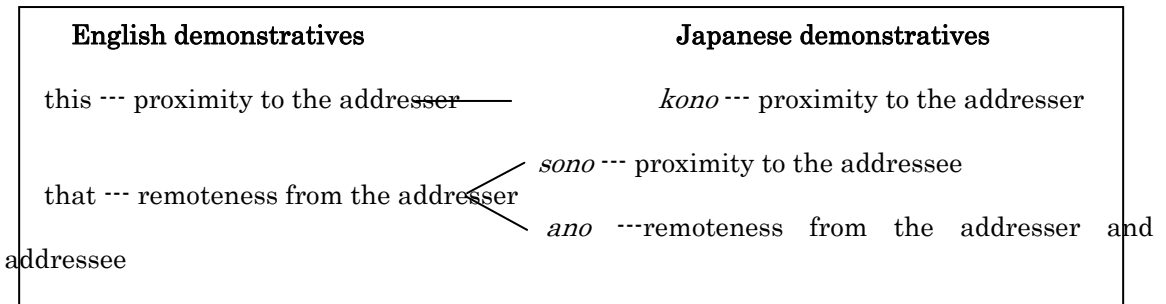
influenced by this constraint.

English demonstratives	Japanese demonstratives

this ··· proximity to the addresser ———

kono ··· proximity to the addresser

sono ··· proximity to the addressee

that ··· remoteness from the addresser

ano ···remoteness from the addresser and addressee

Figure-4 The demonstratives of English and Japanese

Therefore "the" can be compensated for not only by "*sono*" but also "*kono*" or "*ano*" according to the position of the addresser and addressee.

> e.g.　Get me the book.
> 　　Situation (a) if the book is near the addresser
> Translation　*sono　　hon　　o　　totte*
> Gloss　　　　the　　book　　DM　get
>
> 　　Situation (b) if the book is remote from both addresser and addressee
> Translation　*ano　　hon　　o　　totte*
> Gloss　　　　the　　book　DM　　get

A unique entity in the extended situation of utterance is not compensated for in Japanese.

> e.g.　The sun sets in the west.
> Translation　*Taiyo　　ga　　　nishi　ni　sizumu*
> Gloss　　　　Sun　　SM　　　west　in　set

If there is a need to express "the" in an extended situation of utterance, "*ano*" rather than "*sono*".is employed.

> e.g.　The prime minister is speaking on television tonight.
> Translation　　*Ano　soridaijin　　ga　　konya　terebi　de　　hanasu*
> Gloss　　　　　The　prime minister　SM　tonight　television　on　speak

2.2. The indefinite reference-countability

The Japanese language doesn't usually recognize countability, therefore there is no distinction between singular, plural and mass nouns in unmarked forms.

> e.g. There is <u>bread</u> on the table.
> Translation　*Teeburu　　noueni　pan　　ga　　　aru*
> Gloss　　　Table　　　on　　bread　SM　　exist

There is <u>an orange</u> on the table.

Translation	**Tsukue**		**noueni**		**mikan**	**ga**	**aru**
Gloss	Table	on		orange	SM		exist

e.g. There are <u>oranges</u> on the table.

Translation	**Teeburu**	**noueni**		**mikan**	**ga**	**aru**
Gloss	Table	on	orange	SM		exist

When there is a need for counting, numericals and the unit name are employed like the mass noun in English.

e.g.   one orange

Translation	*ik*	*ko*		*no*	*mikan*
Gloss	one+	UNIT		of	orange

two oranges

Translation	*ni*	*ko*		*no*	*mikan*
Gloss	two +UNIT			of	orange

one slice of bread

Translation	*ich*	*mai*	*no*	*pan*
Gloss	one +UNIT		of	bread

(*ko* : the unit name for a round shape object   *mai* : the unit name for a thin object)

2.2.1. a,an

2.2.1.1. Particular reference

The particular usage of the indefinite articles "a/an" can be compensated for in two ways. Either by using "*ichi* (one)+unit name " or *"aru"*(certain)

e.g.   There lived a tiger near the village.

Translation	*Sono*	*mura*	*no*		*chikakuni*	*ippiki*		*no*	*tora*	*ga*
sundeita										
Gloss	The	village	of	near	one+UNIT for animal		of	tiger	SM	lived

Translation	*Sono*	*mura*	*no*	*chikakuni*	*aru*	*tora*	*ga*	*sundeita*
Gloss	The	village	of	near	a	tiger	SM	lived

Since "aru" indicates a particular entity which the addresser assumes that the addressee can't identify, this is appropriate for this usage of "a" and "an".

2.2.1.2. Non particular reference

The labelling usage is not covered by "*ichi*+unit" or "*aru*"

e.g. She is a nurse.

Translation   *Kanojo* *wa* *kangofu* *da*
Gloss   She   TM   nurse   StM

*Translation *Kanojo* *wa* <u>*aru*</u> *kangofu* *da.* or * *Kanojo* *wa* <u>*hitori*</u> *no* *kangofu* *da*
Gloss   She   TM   a(a certain) nurse   StM   She   TM   one person   of   nurse   StM
(* indicates it is not a grammatical sentence in Japanese)

This usage is expressed with no article in Japanese and cannot be compensated for by any other item.

The "any" usage can be compensated for by "*ichi*+unit" but not "aru" because it refers to a particular referent.

e.g. I want an apple.
Translation   *Watashi* *wa* *ikko*   *no* *ringo* *ga* *hoshii*
Gloss   I   TM   one+piece   of   apple   DM   want

Translation   * *Watashi* *wa* *aru*   *ringo* *ga* *hoshii*
Gloss   I   TM   an(a certain)   apple   DM   want

Indefinite usage compensated for by the Japanese language can be summarised as follows.

	ichi +unit	*Aru*
Particular usage	○	◎
Labelling usage	×	×
"any "usage	○	×

Figure –5   Indefinite usages and the compensation by Japanese

2.2.2. The"zero"article

The "zero"article of English and the "nil" article of Japanese (Mizuno 1999) look similar.

e.g. I want water.   Translation   *Watashi*   *wa* *mizu* *ga* *hoshii*
Gloss   I   TM   water   DM   want

Nevertheless the English "zero" article is a marked form and the Japanese "nil" article is an unmarked form.

e.g. I want an apple.   Translation   *Watashi* *wa* *ringo*   *ga*   *hoshii*
Gloss   I   TM   apple   DM   want

Therefore the "nil" article in Japanese can be used for any of the English articles and the markedness of the "zero" article is not compensated for.

2.3. The Generic Reference

The same problem as the "zero" article occurs in the generic reference because the "zero" article is the most common form of the generic reference.

e.g.   Monkeys are   mammals .

Translation *Saru*   *wa*   *honyurui* *da*
Gloss   Monkey   TM   mammal   StM

      I like bananas.

Translation *Watasi*   *wa*   *banana* *ga*   *suki* *da*
Gloss   I   TM   banana   DM   like   StM

If the genericness is emphasized, the adverb "*ippantekini*" meaning "generally" is employed.

e.g. Dogs are obedient.

Translation *Inu*   *wa*   *ippanntekini*   *jujun*   *da*
Gloss   Dog   TM   generally   obedient   StM

3.The difficulties that Japanese learners confront

The lack of a notion of definiteness and countability in the Japanese language makes the article one of the most difficult items to learn. The functions which cannot be compensated for by the Japanese language are difficult to learn . They are listed up as follows

- The cataphoric reference of the definite article "the"
- The comparative reference of the definite and indefinite articles
- The exophoric reference to the extended situation which refers to the general knowledge of the world.
- Labelling usage of "a/an" .
- Zero article
- Generic article

4. Pedagogical Implication

Since there are many difficulties in compensating for English articles in the Japanese language, translation is not a good way to teach articles .It is crucial to teach the concept through the situation.

The situation of utterance should be presented with actual situations. Starting from the immediate situation – the classroom and the school then it can be extended to the community , the country and even the universe.

The situation of thesis should be presented in the discourse. The significance of first-mention and second -mention can be explained through the discourse.

The zero article and generic reference should be taught after the learners acquired "a/an" and "the" because they can be confused with the Japanese "nil" article.

References

Kuno, S (1973) *The Structure of the Japanese Language.*

Lock, G (1996) *Functional English Grammar* . Cambridge : Cambridge University Press

Mizuno, M (1999) Interlanguage Analysis of The English Article System: Some Cognitive

　　　Constraints Facing the Japanese Adult Learners. *IRAL* 37, 127-52.

Quirk, R et al. (1985) *A Comprehensive Grammar of the English Language* . London: Longman

Young, D. J (1993) *Articles and Things, or Why my Students Leave out Definite Article.* Cardiff:

　　　Centre for Language and Communication Research , Cardiff University

The Linguistic Profile of a bilingual child: the development of the phonological and grammatical system in Japanese and English

1 Introduction

　The present study is part of a longitudinal case study of an English-Japanese bilingual child, Toshiya, who experienced a major change of situation. He was born in Japan to a Japanese father and a British mother, entered a Japanese kindergarten just around his fourth birthday and five months later moved to Wales and entered a British primary school. The significant differences of his language situation might enable us to detect evidence of the influence of social context and language input on T's language development.

　In this paper Toshiya's development of each language is described separately from the perspectives of phonology and grammar and language transfer is explored by examining marked forms in each language.

1.1 Literature Review

In the bilingual language acquisition field, the question of whether bilingual children acquire two languages separately from the beginning (Meisel,1989; Genesee,1989; De Houwer, 1990,1995; Lanza, 1992, 1997) or start from the single system (Volterra and Taeshener,1978; Redlinger and Park, 1980; Vihman, 1985) has been a key issue. Volterra and Taeshener (1978) argue that bilingual children go through three stages:

1) one lexicon for both languages

2) separate lexicon but the same syntactic rules

3) differentiation of two languages in lexicon and syntax

De Houwer (1995) argues that there is a consensus in the field that this three stage model doesn't explain bilingual children's acquisition accurately. Birth to the age of 2 is the crucial stage for examining this 'one or two system' question (e.g. Deuchar & Quay, 2000). Toshiya's data has been collected since he was 1;9 and might include some evidence to contribute to this issue. Nevertheless, the primary question of our present study is to explore the influence of the change in his environment on his bilingual acquisition and so our focus will be on a later stage, around 4 years of age. At this stage he had already developed a separate system for each language and the interaction between these two systems is observed and discussed in this study.

One of the major works in cross-linguistic language acquisition is a series of studies edited by Slobin (1985a). After having examined a variety of language acquisition cases, he proposed a set of Operating Principles (OPs) with which children perceive and store language input and then construct patterns (1985b). He predicts that the cognitive development of children is universal and a certain semantic notion should appear at the same time cross-linguistically. If the same semantic notion emerges at different times in two languages, the reason is because the form of one language is less complex than the other (Slobin,1973). De Houwer (1995), however, argues that this FCH (Formal Complexity Hypothesis) has not been proved empirically and that the definition of 'complexity' is ambiguous. Therefore it is beneficial to examine the FCH in relation to fairly different languages such as Japanese and English.

Shirai (1999) investigates the interdependence of cognitive competence and linguistic ability in a Japanese and English bilingual child aged 2;6 to 4;0. She reviews Clancy's (1985) and other studies which argue for the FCH. For instance, the past tense in Japanese is not as complex as the past tense in English thus it should appear earlier in Japanese. Shirai observes the acquisition of past tense and interrogative forms in a Japanese/English bilingual child and finds that, on the contrary, those linguistic forms appear around the same time. She argues that once children develop cognitive competence and acquire a new concept in one language they can express it through both languages at approximately the same time. The subject of the study is only one child and it is difficult to generalize. In addition a sociolinguistic account of acquisition is needed. For example the delay in the acquisition of the personal pronoun in Japanese can be attributed to Japanese culture in which the subject is not an essential element in sentences.

Errors in language offer insight into learners' acquisition strategies, but it can be difficult to identify whether an error is developmentally caused or results from interference based on the first (or other) language. In the 1950's the Contrastive Analysis Hypothesis (CAH) was formulated by Lado (1957, cited in Ellis 1994). The CAH assumes that the difficulty in learning foreign languages can be explained in terms of the differences between the native language and the target language. The CAH was popular in the 1960s but it came under criticism in early 1970s because, amongst other things, it failed to predict learners' errors. Dulay and Burt (1974/1978) conducted a survey and identified that most learners' errors are developmental and that L1 transfer errors are rare. Based on these results, they argued "it is the L2 system rather than the L1 system that guides the acquisition process".(1974:360) Romaine(1995) and Hakuta(1986) argue that there is a problem in distinguishing between developmental and transfer errors in Dulay & Burt's study. Hakuta(1986) reports the case of a Japanese child learner's second language acquisition and he identifies language transfer errors.

One of the most recent language transfer studies in Japanese and English bilingual children is that of Hirai (1999). Her subject acquired English and Japanese simultaneously in the U.S. and moved to Japan at the age of 7;2. She collected two sets of data, at 6;2 to 6;10 and 7;2 to 8;3, to examine language transfer. Language transfer was observed in both languages. The Japanese system of responding to negative questions transferred to English and the English subject inclusion rule transferred to Japanese. Although some attrition in English was observed in the second data set, there was an improvement in both languages and language transfer had decreased.

Nevertheless some of the criteria she employed were problematic.

> e.g. "What's the weather like in Africa?" "Hot"

She regards this reply as subject omission and therefore evidence of language transfer from Japanese. However this ellipsis is not unusual for native speakers of English.

She tried to elicit the response to negative questions by using examples as follows.

> e.g. "Can't you go to Grandma's house by yourself?"

This could be either a negative question or a demand depending on the context. If this is perceived as a demand by the child, the elicited response will not provide appropriate evidence of his response to negative questions. Therefore the sample question should be confined to negative sentences with positive tags.

> e.g. "You can't go to Grandma's house, can you."

This issue will be further discussed later.

1.2.Present Study

In order to establish T's linguistic profile, this paper looks at his utterance in each language separately. This will be examined with regard to phonology and grammar. Attention will be paid to the three phases defined later in 1.3.2, and the characteristics of the acquisition patterns in each phase will be explored.

For each aspect, the developmental pattern is traced first and a cross-linguistic analysis is conducted to explore universal patterns or delays in the acquisition .

Secondly the marked forms are identified and examined to establish whether they are developmental or transfer errors. The literature on monolingual acquisition is referred to, when identifying developmental errors.

1.3 Background information of the present study

1.3.1 The subject and his family

Toshiya (T) was born on 6 April 1996 in Osaka, Japan. He is the first child of a Japanese father (F) and a British mother (M). His father is a native Japanese speaker and had been teaching English in the Japanese secondary education system for 10 years when T was born. He started learning English as a foreign language at the age of thirteen. Toshiya's mother is a native English speaker and she had been living in Japan for 5 years at the time of his birth. She acquired English and Welsh simultaneously from birth in Wales, UK. She started learning Japanese primarily in a colloquial way after she came to Japan. Toshiya's parents decided to raise their child bilingually and adopted the "one parent-one language" strategy in which each parent always talks to the child in his or her native language[1]. His younger brother Ellis (E) was born when Toshiya was 2 years and 6 months old.

1.3.2 The Situation

The family's permanent home is in Japan, so a little background information about the language situation in Japan is helpful here. Yamamoto indicates that "Japan has been perceived and presented as a monolingual and ethnically homogeneous country by many mainstream Japanese"(2001:24) despite a long history of ethnic minority group presence. English is taught from the age of thirteen to eighteen in secondary school and many adults go to language school to learn conversational English. English has a high status in Japan. However it is a foreign not a second language and is not used in the daily life of most Japanese. Yamamoto's survey (2001:40) points out that "the term *bilingual*[2] refers to a speaker of Japanese and English" and bilinguals are expected to have a good command of the four skills in both languages. She also indicates that Japanese/ English bilingualism has a positive image. (2001:39)

The family moved to Wales and lived there for one year. Therefore the language environment of Wales also needs an explanation. In Wales, English is spoken by most of the

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[1] However his mother didn't speak Welsh to T.

[2] Bilingual as "*bairingaru*" is a loan word in Japanese

people and the indigenous Celtic language, Welsh is spoken by 18.7% of the whole population in Wales. (National census,1991 quoted by Baker & Jones:421) In South Wales, where the family lived, the percentage of Welsh speakers is lower than the average. Welsh medium education is available from pre-school to higher education and media in Welsh, i.e. TV , radio and newspapers are also available. There are some Japanese companies and Japanese people living there but the Japanese language is a minority language and incomparable to the status of English in Japan.

In this study Toshiya's language situation is divided into three phases.(see table 1)

Phase	Age	Date	Situation
I	birth to 3;11	April 1996 to March 2000	home in Japan
II	4;0 to 4;4	April 2000 to August 2000	home and kindergarten in Japan
III	4;5 to 5;4	September 2000 to August 2001	home and primary school in Britain

Table 1 The three phases

Phase I starts when he was born in Osaka, Japan. Besides his main interlocutor in Japanese, his father, his paternal grand-parents visited him about twice a month, he went to a play group twice a month and played with neighbours' children. Japanese children's TV programmes were also a good source of Japanese. His mother was his main interlocutor for English, though native English speaking guests visited his home from time to time and talked to him in English. His grandmother came from Wales once a year and stayed about two months. She is a balanced bilingual speaker of Welsh and English but she spoke to T mostly in English. The family visited Wales for 6 weeks every year.

In Phase II, just after his fourth birthday, T entered a Japanese kindergarten. This was a major change of situation with regard to his language acquisition. He went to kindergarten five days a week, five hours a day. During the summer holidays, his father stayed at home and there was a period of two weeks when his mother went out to work. Therefore the amount of Japanese input increased in this phase.

In phase III the family moved to South Wales, in the U.K. T entered the reception class of a primary school where he spent five days a week, six hours a day and began to learn literacy skills. He watched children's television programmes in English every day and played with his Welsh cousin three days a week. She is 2 years and 5 months younger than him. His father was the only source of Japanese in this phase. Compared to phase I and II, the

amount of English input significantly increased and the amount of Japanese input drastically decreased.

1.4 Methodology of the present study
1.4.1 Data collection

The aim of this study is to investigate Toshiya's spontaneous speech in a naturalistic setting. The elicitation technique was hardly employed. The recording was conducted irregularly.

His spontaneous speech was recorded in two ways. Digital audio recordings were made from the age of 1;7 until the age of 5;4. Although several video recordings were also employed, audio recording was the main source of data because in order to collect naturalistic spontaneous speech the Mini Disc (MD) recorder is more expedient than a video camera. A Sony MD recorder with external microphone was employed and data was recorded on 24 MDs. There are approximately 56 hours of audio data. His father always kept the MD recorder ready and as soon as a suitable situation arose, the recording was started. Recordings were usually made when T was involved in some activity such as playing with toys or discussing what was happening on TV.

The other data collection method was a diary. T's mother and father kept written records of T's vocal output in a notebook from the time of his birth. When new features or deviant forms appeared, they were noted. Since his speech couldn't be audio-recorded 24 hours a day, the diary has served as an important resource for pinpointing the crucial moments of his language development.

The data is tabulated into a data index (Appendix-I). First the diary was scrutinized and when significant changes or marked features were found, the audio data around the same period was selected, recorded from MD to computer and transcribed[3]. The sound data and transcription were tabulated into another index with hyperlinks, so that, by clicking on a transcription entry, the audio-version could be immediately heard.(Appendix-II).

1.4.2 Data Analysis

The analyses reported here are qualitative. A quantitative analysis, for example an Mean Length Utterance count (e.g. Brown, 1973) was not employed because this study focussed mainly on the age of three to five and at this age, the length of the sentence is not necessary the most suitable scale to measure language development. Also, the duration of each recording was not long enough to get the 100 utterances that Brown (1973:54) considers

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[3] Appendices don't include actual transcription. See each example in chapter 2,3 and 4.

necessary for an accurate measurement.

Furthermore comparing the number of English and Japanese morphemes doesn't seem appropriate to this study. Clancy (1985:375) argues that in ordinary Japanese conversation ellipsis of nouns or verbs occurs frequently which "makes it difficult to evaluate a child's language utterances in terms of concepts typically applied in analysing the early stages of grammatical development." She also points out that "Japanese child language at the one- and two-word stages is more frequently grammatically complete and correct than would be the corresponding utterances of an English speaking child".

Samples that seemed to be representative of each phase were selected and a number of qualitative analyses were conducted. Since the researcher is the father of the subject and he was always present at the data collection scene, the context could be easily recalled. Since the changes in T's situation are the key factor in this study, the consistent focus was the identification of characteristics for each phase.

In order to answer the research questions, T's linguistic profile is established in this paper. Developmental patterns are identified first and the existence of language transfer is explored.

2 Phonological Perspective of T's language development

Although both segmental and prosodic features could be examined from the phonological perspective, only the segmental will be discussed in this study because of the limitation of space. In this section the phonological systems of the two languages are identified first, then, Toshiya's development is observed, and finally language transfer is examined .

2.1 The differences between two phonology systems

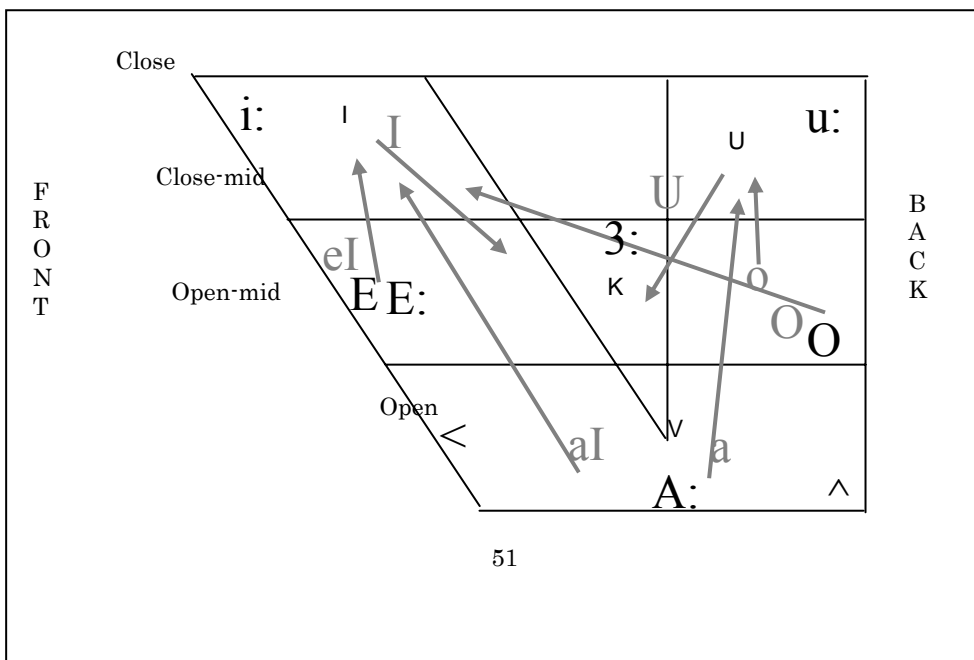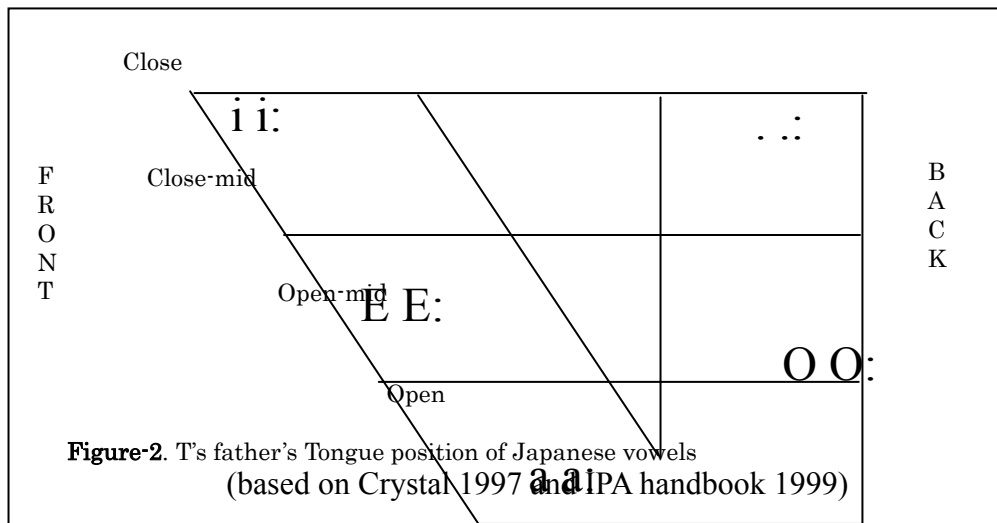## 2.1.1   Contrasting the vowel systems of English and Japanese

Figure-1 [4] T's mother's Tongue Position of English Vowels
(based on Gimson 1994,Crysta1997)
Monophthongs are written in black
Diphthongs are written in grey and described with arrows

Figure-2. T's father's Tongue position of Japanese vowels
(based on Crystal 1997 and IPA handbook 1999)

As figure 1. shows T's mother's English has seven short monophthongs, five long monophthongs, which are different in quality and quantity from short monophthongs, and seven diphthongs. His father's Japanese has five monophthongs /a/, /i/, /ɯ/, /E/, /O/ these have a short form and a long form with the same quality and there are no diphthongs (see figure 2). By contrasting two charts one can predict that Japanese learners will have difficulty with central vowels and diphthongs.

2.1.2 Contrasting the Consonant system of English and Japanese

Again English has more phonemes in its consonant systems than Japanese.(see Table 2) Through a contrastive analysis, one can predict the difficulty Japanese learners will experience with the fricatives /f/ , /v/ , /T/ , /D/. These do actually cause problems among Japanese learners of English. The distinction of the liquids /l/ and /R/ is also difficult because there is only one liquid /*/ in Japanese.

At the allophonic level one thing to note is that aspiration doesn't occur as much in Japanese as in English. /p/ is weakly aspirated (Akamatsu:1997) but /k/and /t/ are not aspirated in Japanese.

By this brief contrastive analysis one can argue that because Japanese has fewer phonemes overall, Japanese learners will have more difficulty in pronouncing English[5] than English learners have in pronouncing Japanese. It should also be noted that the use of similar but not identical phonemes in the two

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[4] Two diphthongs in his mother's vowels different from those of RP (Received Pronunciation) are [E:] and [oU] which are /EK/ and /KU/ respectively in RP.
[5] Japanese learner's errors in English are described in Jenkins (2000:62-63) and Thompson(1987)

languages, e.g. English /u/ - Japanese /./ or English [t^h]-Japanese/t/ and [tS] causes 'foreign' accents.

	Language	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palato-alveolar	Palatal	Velar	Uvular	Glottal
Plosive	E	p b			t ḍ				k g		
	J	p b			t ḍ				k g		
Affricate	E						tS dZ				
	J				[ts] [dz]		tS dZ				
Fricative	E		f v	T D	s z		S Z				h
	J	[!]			s z		S [Z]		[C]		h
Nasal	E	m			n				N		
	J	m			n			[N]	[&]		
Liquid	E				l R						
	J					*					
Approximant	E	w						j			
mant		=						j			

Table-2 The consonant system[6] of Japanese and English
based on Gimson(1994:138), IPA handbook(1999:117) and Akamatsu (1997 :138)

2.2.T's phonological system

2.2.1. Phase I (~3;11)

With vowels, Toshiya had already established a full system before the age of three, and so he did not have to substitute one vowel with another that was not yet pronounceable to him. Nevertheless, consonant sounds were still developing and he seemed to devise the same substitution system in English and Japanese.

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[6] There don't seem to be any significant deviant forms from standard pronunciation in T's father's and mother's consonant system in each language.

Significant patterns are written below.

Following Slobin's OP(Operating Principle) saying that "the phonological forms of words can be systemically modified"(1973:192), T's modifying patterns can be described as a system as follows.

a) Fricatives are substituted by plosives

Age	Orthography	Parents'	T's pronunciation	Translation
		for Japanese	Pronunciation	
< >[7]			/ /[8] [ ][9]	
{ }				

f → p

| <I:3;9.9> | | fell | /fEl/ | [**p**el] |
| <I: 3;9.9> | foot | | /fUt/ | [**p**Ut] |

v → b

| <I: 3;9.9> | | very | /vEri/ | [**b**Eji] |

T → p

| <I: 3;9.9> | bath | | /b<T/[10] | [b<**p**] |
| <I: 3;11.22> | three | | /Tri:/ | [**p**Uji:] |

D → d

| <I:4;0.3[11]> | that | | /D<t/ | [**d**<t] |

s → t

| <I:3;11.22> | see | | /si:/ | [**t**i:] |

Word final /s/ is substituted by idiosyncratic sound.

| <I: 3;11.22> | yes | | /jEs/∩ | [yE**s**][12] |

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[7] The numbers inside the bracket indicates, <phase: year; month. day >

[8] / / indicates his parents pronunciation as the model

[9] [ ] indicates Toshiya's pronunciation as a deviant form

[10] /b<T/ is his mother's pronunciation rather than RP's /bA:T/

[11] T started kindergarten at 4;0.9 therefore this date is regarded as phase I.

[12] This ingressive dental 's' sounds as if he is slurping.

b) Fricatives are substituted by affricates

S → tS

<I: 2;9.17>   *Toshi*   /toSi/   [tot**S**i]   {Toshiya}

c) Liquids are substituted by glides

l → j

<I:3;9.9>   look   /lUk/   [**j**uk]

l → w

<I: 3;10.6>   balloon   /bKlu:n/   [bK'**w**u:n]

* → j

<I: 3;11.22>   *tori*   /to*i/   [to**j**i]   {bird}

d) Consonant clusters are simplified[13]

str → t

<I: 3;9.27>   strawberry   /strO:bERi/   [tO:biji:]

The patterns identified above match the ones mentioned in the literature on children's acquisition of English, such as Crystal (1997: 242). A study on Japanese children's acquisition of sounds also shows similar patterns. Iwabuchi *et al* (1968:67) summarize the patterns as follows:

> Sounds which are 1) easy to articulate 2) easy to distinguish in perception
> 3) frequently occur in conversation 4) easy to watch how to articulate are
> acquired earlier than other sounds./m/and /p/ are acquired first, and then
> other plosives are acquired , then tap/*/, and lastly the fricatives/s/ and /z/ .
> (translated by the author)

This explanation can be applied to Toshiya's consonant system perfectly.

2.2.2. Phase II (4;0~4;4)

Having identified T's phonology system in phase I we will examine if there is a change in that system or not when he moves into phase II.

In phase II, after he entered kindergarten, one marked form appeared in his Japanese , the bilabial fricative sound /!/ pronounced as bilabial plosive /p/. This use is not usual for Japanese children therefore

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[13] This simplification of consonant cluster is common among children (see Smith, 1973:166; Clark &Clark,

this substitution is to be discussed later.

! → p

<II: 4;1.14>   *fune*   /!unE/   [**p**unE]   {ship}

<II: 4;1.14>   *futon*   /!uto&/   [**p**uto&]   {duvet}

On the other hand in phase II, there was a change in his use of the bilabial plosive /p/ for substitution. The labio-dental fricative /f/ was still substituted by bilabial plosive /p/ at the age of 4;2.19, however at the age of 4;3.16 the proper labio-dental fricative /f/ was being used consistently.

f → p

<II: 4;2.19>   coffee   /kOfi/   [kO**p**i]

<II: 4;3.16>   elephant   /'ElI**f**Knt/   ['EjI**f**Knt]

<II: 4;3.16>   far   /**f**A: /   [**f**A:]

Other fricatives are still substituted by plosives and affricates.

T → p

<II: 4;2.19>   mouth   /maUT/   [maU**p**]

D → d

<II: 4;4.4>   that   /D<t/   [**d**<t]

z → d   s → t

<II: 4;1.14>   *zoosan*   /zo:sa&/   [do:**t**a&]   {elephant}

<II: 4;3.13>   *seki*   /sEki/   [**t**Eki]
       {cough}

<II: 4;4.25>   *souyo*   /soojo/   [**t**oojo]   {Yes, it is}

1977:398-399)

S → tS

<II: 4;4.25>	*desho*	/dESo/	[dEt**S**o]	{isn't it?}

    Liquid /l/ is pronounced with the glide sound /j/ at the age of 4;3.16, but he starts pronouncing it properly /l/ at the age of 4;4.4. There is no significant change observed with the Japanese tap sound/*/ and the English liquid sound /R/.

<II:4;3.16>	elephant	/'ElIfKnt/	['E**j**IfKnt]
<II:4;4.4>	elephant	/'ElIfKnt/	['E**l**IfKnt]

<II:4;4.4>	colour	/'kVlK/	['kV**l**K]

    Consonant clusters are still simplified.

<II:4;3.16>	sneeze	/sni:z/	[ni:]

<II:4;1.21>	spider	/spaIdK/	[**p**aIdK]

    The word-final /s/ is still substituted by a slurping sound.

2.2.3. Phase III (4;5~)

    After starting school in Britain at 4;4.26 all T's fricatives are pronounced properly.

<III:4;5.11>	that	/**D**<t/	[**D**<t]

<III:4;5.11>	seven	/sE**v**n/	[sE**v**n]

    Liquids in Japanese /*/and English /R/ are also pronounced appropriately.

<III: 4;5.28>	*hon-nara*	/ho& na*a/	[ho&	na*a]

{well, then}

<III: 4;5.28>   from   /f**R**Km/   [f**R**Km]

Consonant clusters are also pronounced appropriately.

<III: 4;5.28>   start   /start/   [**st**art]

Both of his languages sound quite natural around the age of 4;5 to 4;6 however some marked forms started to emerge around the age of 4;7 to 4:8.

Japanese

t → t^h

<III: 4;7.23>   *owatta*   /owa?ta/   [owa?**t^h**a]

        {finished}

s → T

<III: 4;7.23>   *socchi*   /so?**tS**i/   [To?**tS**I]

        {that way}

tSi → t^{h}I

<III: 4;8.12>   *chigau*   */**tS**i*ga./   [**t^{h}I**gaU]   {no}

English

N → Nk   **T→f**

<III: 4;8.30>   nothing   /'nVTInN/   ['nV**f**I**Nk**]

These deviant forms seem to suggest that he is going backwards because he was pronouncing the sounds properly before. In phases I and II the same substitution system is applied to both languages and his errors seem like developmental ones. At this phase his marked forms seem more like language transfer. The possibility of language transfer is explored in the next section.

2.3 Exploring Phonological Transfer

Having observed T's phonological development in the last section, the marked forms are now

examined with the aim of identifying language transfer. The English marked forms observed in phase III, for example, nothing as ['nVflNk] is likely to be due to the influence of other children. Similarly, "something" and "anything" were pronounced as ['sVmfINk] and ['EnifINk]. These marked forms are typical pronunciation of British children[14]. In addition , although we won't examine it in detail here, his intonation had strong characteristics of the local variety. Therefore in phase III, his English is influenced by school children's pronunciation and the marked forms observed in phase III are local dialect. Therefore no phonological transfer from Japanese to English is observed.

On the other hand several marked forms which don't usually appear in Japanese children's utterances are observed mostly in phase III. In order to explore this we need to return to an example presented earlier.

1) Bilabial fricative [!] substituted by bilabial plosive /p/
2) Alveolar affricate /tS/ substituted by [t^h]
3) Alveolar plosive /t/ substituted by [t^h]
4) Vowel /./ substituted by [U]
5) /s/substituted by dental fricative [T]

2.3.1 Bilabial fricative [!][15]substituted by bilabial plosive[p]

<II: 4;1.14>   *fune*   /!unE/   [punE]   {ship}

This substitution occurred in phase II (see other examples in 2.2.2.2) when Japanese input increased. This might be a developmental error following the pattern of fricative-plosive substitution (see 2.2.1). T's system seemed to have a simple substitution rule that was 'if it is made with the lips (either bilabial or labio-dental) and is fricative, replace it with a plosive'. This explains [p] for /f/ and [b] for /v/ in English (see data2.1) and also explains [p] for [!], since[!] is bilabial like [p], unvoiced like [p] and has lots of aspiration/friction, like [p]. Nevertheless this substitution is not found in the literature   (Iwabuchi *et al* 1968) .

2.3.2 Alveolar affricate /tS/ substituted by [t^h]

<III: 4;8.12>   *chigau*   /tSiga./   [t^{h}IgaU]   {no}

Chigau was pronounced properly in phase II with the post alveolar affricate [tS]. In Japanese this is an allophone of /t/. It is pronounced as [tS] only when /i/ comes after /t/. The sound [ti] doesn't exist in Japanese.

Because this occurred after T had acquired the appropriate way of articulating the Japanese sound, this pronunciation is highly indicative of language transfer.

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[14] Gimson (1962/1994:181) notes that this is a feature of Cockney.
[15] In Japanese the bilabial fricative[!] is considered as an allophone of /h/.When /h/ is connected with /a/, /E/, or /O/ it is realized as /ha/, /hE/and /ho/ whereas when it is connected with /i/ or /./ it is pronounced as [Ci] and [!.] respectively .

This sample shows another item of language of transfer- aspiration.

2.3.3. Aspiration

According to Akamatsu(1997) the Japanese plosives /t/ and /k/ are not aspirated, whereas [p] is weakly aspirated.

In phase III Toshiya's Japanese /t/ and /k/ are aspirated .

<III: 4;7.23>   *owatta*   /owa?ta/   [owa?**t^h**a]

      {finished}

<III: 4;7.23>   tokkyu   /tO?kj.:/   [**t^h**O?**k^h**ju:]

      {express}

This aspiration adds a slight foreign accent to his Japanese, and the feature can be identified as language transfer.

2.3.4   Japanese vowels /i/ and /./ substituted by the English vowels /I/ and /U/

<III: 4;8.12>   *chigau*   /*t*Siga./   [t^hIgaU]   {no -denial}

This sample displays another example of transfer. *Chigau* is a word frequently used at the end of phase II, when his pronunciation was close to the standard Japanese sound. But in phase III he pronounced it with a slight foreign accent. One reason is the use of [t^hI] for /tSi/ mentioned in 2.2.3.5. Another reason is the use of the English vowels /I/ and /U/.

English /</,/E/ and /^/ are not very different from their nearest Japanese counterparts, /a/, /E/ and /o/. However, the Japanese /i/ has more tension than the English /I/ which is more towards the centre and has the same quality as the English long vowel /i:/. The Japanese /./ is unrounded and the English /U/.is rounded. Therefore those vowels create a 'foreign' accent.

2.3.5 /s/substituted by dental fricative [T]

<III: 4;7.23>   *socchi*   /so?**t S**i/   [To?**tS**I]

      {that way}

This also occurred in phase III, when T started pronouncing the English dental fricative /T/ in an appropriate way. One interpretation is language transfer from English to Japanese. Another interpretation is '[16]lisping'. T's lisping in English was observed around the same age within phase III. It is therefore

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[16] /s/ is pronounced as [T].This is a well known phenomenon observed among not only English speaking but also Japanese children.

difficult to be sure that this is language transfer.

3 Grammatical Perspective of T's language development

Grammatical analysis can encompass syntax, morphology, semantics, lexis and discourse. T's language acquisition could be analysed from any of these perspectives. This study however, focuses on how he uses grammar to interact with other people.

3.1 Interpersonal function

When Toshiya started school the need for interacting with other people increased. There might have been some change in his grammar to express interpersonal function.

The interpersonal function is realized by the Mood system in English (Halliday, 1994:69), which is characterized by how the Subject and the [17]Finite elements are placed. Japanese grammar expresses interpersonal function in a different way. Sentence-final particles play the role of the English Mood system.(Funamoto,2000)

Function	Mood in English	Sample sentence English	Sample sentence in Japanese
Statement	Subject^Finite	Toshi can make it.	*Toshiya wa sore tsuku - reru - yo*
			Toshiya TOP it make can EP
Question	Finite^Subject	Can Toshi make it?	*Toshiya wa sore tsuku - reru - ka*
			Toshiya TOP it make can QP
Directive	No Subject or Finite	Make it.	*Tsukut- te*
			make DP

^ ≡ followed by

TOP= Topic marker   EP= Emphasis Particle   QP=Question Particle DP=Directive Particle

Figure 3   Mood systems of English and Japanese[18]

In both languages these functions can be expressed by intonation. For example, rising intonation at the end of the sentence indicates a question. However, in English it is a fairly complicated process to express the function of the question grammatically. It requires recognizing the Subject and Finite, which can be an auxiliary or main verb, and inverting them.

On the other hand with Japanese the process is not so complicated. One can express the function of a question by adding the sentence-final particle *ka*. According to Slobin's (1973) FCH, one can predict that the Japanese question form will appear earlier than the English. In this section, we shall observe how those forms emerged and changed in T's speech.

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[17] Finite element is part of a verbal phrase expressing tense or modality, for example, is, had, can, did. If the clause is simple present of simple past, the lexical verb is the Finite element.
[18] The examples in this figure are made up by the author.

3.1.1. T's development of Mood system in English
3.1.1.1 Phase I

In phase I, for the function of directive, he uses the simple form which is not difficult.

<II: 4;0.10>   T :   Open it.

Yes-no questions are expressed with rising intonation. Wh-words are also used but he can't invert subject and finite.

<II: 4;0.3>   M: They are too small. You can't do the button up can you.

       T :   **Why I can't do it?**
              M: Because it's too small.
<I: 3;10.5>   T :   **What this one is a**?

One thing to mention here is that he has produced correct constructions at an earlier stage.

<I:3;1.17>   T :   Have you finished doing e-mail?

<I:3;1.8>   T :   What's this called?

Nevertheless this doesn't indicate that he has acquired the present perfect interrogative and passive interrogative but that he stored and used a chunk of words as one unit.

3.1.1.2 Phase II

In phase II he is still struggling with inverting Subject and Finite.

<II: 4;3.13>   M: No? Where is it then?

                   T :   Where is it is?

3.1.1.3 Phase III

In phase III there is a great improvement. Now he can invert subject and finite and make an appropriate question form.

<III: 4;5.28>   T :   Where do you start from?

With directives, he can express politeness by using the interrogative.

<III: 4;5.28>   T :   Mummy can you do the number two for me?

In this example he also uses "for me" to indicate he is asking a favour.

Inversion of Subject-Finite is observed in another construction as well - the tag question.

<III: 4;5.28>　　　　(T and his mother is practising writing numbers)

　　　　　　　　T :　　　　That one is not two is it ?

　　　　　　　　T :　　　　That one is two, isn't it.

De Villiers and De Villiers (1978, 1985) and Fletcher (1985) explain that the use of tag questions needs grammatical sophistication:

　1. Match the pronoun to the subject
　2. Shorten the verb phrase to the auxiliary or the dummy form *do*
　3. Negate the positive or affirm the negative
　4. Invert the auxiliary and subject　　　　(De Villiers and De Villiers 1978 : 107)

　T uses the tag 'isn't it' excessively, for example:

<III: 5;2.4>　　　T :　　　Some babies do like it isn't it?

　His mother doesn't use this general tag but this usage is well known as the Welsh variety, therefore he seems to have learned this tag from school. He can also construct a variety of tags, for example:

<III: 4;9.26>　　　T :　　　I never see them before, did I?

<III: 4;10.6>　　　T :　　　I heard something crying, didn't I?

<III: 4;11.13>　　　T :　　　It doesn't have a door, does it?

　　In most cases his use of the tag question is delivered with a falling tone which seems to be eliciting agreement from the addressee.

　A number of chunks or phrases which contribute to interpersonal function are observed in phase III, which are : 'confirmation', e.g. "you see"and 'insisting his turn and trying to get attention',e.g. "I'll tell you what~" and "Do you know what~".

3.1.2 T's development of Mood system in Japanese

3.1.2.1 Phase I

　　Although Clancy (1985:428) observed that the first particles emerge around 1;6-2;0, T started using the first particle *no* at the age of 2;9.17.

<I: 2;9.17>　　　T :　　*Kore*　　*Toshi*　　***no***.　　{This is Toshiya's}
　　　　　　　　　　　this　　　　Toshiya　　GP　　　　　　　(GP=Genitive Particle)

　A different function of *no* is observed two months later.

<I:3;1.17>   T :   *Ellis   nani   mot-   -ten-   -**no**[19]*. {What has Ellis got?}
                        Ellis   what   have   PROG   QP

  (PROG=progressive)

In this case, "*no*" expresses interrogative function. Another example is observed later.

<I:3;3.17>   T :   *Nani   shiten-   -**no**?   {What are you doing?}

        what   doing   QP

Another interrogative particle "*ka*" is observed around the same time as "*no*"

<I:3;3.27>   T :   *Kore   mi-   -yoo   -**ka?**   {Shall we watch this?}

       this   watch   IP   QP   (IP=Intention Particle)

The particle *yoo* expresses the addresser's will therefore the combination of *yoo* and *ka* expresses 'requesting addressee to align with addressee's will'. The sentence-final particle "*ka*" also expresses the male-ness of the addresser as well as being having grammatical function. The directive particle *te* emerged at the age of 3;3. This directive particle can mean 'asking for help'.

<I: 3;3.26>   T :   *Kore   mot-   -**te**.*   {Hold this please}
                         this   hold   DP

<I: 3;4.7>   T :   *Kocchi   i-   -**te**.*   {Stay here please}
                         here   stay   DP

The statement particle *ya* appeared at the end of phase I.

<I: 3;9.28>   *Kore   wa   neko   **ya**.*   { This is a cat.}

       this   TOP   cat   SP   (SP= statement particle)

The particle *ya* is a local accent of the standard Japanese *da* and the use of *ya* is observed frequently around this time. He even puts it at the end of an English phase.

<I: 3;9.28>   T :   Go away   **ya**
                                                SP

3.1.2.2 Phase II

New sentence-final particles keep increasing after he enters Japanese kindergarten.

<II:4;2.10>   T :   *Etto   **ne**.*   {Well let me think.}
                         Well   FP   ([20] FP=Sentence   Final

---

[19] When particles come after verbs, the verb form changes depending on the particle. The connection between the verb and the particle is strong. Therefore hyphen is used to show the connection.

[20] When a clear function is not found, the category FP is allocated. The whole phrase "*Etto ne*" is a phrase for time-buyer or a filler.

Particle)

<II:4;2.10>　　　T :　　　*Tsugi　wa*　　　　　*nani　shi-　　-yoo*
-kana?

　　　　　　　　　　next　　　　TOP　　　　what　　do　　IP

　QP

{**I wonder** what I shall do next}

The two new sentence-final particles *ne* and *kana* seen here express that he is thinking.

　　　The sentence-final particle *yo* has the meaning of "I'm telling you that" and it increased from the age of 4;2.

<II:4;2.10>　　　T :　　　*Kore　janai-　-yo.*　　　{(I'm telling you that) this is not the one}

　　　　　　　　　　　　This　　　NEG　　EP

　　　　　　　　　　　　　　　　　　　　　　(NEG=negative)

<II:4;3.6>　　　　　　T :　　　*Sakini　koko　made　hashiru-　　　-yo.*

　　　　　　　first　here　to　　　　　run　　EP

　　　　　　　{(I'm telling you that) I will run up to here first}

<II:4;4.26>　　　T :　　　*Kore　Toshiya　　　no　　　　　　　chiisai*
*toki　**da-**　-yo.*

　　　　　　　　　　this　Toshiya　CP(Subject)　　　little　　time　SP　EP

　　　　　　　{(I'm telling you that) this is when Toshiya was small}

　　　　　　　　　　　　　　　　　　(CP=case particle)

The patterns shown above ' VP+ "*yo*" and 'NP+ "*da*" "*yo*" are typically used by boys. However, if "*yo*" is used after a noun phrase, 'NP+ "*yo*"', it constitutes the female usage.

<II:4;4.25>　　　T :　　Soo　　yo.　　　　　　　{Yes, it is}
　　　　　　　Yes　EP
　　　　　　　　(Soo is realized as noun phrase here)

　　Toshiya frequently used female sentence-final particles in phase II. Another sentence-final particle "*no*" which has the function of emphasis and is used exclusively by girls.

<II:4;3.13>　　　T :　　　*Kono　jigusoo wa　muzukasii-　-no*　　　{This　jigsaw　is
difficult.}　　　　　　　　　　　　　　　this　jigsaw　TOP　　　difficult
　　EP

<II:4;4.0>　　　　　T :　　　*Hora　ookii　no²¹　tsukut-　-ta-　-no*

　　　　　　　Look　big　thing　make　　　PAST　EP
　　　　　　　{Look, I made a big one.}　　　(PAST=particle　for

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²¹ This "*no*" is an ellipted form of "*mono*" meaning 'thing'.

past)

The emergence of the female sentence-final particle is indicating the influence of his female kindergarten teacher or female friends.

Around the end of phase II, another new sentence-final particle emerged.

<II:4;4.25>　　　T :　　Teletubbie　*ga*　　　　*tabiitoosuto*　*tabe-*　*-nakutemo*
ii-　**-desho**

　　　　　　　　　　　　CP(Subject)　tubbie toast　　eat-　　-don't have to　　TAGP
　　　　　　　　{ Teletubbies　don't　have　to　eat　　tubbie　toast　do　they?}
(TAGP=Tag Particle)

"*Desho*" is a variant of the particle "*desu*" which expresses the function of the statement and politeness It corresponds with the English tag question. By using "*desho*", the speaker seeks agreement from the addressee.

3.1.2.3 Phase III

In phase III no new sentence-final particles appeared. The most frequently observed particle is "*desho*".

<III: 4;7.1>　　T :　　*Ip*　*pon*　　　*wa Baanii*　　*desho*　{One　is　Barnie [22]
isnt't it?}
　　　　　　　　　　　　　one　　UNIT[23]　TOP　Barney　　TAGP

<III: 4;7.1>　　T :　　*Baanii*　　　　*wa*　*ookii-*　　*-desho*　　　　　{Barnie　is
big isn't he?}
　　　　　　　　Barnie　　TOP　big　　　　TAGP

From around the age of 4;8 on he even talked to his Father in English but at the age of 4;9.29, he talked in Japanese while watching a Japanese video.

<III:4;9.29>　　T :　　*Tsugi*　　　　*wa*　　　　　　*onigiri desho* {the next one
is a rice ball isn't it?}　　　　　　　　　　next　　　　TOP
　　　　riceball　TAGP

One can argue that "*desho*" is firmly established in Toshiya's lexicon.

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[22] Barnie is a character of a children's video.

[23] "*Pon*" is a particle used when counting long objects , e.g. Ip　pon　no　pen {one pen}

one　unit　of pen
　　He should have used unit name for animal "*piki*" here, i.e.　Ip　piki
　　　　　　　　　　　　　　　　　　　　one　unit

3.2 Exploring language transfer in T's grammatical development

In this section we examine language transfer, or interference, in grammar in more detail. Syntactic, morphological, semantic and lexical transfer have been examined in the literature, but because of the constraint of space we shall concentrate on the same areas that we have examined so far. There is one error in the sentence-final particle of Japanese and one in the Mood system of English which will be studied in more depth. The possibility of language transfer is then explored .

3.2.1 Morphosyntactic transfer in Japanese : genitive particle

Toshiya consistently makes errors in the following expression.

<II: 4;2.4>　　T：　　***Toshiya**　　　　*no*　*dake*　　　　(*****indicates a deviant form)

　　　　　　　　　Toshiya　　　GP　only

Standard form - √ *Toshiya*　　*dake*　　　*no*　　　(√ indicates the standard form)

　　　　　　　　Toshiya　　　only　GP　　　{This　is　only Toshiya's}

Another example was observed in phase II.

　　　　　　　T：　　***boku**　*no*　*dake*

　　　　　　　　I　　　GP　only

Standard form - √ *Boku*　　*dake*　　　*no*　　　　{This　is only mine}

　　　　　　I　only　GP

In Japanese the genitive form is constructed at a syntactic level using the form "*no*", and if there is another element in the phrase , it should go between the noun and the particle *no* because particles are put at the end of the phrase or sentence.

　　　　　　　　　　　　　　↓
　　　Toshiya　*no*　　　*Toshiya* **dake**　*no*
　　　NOUN　GP　　　NOUN　only　　　GP

In English the genitive form is constructed at a morphological level and other elements can not be inserted between lexical morphemes and grammatical morphemes.

　　　　　　　↓　　　　　　↓
　　Toshiya's　　*Toshiya **only** 's　　√ Toshiya's **only**
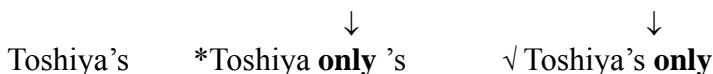
In this case the rule of the English genitive form might be used for the Japanese genitive form.

3.2.2 Semantic Transfer in English : Negative question

As Hirai(1999) pointed out, the response to the negative question is one place where language transfer occurs between Japanese and English. This always happens to adult learners of English and is an error Toshiya consistently makes in English.

Here is a sample of his error. The context is that he had a headache the previous day and now he feels well. Mother asks him about his condition.

<III: 4;9.26>   M: Toshi you haven't got a headache tonight, have you?

                        T : Yes
    M: No I haven't ⋯(Correcting)
                        You haven't got a headache, have you?

                        T : Yes
    M: You're not going to school tomorrow, are you?

                        T : Yes

T doesn't have a headache and he is not going to school tomorrow. Therefore according to the English system he is supposed to answer "No".

If these questions were asked in Japanese, the answers should be *un* meaning "yes".

    M :   *Toshiya,*   *konya*   *wa*   *atama*   *itaku-*
-nai-   *-ne?*

    TAGP

Toshiya   tonight   TOP   head   hurt   NEG

{Toshiya, you haven't got a headache tonight, have you?}

    T: *Un*   *itaku-*   *-nai-*
-yo

Yes   hurt   NEG   EP

{Yes, I haven't}
(This is a made-up translation by the author)

The response can be translated into ' Yes I haven't.' There is a semantic difference between English and Japanese negative questions and answer systems. In Japanese the addressee gives affirmation/negation to the addresser's statement, whereas in English the addressee gives affirmation/negation to the actual matter. Toshiya's error can be attributed to a semantic error from Japanese to English.

In order to confirm this language transfer, elicited questions are conducted as follows.

<III:5;2.11>   F :   Do you like Diesel 10.?
                        T：No.
    (Diesel 10 is a bad train in "Thomas the tank engine" movie and he doesn't

like it)

F :   *Toshiya, Diesel-ten   suki-   -janai- -no?*
                                like   NEG   QP

                                                    T : Yes. I will smash him.
                        F :   You don't like Diesel 10, do you?
                                                    T : Yes.

<III:5;2.11> (After T said that he preferred school dinner to his mother's
              sandwiches.)
              M: Toshiya, tomorrow, are you going to have school dinner or
              Mummy's
                  sandwiches?
                                                    T : School dinner.
              M: You don't like Mummy's sandwiches?
                                                    T : Yes

T keeps giving affirmation to the addresser's statement even though it is English.

In her investigation, Hirai (1999) uses negative questions starting with *don't* or *can't*.

    e.g. Don't you like hamburgers?

        Can't you go to Grandma's house by yourself?

She argues that negative tag questions scored a higher percentage of errors than negative questions. The use of these negative questions for elicitation is problematic, because sometimes they are used as a demand rather than questions. The addressee's "yes/no" might therefore express the acceptance or refusal for the demand.
The same type of negative-questions were employed in our study.

<III:5;2.11>   F :   Don't you like Diesel 10?

              T :   No. I will smash him.

<III:5;2.11>   F :   Can't you drive a car?

              T :   No.

T answered correctly. Because they are not questions but demands. "Don't you like Diesel 10?"doesn't really have a negative proposition. It implies the meaning of "You must like Diesel 10. He is nice." Therefore to examine the transfer in negative-question responses, tag-questions are appropriate and negative questions are problematic.

4 Discussion

4.1 The development of T's phonology

T's phonological system shows progress through the three phases. Although he differentiates between the phonological systems of the two languages, he has similar difficulties in both languages with certain items in certain periods and applies the same strategy to compensate for the problems. With the production of consonants, he has difficulty with fricatives and liquids in both languages. Plosives for fricatives and glides for liquids are employed as substitutes. In phase III most of the difficulties are overcome. Some unique deviant forms are observed in phase I and phase II, e.g. the use of /p/ for Japanese /!/, however it is difficult to tell if this is language transfer or just an idiosyncratic phenomenon within the developmental process. In this case, influence of input might also be a factor.(see chapter 4)

In phase III his pronunciation has developed to a certain level so that it seems easier to identify language transfer. The language transfer doesn't cause serious intelligibility problems but his Japanese has a slight foreign accent. Language transfer seems to influence the points where the two languages have quite close but slightly different qualities, e.g. adding aspiration to Japanese /t/ or the use of /u/ for Japanese /./.

The fact that the transfer occurred only from English to Japanese implies that English has become dominant because of the increase in its input. However the quality of the input should also be examined because when his Japanese input was at its peak during his attendance of Japanese kindergarten, his English wasn't influenced by transfer from Japanese.

Another thing to note about his English in phase III is that he started acquiring the community dialect. His English seemed to regress at one point because of the deviant form of the dialect. This is also one major input factor influencing his language.

Although his perception of the phonology is not mentioned in this chapter, he showed some evidence of how he perceived English and Japanese sounds. It is discussed in the metalinguistic awareness section of the next chapter.

Another interpretation is parental input. His mother pronounces [!.] as [fU] because she learned the Japanese sound from the orthography "fu". One can argue that Toshiya tries to copy his mother's [f] sound and uses the rule [f] substituted by [p].

4.2 The development of T's grammar

With regards to grammatical development, we have focussed, in this study, on T's expression of interpersonal functions. Two grammatical forms with the same function 'seeking agreement' appeared in different phases. The Japanese sentence-final particle *desho* appeared in phase II. The English tag question *isn't it* and other forms appeared in phase III.

Two interpretations are feasible. One is the one proposed by Slobin's FCH (1973,1985):   the more

complex form -- the English tag question -- emerges later. The Japanese sentence-final particle is obviously less complex .

The other interpretation relates to the influence of the environment. In phase II T went to Japanese kindergarten and there was more of a need to interact with peers and teachers in Japanese. Therefore his expression of Japanese interpersonal functions developed and *desho* emerged .

On the other hand, in phase III he entered a British primary school and the need for English interaction increased. Therefore his expressions of English interpersonal functions developed.

Both of these environmental factors are relevant to his development, and the nature of his input should be taken into account.

There is some evidence that he produced the perfect English interrogative form at an early stage and then, later, he produced the non-inverted form. He gradually acquired the interrogative grammar system and finally in phase III he produced the standard interrogative form. This can be interpreted as follows. First he stored the interrogative form as a chunk and then he gradually acquired the grammatical system, as the input from his environment made his grammar more sophisticated. The links between these three factors should be explored further.

With language transfer, the word order transfer from English to Japanese can be explained as either transfer from English or a developmental error.

The response to the negative question is safely explained as language transfer. T's error is consistent even after he moved to Britain and English input increased. However, Hirai(1999) reports that it didn't take long for her subject to overcome this transfer. Her subject was aged 7 to 8 and might have had enough grammatical competence to adjust against the transfer, while T at the age of 4 doesn't yet have that competence.

4.3 Implication

Having explored his development in each language, it is reasonable to interpret the patterns as indicating that the change of his environment played a crucial role in his bilingual development. In order to see this, it is necessary to examine not only the quantity but also the quality of input. Japanese sentence-final particles showed lots of evidence of input-related influence, e.g. the use of the female marking particle. Specifically, there might be influence from his female teacher in the Japanese kindergarten. The difference between input from mother and father should be explored. His strategies and his attitudes towards both languages are also essential factors.

References

Akamatsu, T. (1997) *Japanese Phonetics: theory and practice.* Munhen: Lincom Europa.
Baker, C. and Jones, S. P. (1998). *Encyclopedia of Bilingualism and Bilingual Education.*Clevedon: Multilingual Matters.

Baker, C. (2001) *Foundations of Bilingual Education and Bilingualism* (3rd edition). Clevedon: Multilingual Matters

Bhatia, T.K.and Ritchie, W. C. (1999) The Bilingual child: some issues and perspectives In Ritchie, W. C. and Bhatia, T.K. (eds.) *Handbook of Child Language Acquisition.* Orlando, FL: Academic press.

Brown, R (1973). *A First Language: the early stages.* Cambridge Mass: Harvard University Press.

Clancy, P.M.(1985) The Acquisition of Japanese. In D.A. Slobin (ed.) *The Crosslinguistic Study of Language Acquisition, Vol.1: The Data* Hillside, NJ : Lawrence Erbaum Associates.373-524

Clark, H.H. and Clark, E.V. (1977) *Psychology and language: an introduction to psycholinguistics.* New York: Harcourt Brace Jovanovitch

Cruttenden, A. (ed) (1994) *Gimson's Introduction to the Pronunuciation of English* . London: Edward Arnold

Crystal, D. (1986). *Listen to Your Child* London: Penguin Books*.*

─────(1997). *Cambridge Encyclopaedia of Language* (2nd edition). Cambridge: Cambridge University Press

De Houwer, A. (1990) *The Acquisition of Two Languages from Birth: A Case Study.*Cambridge: Cambridge University Press.

─────(1995) Bilingual language acquisition. In P. Fletcher and B. MacWhinney (eds.) *The Handbook of Child Language.* Oxford: Blackwell, 219-50.

De Villiers, J.G. & De Villiers, P.A (1978) *Language Acquisition.* Cambridge, Mass.: Harvard University Press

─────(1985) The Acquisition of English. In D.A. Slobin (ed.) *The Crosslinguistic Study of Language Acquisition, Vol.1: The Data* Hillside, NJ : Lawrence Erbaum Associates, 373-524

Deuchar, M and Quay, S. (2000) *Bilingual Acquisition: Theoretical Implication of a Case Study.* Oxford:Oxford University Press.

Dulay, H.C. & Burt , M. K.(1974/1978) Natural sequences in child second language acquisition. *Language Learning* 24(1):37-53. Reprinted in Hatch (1978) *Second Language Acquisition: a book of readings.* Rowley, MA: Newbury House, 347-361.

Ellis, R. (1994) *The Study of Second Language Acquisition.* Cambridge: Cambridge University Press

Fantini, A. (1985) *Language Acquisition of a Bilingual Child: A Sociolinguistic Perspective.* Sandiego: College Hill Press.

Fletcher, P. (1985) *A Child's Learning of English.* Oxford: Basil Blackwell Publisher

Funamoto, H. (2000) "The Communicative Unit in Japanese Texts: Analyzing the Mood Structures". Paper presented at International Systemic Functional Congress, University of Melbourne, Melbourne, Australia.

Genesee, F. (1989) Early bilingual language development: one language or two? *Journal of Child Language* 16: 161-79

Hakuta, K. (1974) Prefabricated Patterns and the Emergence of Structure in Second Language Acquisition. *Language Learning* 24(2): 287-297

─────(1986) *Mirror of Language: the debate on bilingualism.* New York: Basic Books.

Halliday, M.A.K. (1975). *Learning How to Mean.*London: Arnold.

─────(1994) *An Introduction to Functional Grammar.* London: Edward Arnold

Hirai, S. (1999) Language Transfer between English and Japanese: A case study of a simultaneous English Japanese bilingual *Japan Journal of Multilingualism and Multiculturalism* 5: 57-79

International Phonetic Association (1999) *Handbook of the International Phonetic Association.* Cambridge: Cambridge University Press

Iwabuchi. E. *et al* (1968) *Kotoba no Tanjo: Ubugoe kara Gosai made* Tokyo: Nippon Hoso
        Shuppan Kyokai

Jenkins,J (2000) *The Phonology of English as an International Language.* Oxford: Oxford
        University Press

Meisel, J. M. (1989) Early differentiation of languages in bilingual children. In
        K. Hyltenstenstam and L. Obler (eds) *Bilingualism across the Lifespan.*
        Cambridge: Cambridge University Press, pp 13-40

Redlinger, W and Park, T.Z.(1980) Language Mixing in Young Bilingual Children. *Journal*
        of Child Language 7, pp337-352.

Romaine, S (1995) *Bilingualism* (2nd edition)*.* Oxford: Oxford University Press.

Shirai, J. (1999) Interdependence of cognitive and linguistic development: Evidence from the
        development of a bilingual child. *Japan Journal of Multilingualism and*
        Multiculturalism 5:80-90.

Slobin, D.I.(1973) Cognitive prerequisite for the development of grammar. In C.A.Ferguson
        & D.I. Slobin (eds.) *Studies of Child Language Acquisition.* New York: Holt,
        Rinhart & Winston, 175-208

—————(ed.) (1985a) *The Crosslinguistic Study of Language Acquisition Volume 1:*
        London: Lawrence Erlbaum Associatioates, Publishers

—————(1985b) Crosslinguistic Evidence for the Language-Making Capacity In D.I.
        Slobin (ed.) *The* Crosslinguistic Study of Language Acquisition Volume 2: London:
        Lawrence Erlbaum Associatioates, Publishers.

Smith, N.V. (1973) *The Acquisition of Phonology: a case study.* Cambridge: Cambridge
        University Press.

Vihman, M.M.(1985). Language Differentiation by the bilingual infant. *Journal of Child*
        Language 12, pp297-324.

Volterra,V. and Taeschner, T.(1978) The acquisition and Development of Language by
        Bilingual Children. *Journal of Child Language* 5:311-326.

Yamamoto, M. (2001) Japanese attitude towards bilingualism: a survey and its
        implications In M.G. Noguchi & S. Fotos (eds.) *Studies in Japanese Bilingualism.*
        Clevedon: Multilingual Matters,24-44.