The acquisition of the English determiner phrase

by Japanese and Spanish learners of English

Neal Snape

A thesis submitted for the degree of Doctor of Philosophy in Language and Linguistics

Department of Language and Linguistics

University of Essex

November 2006

Acknowledgements

I would like to express my sincere thanks to my supervisor, Professor Roger Hawkins, for giving me the opportunity to undertake a Ph.D in Applied Linguistics at the University of Essex. He has been supportive, patient, encouraging and above all, available throughout, given that he has a busy schedule to maintain. His supervisions have been extremely helpful in allowing me to guide my research in the direction I wanted to take it.

A special thanks goes to Dr. Yan-kit Ingrid Leung for her time and enthusiasm. When I started my research she was kind enough to give me piles of academic papers relevant to my topic, which have been valuable reference material. Over the past three years she has become a very good friend. Further thanks go to the following people; Sonja Eisenbeiss, Andrew Radford, Wyn Johnson, Paula Reimers, Panos Athanasopoulos, Chieko Kuribara, Heather Goad, Ayşe Gürel, Mits Ota, Tania Ionin, Bonnie Schwartz, Mitsuru Hiki, Sean Mahoney and Danijela Trenkic. My thanks extend to all those who I met and chatted with at the various conferences I was fortunate enough to attend. Audiences at postgraduate conferences; University of Durham, University of Reading, University of Cambridge, plus the international conferences; J-SLA 5, GALA 2005, EUROSLA 15, 16, GASLA 08 and GALANA 2.

Finally, I wish to thank my dearest wife Atsuko for enduring the last three years. I would have not been able to complete my research without her support. It has been a great opportunity for her to live, study and work in the UK while I have been studying at the University of Essex. It has also given my parents, who have been very supportive throughout, the chance to get to know their daughter-in-law and vice versa. This has been an added bonus of being a full-time Ph.D student living in the UK.

Abstract

The acquisition of articles in English is notoriously difficult for second language (L2) learners of languages without articles. Early studies by Huebner (1985), Parrish (1987) and Thomas (1989) reported omission and substitution errors in their data. Recent accounts of omission of articles in obligatory contexts suggest variously that there is a mapping problem between the morphological or PF component and the syntax (Robertson 2000, White 2003), a representational deficit problem (Kuribara 1999, Hawkins *et al* in progress) and an inability to represent articles prosodically (Goad & White 2004, 2006). Substitution errors are claimed to be the result of a failure to set an 'article choice parameter' appropriately for English (Ionin 2003a, Ionin *et al* 2004). The current thesis extends this work on L2 English by investigating speakers whose L1s are Japanese and Spanish. Japanese is an article-less language, while Spanish marks definiteness and plural, like English. Specifically, the investigation tests the success of the existing hypotheses in accounting for the performance of these speakers in a series of experimental tasks. Additionally it examines whether a 'nominal mapping parameter' proposed by Chierchia (1998a), which determines whether bare NPs in a language are argumental, predicative or of both types, provides insight into L2 learners' knowledge of the English nominal domain.

Results from a grammaticality judgement task, forced choice elicitation tasks and oral/written production tasks show that the Japanese L2 learners can distinguish between countable and uncountable nouns but continue to have difficulties with definite *the* in plural and mass contexts and with indefinite *a* in count singular contexts. The results are consistent with the claim that the Japanese and Spanish L2 learners can reset the Nominal Mapping Parameter. Substitution of *the* for *a* and *a* for *the* was found in the forced choice elicitation tasks, but it is argued that this is not the result of an inability to set an article choice parameter. Rather, it is

expected given that L2 learners from article-less languages have to 1.) remap features made available by the L1 or via UG to forms in the L2 (Lardiere 2005) and 2.) they lack knowledge about the syntax-pragmatic interface rules (Bos *et al* 2004, Hopp 2004). Overall, the Spanish L2 learners behaved much more like the native speakers on all the tasks.

It is argued that the findings are consistent with the Full Transfer/Partial Access (Hawkins & Chan 1997) and Full Transfer/Full Access (Schwartz & Sprouse 1994, 1996) hypotheses.

Table of Contents

Chapter 5. A cross-linguistic analysis of Japanese and Spanish: NPs and DPs

Chapter 6. Experiment 1: the count – mass grammaticality judgement task

Chapter 7. Experiment 2: the forced choice elicitation task: types of (in)definite

Chapter 8. Experiments 3 and 4: story re-call production task: oral and written versions

Chapter 9. Experiment 5: - forced choice elicitation tasks: definiteness and specificity

Chapter 10. Discussion and Conclusions

Appendices

List of Tables

List of Figures

Abbreviations

Acc	Accusative
ACP	Article Choice Parameter
Adj	Adjective
AdnQs	Adnominal Quantifiers
±arg	±argument
Art	Article
Cl	Classifier
ClP	Classifier Phrase
COMP	Complementizer
CountP	Count Phrase
D	Determiner
DP	Determiner Phrase
Dem	demonstrative
DM	Distributed Morphology
EFL	English as a Foreign Language
ESL	English as a Second Language
HK	Hearer Knowledge
Fem	feminine
fnc	functional word
FFH	Failed (Functional) Features Hypothesis
FH	Fluctuation Hypothesis
Ft	Foot
FT/FA	Full Transfer/Full Access
FT/PA	Full Transfer/Partial Access
Gen	genitive
ILGs	interlanguage grammars
IND	indicative
INFL	inflection
IP	Inflectional Phrase
JLEs	Japanese Learners of English
LF	Logical Form
L1	first language

L2	second language
L3	third language
masc	masculine
MSIH	Missing Surface Inflection Hypothesis
MUH	Morphological Underspecification Hypothesis
N	Noun
NP	Noun Phrase
NMP	Nominal Mapping Parameter
NmrlP	Numeral Phrase
nom	nominative
NS	Native Control Speakers
NumP	Number Phrase
OQPT	Oxford Quick Placement Test
PF	Phonological Form
Pl	plural
PLD	Primary Linguistic Data
PPh	Phonological Phrase
±pred	±predicate
PTH	Prosodic Transfer Hypothesis
PWd	Prosodic Word
QP	Quantifier Phrase
±R	±referential
RDH	Representational Deficit Hypothesis
Sing	singular
SLA	second language acquisition
SLEs	Spanish Learners of English
SR	Speaker Referent
SUBJ	subjunctive
TOEFL	Test of English as a Foreign Language
uF	uninterpretable feature
$u$num	uninterpretable number
UG	Universal Grammar
VP	Verb Phrase

Chapter 1

Universal Grammar and L2 acquisition of the nominal domain

1.0   Introduction

The main focus of this research is to investigate the acquisition of the Determiner Phrase (DP) in English by adult non-native learners, in particular the syntax, semantics and phonology of article use and the distribution of nouns (singular, plural, mass). The following two hypotheses will be tested: the Full Transfer/Partial Access to Universal Grammar (UG) hypothesis (Hawkins & Franceschina 2004, Hawkins 2005, Hawkins *et al* in progress) and the Full Transfer/Full Access hypothesis, which claims that there is full access to Universal Grammar (Schwartz & Sprouse 1994, Schwartz & Sprouse 1996, Schwartz 1998a). In both cases it is assumed that the entire first language (L1) grammar (minus phonetic exponents) is the initial state of the second language (L2) grammar, and that development consists of restructuring on the basis of experience with samples of input. The accounts differ, however, in their view of the role of Universal Grammar. Full Access assumes that L2 learners in principle have all of the resources of the language faculty available for the construction of an L2 grammar, whether instantiated in the L1 or not. By contrast, the Partial Access view holds that a subset of the features of UG (specifically uninterpretable syntactic features) disappear from the UG inventory if not activated during primary language acquisition. Hence L2 learners will potentially suffer a deficit in this domain. L2 learners can, in principle, acquire UG-determined properties of the L2 that are not instantiated in the L1, other than uninterpretable syntactic features.

1.1. Early studies in L2 acquisition of articles

Early studies of L2 learners from article-less languages, such as Parrish (1987), Thomas (1989), Young (1996), Murphy (1997) and Shikano (2001) investigated L2 article acquisition by adopting an analysis of them in terms of the referent of the NP by the speaker and hearer in a speech event using Bickerton's (1981) universal features [±Specific Referent, ±Hearer Knowledge]. The four possible combinations of features are presented below;

[-Specific Referent] [+Hearer Knowledge]
This combination defines the generic use of *the*/*a*/*Ø* where the reference of an NP is to the class of entities in question, hence is non-specific, but it is assumed that the hearer can identify this class from general knowledge of the world.

e.g. *The* beaver builds dams/*A* beaver builds dams/ *Ø* Beavers build dams.

[+ Specific Referent] [+ Hearer Knowledge]
This combination defines the use of *the* when an NP refers to a specific entity which the hearer can identify from the discourse or from context.

e.g. Tim brought a French wine for dinner. *The* wine was very good.

[+ Specific Referent] [-Hearer Knowledge]
This combination defines the use of *a/Ø* when an NP refers to a specific entity, but it is not known to the hearer from the previous discourse or from context.

e.g. Tim brought *a* French wine for dinner.

[-Specific Referent] [-Hearer Knowledge]
Finally, this combination defines the use of *a/Ø* when an NP is not known to the hearer from discourse or context, and furthermore does not refer to a specific entity.

e.g Tim has never seen *a* beaver

As the current work sets out to test Japanese L2 learners of English (an article-less language) the findings from earlier previous studies provide interesting insights into how learners perform in different tasks.

1.1.1. Parrish (1987)

Parrish reports on the development of a Japanese L2 learner of English. The subject, named Mari, was placed at the 'beginner level' due to her results on a placement test. Parrish collected data over a four month period by asking the subject to tell two stories, one about her own country and the other about the US. These tasks took place every ten days with each session lasting 20-30 minutes. The data was then classified for all contexts where a native speaker would use articles by using the [±SR, ±HK] features. Tokens of *the*/*a*/*Ø* used by the L2 speaker were counted as a proportion of the obligatory contexts for a native speaker. The results of her study show that the Japanese subject used *the*/*Ø* more often initially and then *a* started to emerge in the later stages of development. In the initial stage there was an overuse of the definite article *the*[1] in the [+SR, -HK] context, but *a* also correctly appears in the [+SR, -HK] context where a native speaker would use it. The conclusion drawn from this study is that there is a pattern of use of *the* in [+SR, +HK] contexts and *a* in [+SR, -HK] contexts, consistent with the native pattern. Importantly, the indefinite is used less frequently than the definite article and is always restricted to [-HK] contexts (-HK being the correct context for native speakers).

---

[1] Huebner (1985) found similar results in his study of a Hmong speaker from Laos. However, his subject tended early on to 'flood' all contexts with the definite *da* (equivalent to *the*). Subsequently, the subject started to drop *da* first from [-SR, -HK] contexts, and then from [+SR, -HK] contexts where *a* not *the* is possible for native speakers of English.

1.1.2. Thomas (1989)

Thomas investigated the acquisition of articles by conducting a study involving 30 adult L2 learners of English. The initial hypotheses were that learners would associate *the* with [+SR] rather than [+HK] contexts, but be more accurate restricting *a* to [-SR, -HK] contexts. Thomas collected data on the spontaneous production of *the*, *a* and *Ø* by administering a picture description task. Of the 30 subjects, there were French (n=1), German (n=1), Italian (n=2), Spanish (n=2) and one Greek (L1s with articles) and twenty-three were Japanese (n=13) Chinese (n=6), Korean (n=3) and one Finnish (L1s without articles). All the subjects were placed into three proficiency groups low (n=11) mid (n=9) and high (n=10). The results show a similar pattern of development between the French, German, Italian, Spanish and Greek subjects (L1s with articles) and Japanese, Chinese, Korean and Finnish subjects (L1s without articles) in relation to *the* and *a*. Nevertheless, the L2 learners from article languages supplied articles more frequently than the L2 learners from article-less languages with *the* and *a* in appropriate contexts. Thomas's results support the hypotheses in that learners associated *the* with [+SR] not with [+HK] and correctly selected *a* for [-HK] contexts. Her findings seem to suggest that L1 influence is present and that L2 learners with an article system in their L1 have an advantage over those who do not. Nonetheless, the L2 learners without articles do use articles in English in the appropriate contexts,[2] but as a result of L1 transfer there are more occurrences of *Ø*.

---

[2] Thomas (1989) examined the results of the Japanese/Chinese/Korean/Finnish learners together, so it is not possible to assess whether the Japanese performed better than the Chinese etc. It is possible that there is a difference between them because of different L1 influence.

1.1.3. Murphy (1997)

Murphy reports on the acquisition of articles by 30 adult Korean and Spanish L2 learners of English. The level of proficiency was based on their TOEFL scores.[3] A number of tasks were given to the learners. An oral and written component, a cloze-type passage, a metalinguistic task whereby learners could state which rules they were familiar with for using English articles and a follow-up interview. Though both groups were less accurate in the use of indefinite *a* the Korean L2 learners experienced greater difficulties. No overgeneralization of *the* by the Korean or Spanish L2 learners was found in the [+SR, -HK] contexts. Article omission by the Korean L2 learners was the main error type. Murphy found that overall the Spanish L2 learners performed better than the Korean L2 learners and concluded that this was probably due to L1 transfer from Spanish to English.[4]

The results from the earlier L2 studies show a pattern of development in the acquisition of articles similar to that of L1 English children. Children overuse *the* if the referent is known by the speaker (see chapter 3 for discussion). The significance of the findings in the earlier L2 studies relate to the concepts definiteness and specificity which will be explored in the current work.

In recent generative work the focus has been more on the way that articles realise properties of Universal Grammar, and whether the L2 acquisition of articles indicates that L2 learners' grammars are fully or only partially constrained by UG (Trenkic 2000, Kowaluk 2001, Leung 2001, White 2003, Ionin 2003a, Ionin *et al* 2004, Hawkins *et al* in progress, Lardiere 2005, Ionin *et al* in press). Some languages require articles (or equivalent determiners) with all

---

[3] Murphy (1997) admits that the Spanish learners in her study could be more advanced as TOEFL scores were slightly higher. The TOEFL scores did not predict actual proficiency level at the time of testing.

[4] Trademan (2002) investigated the acquisition of articles by Japanese and Spanish learners of English using written essay tasks. She found that most errors were produced by the Japanese which tended to be omission of *a* or *the* when an article or the plural marker *–s* is obligatory for native speakers of English. Unfortunately, no comparison can easily be made with similar studies due to the lack of statistical analysis (ANOVAS or t-tests) on the dataset.

(or almost all) uses of NPs (e.g. French, Spanish, Italian). Others have no article system at all (e.g. Japanese, Chinese, Vietnamese). English requires articles in some NP contexts but not others. One way of capturing variation between languages in the nominal domain is the Nominal Mapping Parameter (Chierchia 1998a).

1.2.   The Nominal Mapping Parameter (NMP)

Three different languages are the focus of this present study; English, Japanese and Spanish. Each language differs with regard to the nominal domain. Chierchia (1998a) proposes a system that allows for certain semantic variation in terms of how the reference of the syntactic category NP is set - the Nominal Mapping Parameter (henceforth NMP), which is a parameterised property of UG. Three kinds of language can be distinguished in terms of their NP type: whether all NPs can refer directly to kinds (i.e. can be used generically), and hence are possible arguments in syntactic expressions, whether no NPs can refer directly to kinds, but are predicates that need to be accompanied by a determiner, and whether some NPs can refer to kinds directly and some cannot. These distinctions can be captured by using two primitive features [± argument] and [± predicate]:[5]

a. NP [+arg, +pred]	b. NP [+arg, -pred]	c. NP [-arg, +pred]
English, German	**Japanese**, Chinese, Thai	**Spanish**, Italian, Greek
- L1s with (in)definite articles. - Number marking on Ns. - Bare mass Ns.	- L1s lacking an article system. - No number marking on Ns.	- L1s with (in)definite articles. - Number marking on Ns. - No bare mass Ns

---

[5] The [-pred, -arg] option is obviously excluded as this would prevent an NP from having any interpretation at all.

English is a language with the setting [+arg, +pred] which allows bare plural and mass nouns to function as arguments without the need for a licensing determiner, but count singular nouns require licensing otherwise they are ungrammatical. Japanese is a language with nouns that are mass-like or 'kind-denoting' [+arg, -pred], whereas Spanish is a language where all nouns need to be licensed by some kind of determiner [-arg, +pred]. Japanese has nominals that are merged into argument positions in syntactic expressions without the need for a determiner. Spanish is a language that has singular, plural and mass nouns that can never be merged directly in argument positions without a determiner[6]. The Spanish learners are predicted to perform better than the Japanese learners on all tasks because the NMP setting for Spanish is similar to the setting for English [+pred]. Thus, the Nominal Mapping Parameter is expected to play a central role in L2 English acquisition as Japanese and Spanish are two languages with different NMP settings to English.

1.3. The Article Choice Parameter (ACP)

The Article Choice Parameter is a semantic parameter with two values: +/-definite and +/-specific. Languages that have a two-article system select one value or the other. English and Spanish, for example, have selected +/-definite. Samoan and other Polynesian languages have selected +/-specific. On encountering a two-article system, language learners have to fix this parameter. Ionin (2003a) and Ionin *et al* (2004) have claimed that L2 learners fluctuate between parameter settings until the input leads them to fix the appropriate value. By combining the Fluctuation Hypothesis with the Article Choice Parameter, a prediction is that L2 learners who

---

[6] In some languages where nominals obligatorily require a determiner, the overt form of the determiner may be deleted when immediately c-commanded by a lexical category. This appears to be a case of deletion of the exponent of the D, not the absence of the D itself.

encounter English will initially fluctuate between the definiteness setting (e.g. English) and the specificity setting (e.g. Samoan) for articles.

This picture is complicated by the possible effects of transfer from the L1. There may be a distinction between speakers of L1s that already have articles marking definiteness, and speakers of L1s that do not have articles in terms of development. While the former might not fluctuate, the latter might.

Given that there are two parameters which coexist, the Nominal Mapping Parameter and the Article Choice Parameter, it is possible to make certain predictions about how L2 learners acquire English by testing L2 learners whose L1s are different. The Article Choice Parameter is not activated in L1s without articles whereas the Nominal Mapping Parameter is set for each language at the early stages of L1 acquisition. The empirical data for this thesis comes from four tasks given to intermediate and advanced Japanese and intermediate and advanced Spanish adult L2 learners of English: a count – mass grammaticality judgement task, a story re-call task (oral production and written production) and forced choice elicitation tasks. It is predicted that as Spanish is a language with articles and number marking on nouns whereas Japanese is not, there will be potential differences between the two language groups acquiring the DP in English. There are also expected to be potential differences within the Japanese and Spanish L2 groups as there are two proficiency levels in each group. The central question is do Japanese learners have access to syntactic and semantic features in UG which are not present in their first language? Thus, the present work seeks to explore the L2 acquisition of articles and nouns from a generative perspective to see whether there are potential differences between the two L2 groups and attempt to explain any differences found. Through examining the use of articles by L2 learners of English it is possible to test the following existing hypotheses in the SLA literature.

1.4.   L1 transfer and access to UG

1.4.1. No Access

Under this view Bley-Vroman (1989) argued that first language acquisition is fundamentally different to second language acquisition. The claim is that there are specific differences between child and adult language acquisition and UG is not involved in SLA.[7] Adult L2 learners do not have access to UG after puberty and rely on general learning strategies. Clahsen & Muysken (1986) reported on L2 acquisition of German word order and examined developmental differences between child and adult L2 acquisition. They argued for no parameter resetting from the L1 to the L2, thus no access to UG.[8] The proponents of 'no access' to UG claim that there is a critical period (Lenneberg 1967) for language acquisition.

1.4.2. No Transfer/Full Access

This view assumes that there is 'full access' without L1 transfer (Epstein *et al* 1996, Flynn 1996, Epstein *et al* 1998). In its strong form the L1 final state does not transfer and become the L2 initial state at any stage. This is not ignoring the role of UG in L1 acquisition, it is just assuming that UG is available and constitutes the initial state for L2 acquisition. This means that L2 acquisition is very similar to L1 acquisition. They assume that age is not a factor. There

---

[7] White (2000) argues that even though this view may support 'no access' to UG it is misleading because proponents of this view assume UG effects will be manifested in ILGs.

[8] duPlessis, Solin, Travis & White (1987) argue that adult learners do have access to UG and any differences found may be attributable to the wrong parameter setting. A number of parameter settings are possible which are neither of the L1 or L2 but of a third language; as similarly proposed by Schwartz & Sprouse (1994) and Ionin (2003a).

is full access to UG at any age and all the properties of UG are available, thus new parameter

settings are possible along with acquiring new functional categories and feature values.[9]

1.4.3. Partial Transfer/Full Access

Vainikka & Young-Scholten (1996, 1998) argue that in the initial L2 grammar only lexical not

functional categories are transferred. Lexical categories project NP and VP whereas functional

categories project DP, IP and CP. At the L2 initial state input is needed to trigger the projection

of functional categories.[10] Gradually over time it is assumed L2 learners converge on the L2

grammar and proceed along the path of the Full Access route (Vainikka & Young-Scholten

1996).

1.4.4. Full Transfer/Partial Access

Proponents of this position assume that L2 learners have 'partial access' to UG and either fail to

reset parameter settings (Clahsen & Muysken 1989, Tsimpli & Roussou 1991)[11] or fail to

acquire specific features of the second language due to some kind of deficit in the syntactic

component (Hawkins & Chan. 1997, Hawkins 2000, Hawkins & Liszka 2003). This is known

as the Representational Deficit Hypothesis (Hawkins & Franceschina 2004, Hawkins 2005,

Hawkins *et al* in progress). The original version of the Representational Deficit Hypothesis first

appeared as the Failed (Functional) Features Hypothesis (FFH) (Hawkins & Chan 1997). The

---

[9] See commentary by Schwartz (1996), Sprouse (1996), Sorace (1996), Vainikka & Young-Scholten (1996) and White (1996) for arguments against the proposal of no transfer/full access.
[10] Schwartz (1998a) argues that it is equally plausible for there to be functional categories fully specified as in the L1 grammar but the categories INFL and COMP are not overtly filled (no PF material).
[11] Clahsen & Muysken (1986, 1996) argue that adult L2 learners may have lost access to parametric options but access to UG is possible through their L1 mature grammar.

original motivation for proposing the FFH came from a study by Smith & Tsimpli (1995). The claim is that there is a critical period for L2 acquisition. If parameterised UG properties are not instantiated in the L1 grammar then specific features of functional categories are defective or absent in adult second language acquisition. The prediction for L2 acquisition of articles in English might be that L2 learners are able to eventually set the Article Choice Parameter to the setting [+definite] but difficulty may persist with resetting the Nominal Mapping Parameter. The Representational Deficit Hypothesis would possibly predict that Spanish learners would not have a difficulty resetting the NMP from [-arg, +pred] to [+arg, +pred] because Spanish has count nouns and articles i.e [+pred]. Japanese learners would possibly have difficulty resetting the NMP because Japanese has the setting [+arg, -pred] where all nouns are argumental (mass-like) and there are no articles i.e [-pred]. Therefore, even at advanced levels Japanese learners may have a persistent problem with formal features associated with DP in English.

1.4.5.   Full Transfer/Full Access (FT/FA)

This position was initially proposed by Schwartz & Sprouse (1994, 1996) and assumes that the entire L1 grammar transfers (abstract features and functional categories) at initial state in L2 acquisition (full transfer) and learners have access to properties of UG which are not instantiated in the L1 grammar (full access). The resulting interlanguage grammars (ILGs) are UG constrained even if they turn out to be non-target like and differ to those of native speakers. Thus, Full Transfer means at the initial state of L2 acquisition and Full Access means the ongoing interlanguage grammar restructuring over the course of development until the end-state. FT/FA might predict that L2 learners of English can fully acquire target-like use of articles given that there is enough Primary Linguistic Data (PLD) provided to the L2 learners. This

means that given enough time very advanced L2 learners of English could set the Article Choice Parameter correctly for [+definite].

The present study will consider the implications of the above hypotheses; the Full Transfer/Partial Access view and the Full Transfer/Full Access view. Theories that support the claim of 'full transfer/full access' to the syntax are the Fluctuation Hypothesis (Ionin 2003a), the Missing Surface Inflection Hypothesis (Lardiere 1998a, Lardiere 1998b, Prévost & White 2000, White 2003) and the Prosodic Transfer Hypothesis (Goad *et al* 2003a, Goad *et al* 2003b, Goad & White 2004, Goad & White 2005, Goad & White 2006).[12] I will briefly introduce each theory in a general way and then go on to discuss how they may be applied to L2 acquisition of articles in English.

1.4.6. The Fluctuation Hypothesis (FH)

Ionin (2003a) and Ionin *et al* (2004) proposed that fluctuation between parameter settings in L2 acquisition could be explained by the Fluctuation Hypothesis. L2 learners have UG-constrained L2 grammars and have full access to principles and multiple UG parameter settings. They claim that L2 learners fluctuate between parameter settings until the input leads them to set the parameter (i.e. for verb raising or reflexive binding) to the appropriate value. The Fluctuation Hypothesis is only concerned with parameter settings and does not refer to the role of transfer in L2 acquisition. They assume that at very advanced levels, L2 learners can correctly set parameters in their L2 grammars. The Fluctuation Hypothesis might predict that there will be fluctuation between the settings of the Article Choice Parameter for Japanese not Spanish learners of English, as Spanish has the same setting as English for articles [+definite]. It might be difficult for Japanese learners to choose the correct setting because articles are not present in

---

[12] Goad & White (2004) state that there may only be partial access to the phonology due to L1 prosodic constraints.

Japanese. Therefore, Japanese learners are predicted to fluctuate between the semantic features definiteness and specificity until the input leads them to set the Article Choice Parameter for [+definite].

1.4.7. The Missing Surface Inflection Hypothesis (MSIH)

The Missing Surface Inflection Hypothesis (henceforth MSIH) was proposed by Prévost & White (2000). The claim is that L2 learners who have variability in their interlanguage grammars in using inflectional morphology (e.g. 3rd person –s, plural –s, past tense –ed) in production may produce omission errors as the result of a 'mapping problem', according to Lardiere (1998, 2005) between the morphological or PF component and the syntax. In the case of articles, the MSIH might predict that all L2 learners are successful in resetting the NMP to English and setting the Article Choice Parameter for definiteness but still omit articles in oral production.

1.4.8. The Morphological Underspecification Hypothesis (MUH)

In a further attempt to explain variability in use of inflectional morphology by L2 learners the Morphological Underspecification Hypothesis was proposed by McCarthy (2004, 2005). McCarthy claims that the Morphological Underspecification Hypothesis predicts the types of errors and absence of errors which occur in L2 production, whereas the MSIH can only account for variability in production by stating that inflectional morphology is missing. The Morphological Underspecification Hypothesis is based on the Distributed Morphology model (hereafter DM) (Halle & Marantz 1993, 1994) which claims that syntactic terminal nodes are

bundles of features (syntactic and semantic) without phonological form. The syntax matches the features from the terminal nodes with the features of phonological exponents known as a process of Late Insertion. Sometimes the features of the phonological exponents may be underspecified when they are inserted into a syntactic terminal node and this is known as Underspecification. L2 learners are more likely to produce underspecification errors i.e. omission of *the*, *a* and plural *–s* in obligatory contexts in oral production rather than feature clash errors e.g. substitution of *the* for *a* and vice versa.

1.4.9. The Prosodic Transfer Hypothesis (PTH)

More recently a different type of account has been offered by Goad, White & Steele (2003a and 2003b) and Goad & White (2004, 2006) to try and account for morphological variability within L2 learners of English, which is the Prosodic Transfer Hypothesis. Essentially, the claim is that there is L1 transfer of the prosodic structure to the L2 and when the L2 prosodic structure differs from the L1 structure then variability may occur in oral production. The Prosodic Transfer Hypothesis predicts that if L2 learners omit articles in oral production this may be attributable to transfer of the L1 prosodic structure. The prosodic structures of Japanese and Spanish and predictions for L2 English are discussed in chapter 5.

1.5.   Research Hypotheses

In order to investigate the acquisition of the DP in English by Japanese and Spanish learners I propose the following hypotheses:

H[1]   L2 learners from different L1 backgrounds can reset the NMP: Japanese speakers can reset the NMP from the [+arg, -pred] setting and Spanish speakers can reset the NMP from the [-arg, +pred] setting to the English setting [+arg, +pred].

Hypothesis (1) is a prediction for parameter resetting. Spanish is a language with articles and count syntax, therefore it has the setting [-arg, +pred], whereas all nouns are argumental [+arg, -pred] (mass-like) in Japanese. For resetting to occur, the L2 learners need to be able to distinguish between what is countable and uncountable in English.

H[2]   Japanese L2 learners can reset the NMP but there may be a difference in the suppliance of definites in singular, plural and mass noun contexts due to the different pragmatic uses of the definite article.

Hypothesis (2) predicts that the Japanese groups (intermediate and advanced) can reset the Nominal Mapping Parameter, but there may be problems with certain types of definites.

H[3]   Japanese intermediate and advanced L2 learners should produce more underspecification errors than feature clash errors (prediction of the MUH). The intermediate and advanced Spanish L2 learners are predicted not to produce underspecification errors.

Hypothesis (3) is a prediction of the Morphological Underspecification Hypothesis as it predicts that L2 learners will produce far fewer feature clash errors i.e. substitution errors of *the* in an indefinite context and *a* in a definite context. L2 learners are more likely to produce underspecification errors i.e. omission of *the*, *a* and plural *–s* in obligatory contexts. The

Missing Surface Inflection Hypothesis and the Morphological Underspecification Hypothesis both predict that if L2 learners do omit articles and plural –*s* marking in an oral production task it is due to performance pressure with a failure to 're-map' features to forms, but they are expected to perform better on a written production task. The RDH may also predict that L2 learners perform better in a written production task as they are able to apply what Krashen & Terrell (1983) termed as'learnt' knowledge rather than 'acquired' knowledge. As a written task does not place as much pressure on the learner to perform and gives them more time to organize their thoughts they may use metalinguistic knowledge.

H⁴   There will be no difference in suppliance of articles in Art+N contexts and Art+Adj+N contexts if Japanese L2 learners can prosodically represent articles in their ILGs. The Spanish L2 learners are predicted to supply articles as the prosodic representation for articles is the same as English.

Hypothesis (4) is the null hypothesis of the Prosodic Transfer Hypothesis. If Japanese L2 learners can accommodate the prosodic structure of English in their ILGs then the Prosodic Transfer Hypothesis predicts that there should be equal suppliance of articles (the/a) in Art+N and Art+Adj+N constructions.

H⁵   Japanese L2 learners will tend to fluctuate between definiteness and specificity and use *a* and *Ø* in definite non-specific singular and plural contexts respectively and *the* in indefinite specific singular and plural contexts as they fail to set the Article Choice Parameter and associate *a* and *Ø* as [-specific] markers and *the* as a [+specific] marker.

Hypothesis (5) is a prediction of the FH in that Japanese L2 learners will have greater difficulty with setting the ACP to [+definite] because Japanese lacks morphological markers (articles) for the semantic features definiteness and specificity.

H[6]   Spanish L2 learners will not fluctuate between definiteness and specificity in the use of articles because Spanish has definiteness-marking articles.

Hypothesis (6) predicts that both the intermediate and advanced Spanish L2 learners will not fluctuate between the two settings of the Article Choice Parameter as they transfer their L1 setting of Spanish for articles [+definite] to L2 acquisition of English articles.

The test instruments used in this study are designed to test the hypotheses from 1 – 6. The count – mass grammaticality judgement task is designed to test hypothesis (1). It is predicted that L2 learners can reset the NMP to the target setting for English. The forced choice elicitation task: types of (in)definite is designed to test hypotheses (2) and (3). The oral story re-call task is designed to test hypotheses (3) and (4). The written story re-call task is designed to test hypotheses (3) and (4). The forced choice elicitation task is designed to test hypotheses (5) and (6).

1.6.   Organisation of thesis

The thesis is organised as follows: Chapter two presents the theoretical details of the Determiner Phrase in English. Chapter three discusses child L1 acquisition studies of English DP. Chapter four discusses adult L2 acquisition studies of English DP. Chapter five presents the theoretical details of the nominal functional domains in Japanese and Spanish, the native languages of the participants in this study. Chapter six reports the count – mass grammaticality

judgement task study. Chapter seven reports the forced choice elicitation task: types of (in)definite study. Chapter eight reports on the oral and written story re-call studies. Chapter nine discusses the forced choice elicitation task studies. Finally, chapter ten summarises the results of the five studies and discusses the implications for future research in SLA and concludes this work.

Chapter 2

The nominal domain in English

2.0.   Introduction

Some of the world's languages have articles and some do not. Given this observation, there has been considerable debate about whether a functional D category, which hosts articles, is projected universally with morphophonologically zero exponents in languages that lack articles, or whether D is truly lacking in these languages. The assumption that will be made here, and in the subsequent L2 studies reported in later chapters, is that languages that lack articles do not project D. Speakers of these languages who acquire a language with articles have to learn a new functional projection. It is important nevertheless to examine the arguments for and against the universal projection of D, and that is one of the aims of this chapter. A universal approach towards languages which have articles and those that do not is to assume there is parametric variation. One such approach has been proposed by Chierchia (1998a) and is termed the **Nominal Mapping Parameter**. It is primarily a semantic parameter which divides the world's languages up into three types; 1.) languages like English that have articles, count nouns and bare mass nouns 2.) languages like Spanish that have articles, count nouns and a few mass nouns (see chapter 5, section 5.2.2 for discussion) 3.) languages like Japanese that only have mass-like nouns or 'kinds'. I adopt Chierchia's proposal of a NMP throughout the following chapters and for my own study.

Languages like English, Spanish and Japanese have different parameter values according to the NMP. The NMP setting for English is [+argument, +predicate]. Languages like English allow NPs to be argumental [+arg], i.e. to merge directly in argument positions in syntactic derivations without further modification. For Chierchia, mass nouns and count plural nouns are

potentially [+arg]. Count singular nouns are predicative [+pred], and need to be modified (that is, licensed) by determiner elements like articles. In section 2.1 I discuss the NMP setting for English and consider an alternative proposal by Longobardi (1994, 2001) for English DP in section 2.2. As the NMP has clear implications for the syntax, section 2.3 discusses the syntactic licensing functions of Determiner and Number. The licensing functions of Number are then extended to include measure phrases and classifiers, combining the two as one category known as Count. The motivation for claiming that there is a Count Phrase comes from languages which lack articles and number morphology, but have classifiers i.e. Japanese. The idea is that though languages like Japanese and Chinese may lack articles and functional category D it is still an open question as to whether they have a count syntax. But, if it turns out that languages like Japanese have a count syntax this will undermine Chierchia's (1998a) claim of a NMP as Japanese would also have a count – mass distinction (see chapter 5 for discussion). One reason to pursue the claim that Japanese has a count – mass distinction is for the purpose of L2 acquisition. If there is count syntax in Japanese speakers' L1 we might expect transfer to L2 English. As a result of L1 transfer, Japanese speakers may not have conceptual difficulties with what is countable and uncountable in English but may have problems acquiring articles as Japanese lacks functional category D.

One attempt to capture the difference between such languages has been proposed by Ionin *et al* (2004) who claim there is an **Article Choice Parameter** which has the binary settings (1) definiteness and (2) specificity. Languages such as English have setting (1) definiteness for articles and Polynesian languages like Samoan have setting (2) specificity. L2 learners of English from languages without articles are expected to fluctuate between the two settings of the ACP until input leads them to set the parameter to definiteness. The definition of definiteness and specificity is explored in section 2.4 with Ionin *et al*'s proposal of an ACP discussed in section 2.4.1. In section 2.4.2 I adopt the position, contra Ionin *et al* (2004), that

English grammaticalizes definiteness and the articles *the* and *a* lack lexical content (Lyons 1999). DPs can either be specific or non-specific, depending on the discourse context. This implies that L2 learners do not have to set the ACP value for definiteness but rather have to be able to associate the use of definite *the* to non-specific contexts and indefinite *a* to specific contexts.

An alternative proposal offered by Hawkins *et al* (2006) to the Article Choice Parameter is a feature based account for articles. This proposes that the features [+/-definite] and [+/-specific] are both available in the UG feature inventory, and they are not opposed as two values of a binary Article Choice Parameter. English happens just to have selected [+/-definite] for the specification of articles, although both [-definite] and [+specific] are part of the specification of colloquial *this* (e.g. *This man walks into a pub …*). Hawkins *et al*'s (2006) proposal assumes that the grammar is organised along the lines proposed by Distributed Morphology (Halle & Marantz 1993, 1994), which is an idea based on the Separation Hypothesis (Beard 1987). "The 'distributed' of Distributed Morphology refers to the separation of properties which in other theories are collected in the Lexicon" (Harley & Noyer 1999: 3). Under DM there are syntactic terminal nodes which consist of bundles of features (syntactic and semantic) without phonological form. The syntax matches the features from the terminal nodes with the features of phonological exponents known as a process of 'Late Insertion'. Sometimes the features of the phonological exponents may be underspecified; underspecification has played an important role in some recent theories of L2 performance (Lardiere 2000, Prévost & White 2000, McCarthy 2004). It is expected that in my study (see chapter 8) the Spanish speakers will omit articles less often than Japanese speakers in spoken production as Japanese is a language that lacks articles. Omission of articles in production may persist for Japanese speakers because they identify different features for insertion of article forms to that of native speakers (Hawkins *et al* 2006). DM is discussed in section 2.5 in relation to the syntactic features of articles in English.

In the final section 2.5.1 the connection between syntax, morphology and phonology is explored with discussion of articles appearing prosodically as clitics. The discussion relates to the Prosodic Transfer Hypothesis proposed by Goad & White (2004), which is based on Selkirk's (1996) work. Discussion of Japanese and Spanish prosodic structures appears in chapter 5.

2.1.   The Nominal Mapping Parameter

Chierchia (1998a, 1998b) offers a cross-linguistic account of NPs that are present throughout the world's languages.[1] He proposes that there is a Nominal Mapping Parameter with a three-way distinction that divides languages. Languages that have bare NPs are argumental or names of 'kinds' i.e. a language like Japanese, has the NMP setting [+arg, -pred] as there is no singular/plural distinction. Languages such as Spanish need all nouns to be licensed to appear as arguments hence a functional D head always projects. Romance languages have the NMP setting [-arg, +pred] (see chapter 5 for further discussion). However, English is a mixed language which allows argumental NPs (bare NPs) but predicative NPs (count NPs) require licensing. This gives English the NMP setting [+arg, +pred]. Examples of the count – mass distinction in English are presented in (1):

(1)

a. *A/the boy* bought *a/the book*   [±definite] [count singular]
b. *The* boy-*s* bought *the* book-*s*   [+definite] [count plural]
c. **Boy* bought *book*

---

[1] Gil (1987) proposes a similar parameter called 'the configurational parameter'. His account is based on the count – mass distinction universally present due to extragrammatical factors such as how concepts are represented in languages.

        d. *Boys* like *girls*   [-definite] [count plural]

        e. John received *money* for Christmas   [-definite] [mass]

        f. #*The boy* bought *the big blue book*   [+definite]

Count nouns in English like *boy* and *book* are predicates that are licensed by overt articles *the* or *a* or plural *–s* marking as in (1a) and (1b), otherwise they are ungrammatical as in (1c). However, English also allows kind-denoting nouns which are bare plurals as with *boys* and *girls* in (1d) (a generic reading) and mass nouns with a mass-type reading as with *money* in (1e), to be argumental. [2] (1f) is grammatical in English, but it does not have a definite generic reading as the hearer may not have any prior knowledge of who the boy is and the type of book being spoken about (presupposition of uniqueness use). Unlike Romance languages where all nouns are licensed by a phonologically overt or covert article filling an obligatory D position, Chierchia argues that this is not the case for English. He proposes a type shifting device as a last resort which allows him to propose the count – mass distinction exists in English as plural –*s* licenses the noun as an argument and mass nouns are always arguments that do not project D, hence there is no null (covert) article in English.[3] A different view taken by Abney (1987), Longobardi (1994) and Bernstein (2001) is the DP hypothesis. This is discussed in the next section.

---

[2] See Allan (1980) for a discussion of noun countability in English.

[3] Chierchia's (1998a) account cuts across noun classification. The consequence of his proposal for syntactic representation is that count Ns would have to have two lexical entries: one for the singular which is [+pred] and one for the plural which is [+arg]. This however misses the lexical generalisation that plural count Ns are the same N as the singular, but with plural specification. This forces one to the straightforward position that count Ns are [+pred] while mass Ns are [+arg]. The licensing of count Ns as arguments can be implemented by articles, by the plural, by demonstratives, by quantifiers. English remains a [+arg, +pred] language, but with the distinction between [+pred] and [+arg] Ns drawn slightly differently.

2.2.   The DP hypothesis

In order to test the NMP in L2 acquisition I will adopt Chierchia's (1998a) position throughout

the current work, though it is worth exploring different proposals for English and Spanish and

DPs as they will be discussed in relation to the findings in chapter 10. It has long been assumed

that languages with articles have overt and covert forms e.g. Italian (Chierchia 1998a,

Longobardi 1994, 2001), Spanish (Bernstein 2001)[4] and English (Abney 1987). The reason for

arguing that a language like English has covert forms is because null articles like overt forms

the and *a* seem to have grammatical, semantic and selectional properties (Radford 2005). This

is illustrated in the examples below:

(2)   a.   We linguists take **ourselves/*yourselves/*themselves** too
              seriously, don't *we/*you/*they*?
       b.   You linguists take **yourselves/*ourselves/*themselves** too
              seriously, don't *you/*we/*they*?
       c.   Linguists take **themselves/*ourselves/*yourselves** too seriously,
              don't *they/*we/*you*?

(taken from Radford 2005, p.81)

Under the DP hypothesis it is argued that the null determiner carries person properties equal to

that of first and second person pronouns such as *we* and *you*. As the pronouns *we* and *you* serve

as antecedents to the reflexives *ourselves* and *yourselves* respectively and form tag questions,

the argument for a null determiner can be extended in the case of (2c). The reflexive *themselves*

and third person pronoun *they* in the tag in (2c) implies that there is a null determiner which

carries third person properties.

---

[4] For examples in Spanish see chapter 5, section 5.2.1.

Representations for the examples in (2) are in figure 2.1:

Figure 2.1. Person properties of the null determiner

	a.	DP	b.	DP	c.	DP
		D N		D N		D N
		we linguists		you linguists		ø linguists

(taken from Radford 2005, p.81)

Other examples are of the null determiner having semantic properties as in a generic interpretation versus a partitive interpretation:

(3)   a.   ø *Eggs* are fattening

b.   ø *Bacon* is fattening

c.   I had ø *eggs* for breakfast

d.   I had ø *bacon* for breakfast

(taken from Radford 2005, p.82)

The claim by Radford (2005) is that (3a) and (3b) have a generic interpretation and (3c) and (3d) have a partitive interpretation similar to that of *some eggs* and *some bacon*. Radford (2005) assumes the same argument for mass nouns as null determiners or quantifiers seem to modify them as with the noun *sincerity* in e.g. *Sincerity may frighten the boy* (Chomsky 1965). Other examples from Radford (2005) demonstrate that the null determiner has similar selection properties to the overt quantifier *enough*:

(4) a. I wrote *ø poems*   b. I wrote *ø poetry*   c. *I wrote *ø poem*

I've read **enough**   I've read   *I've read
poems   **enough** *poetry*   **enough** *poem*

Both the covert and overt quantifier can select as its complement a count plural noun like *poems* and a mass noun like *poetry* but not a count singular noun like *poem*.

However, the DP hypothesis is in conflict with Chierchia's proposal of a NMP. For the NMP to function as a parameter that captures the difference between the world's languages in the nominal domain, Chierchia uses a type-shifting device so that the semantics of plurals and mass nouns in English are arguments. There is no need to posit that English has null determiners.

2.2.1. N-movement

In languages such as Italian (Longobardi 2001) it has been claimed that proper names can move from N to D (N-raising), as in example (6a):

(5) a. L'antica Roma (fu distrutta dai barbari)   (Italian)
         'The ancient Rome (was destroyed by the barbarians)'

     b. *The ancient Rome (was destroyed by the barbarians)[5]   (English)

(6) a. Roma antica/*Antica Roma   (Italian)

     b. Ancient Rome/*Rome ancient   (English)

---

[5] Matushansky (2005) provides some examples in English where definite articles appear in front of proper names:

(i.)   the Clintons, the Beatles, the Alps (plurals)
(ii.)   the Titanic (ships)
(iii.) the Seine, the Atlantic, the Thames (bodies of water)

This depends on the lexical class of the proper name.

(taken from Longobardi 2001, p.591)

In (5) the determiner *la* fills the D position as a clitic and attaches to the adjective *antica*. In (6a) the head D position of DP is filled by a null affixal determiner (Radford 2005) and the proper name '*Roma*' raises from N to D across the intervening adjective '*antica*' to attach to the null affixal determiner, as illustrated in figure 2.2:

Figure 2.2. N-movement in Italian

$[_{IP}...DP...]$

Det   NP

Roma$_i$ antica   t$_i$
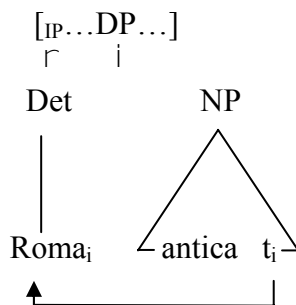
N-raising does not take place in Modern Standard English (see 6b), but there are examples from early varieties of English in vocative expressions such as Chaucer's *Troilus and Criseyde* (cited in Radford 2005):

(7)   a.   'Iwis, *myn uncle*,' quod she quod she
               'Certainly, my uncle,' said she said she

        b.   'And whi so, *uncle myn*? whi so?'
               'And why so, uncle mine, why so?'

The claim by Longobardi (1994, 2001) is that in vocative structures like (7a) they are smaller nominal structures that do not project D, whereas in structures like (7b) the proper noun *uncle* raises from N to D as the null affixal determiner triggers N to D movement, as in Italian.

Adopting a Minimalist approach, Longobardi (1994) proposes the following idea of a syntactic

feature ±R:[6]

a.   All D positions are universally generated with an abstract feature
      ±R (suggesting 'referential'), which must be checked with respect
      to at least one of its values. This ±R feature is strong in Romance
      and weak in Germanic

b.   +R is universally checked iff the D is interpreted as being in a
      chain/CHAIN containing an object-referring expression.

c.   -R is universally checked iff the D is interpreted as being in a
      chain/CHAIN not containing any object-referring expression.

d.   The lexical government requirement on empty heads universally
      applies at LF.

e.   The existential interpretation of empty Ds universally applies
      freely (is an 'anywhere' rule).

(Longobardi 1994, p. 659)

The examples from (2), (4), (5), (6) and (7) are all +referential:

Figure 2.3. Checking the +referential feature

$$[_{IP}...DP...]$$

Det	N(P)
[+R]	
Ø/We	linguists
Ø/enough	poems/poetry
L'	antica Roma
Roma$_i$	antica t_i
uncle$_i$	myn t_i
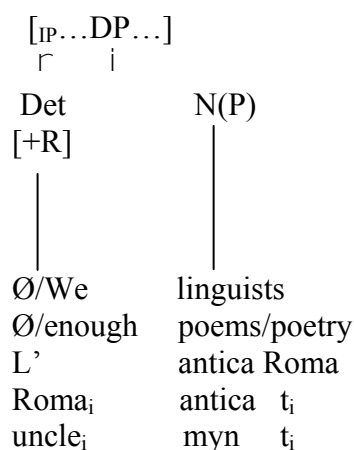
For discussion on 'kinds' (-R feature) see Longobardi (1994, 2001).

---

[6] See Chierchia (1998a) for criticism of the [+R] feature.

At this stage, there are three possibilities for the syntax-semantics mapping of bare nominals. The representations in figure 2.4 are based on Longobardi's (1994) proposal. In 2.4a it is assumed that there is a null determiner heading the D projection. In 2.4b the noun raises to D to fill the D position, but this does not overtly occur in Modern Standard English. The representation in 2.4c is based on Chierchia's (1998a) account where there is covert type shift:

Figure 2.4. Three possibilities for the syntax-semantics mapping of bare nominals
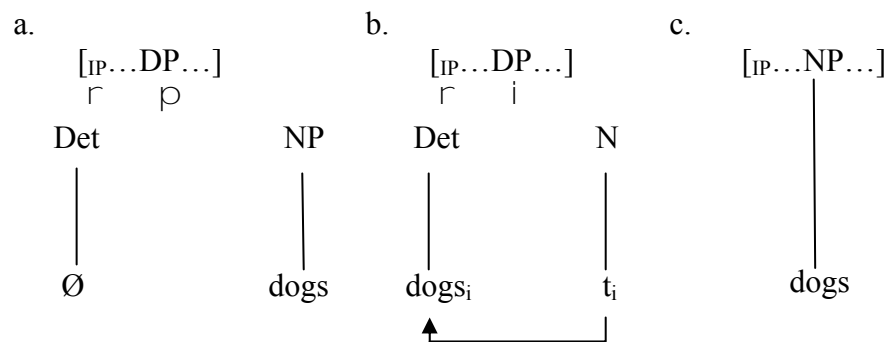
(adapted from Dayal 2004, p.414)

I will assume for now that the structure represented in 2.4c is the appropriate structure for English according to the NMP.

2.3. The licensing function of Determiner and Number in English

English has the NMP setting [+arg, +pred] meaning that there is a count − mass distinction. What does this mean for the syntactic structure of English? Following proposals by Abney (1981), Ritter (1991) and Valois (1991) I assume that there is a Num(ber) Phrase between NP and DP, as illustrated in figure 2.5:

Figure 2.5. The Determiner Phrase in English
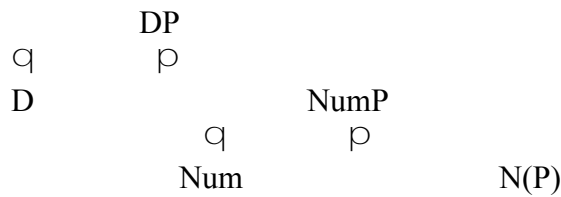
```
                    DP
              ⌐          ¬
              D                    NumP
                              ⌐          ¬
                            Num              N(P)
```

Hawkins *et al* (in progress) adopt a syntactic analysis of the English DP that involves the notion of `Agree' defined by Adger (2003) in relation to wh-questions, and extended to determiners and count nouns. There is a dependency that is expressed as Agree between an interpretable feature [F] of a c-commanding category and an uninterpretable feature [*u*F] of the count noun:

(8)   Agree

                    In a configuration:

              X[F:value] ... Y[*u*F:] or X[*u*F:] ... Y[F:value]
              where ... represents c-command, then F (interpretable feature)
              checks and values *u*F (uninterpretable feature).

(taken from Adger 2003, p. 169)

In Hawkins *et al*'s study, a different set of assumptions are made, based on proposals by Radford (2000):[7]

(9)   the/a   boy

           [+singular][8]   [noun, animate, masc, 3p, *u*num:] →
           [+singular]   [noun, animate, masc, 3p, ~~*u*num~~: +singular]

---

[7] Radford (2000) gives a similar account for L1 acquisition of articles and count syntax in English.
[8] The features [+singular] and [-singular] will be used throughout referring to singular and plural nouns respectively.

(10)   -s   boy

[-singular]   [noun, animate, masc, 3p, *u*num:] →
[-singular]   [noun, animate, masc, 3p, ~~*u*num~~: -singular]
                                                          = boys

Under a Minimalist account the noun *boy* is selected from the lexical array and enters the derivation with an unvalued number feature which is uninterpretable. The definite or indefinite article is selected from the lexical array and enters the derivation carrying an interpretable feature. The noun and the article subsequently merge and enter into an Agreement relation where the interpretable number feature of the indefinite checks and values the uninterpretable feature of the noun *boy*. Once the noun *boy* has been valued, the uninterpretable feature is deleted, as illustrated in (9) above. The same process applies to *boys* in (10) where the uninterpretable feature is checked and deleted via plural *–s* as it has an interpretable number feature.[9]

Given this account, I assume, following Lyons (1999), that D is the locus of interpretable [definiteness][10] as it is grammaticalized in English as 'identifiability'. Lyons's account proposes that definiteness is a grammatical category and is represented in the syntax as functional head D. It departs from the DP hypothesis where D relates to a class of determiners (Abney 1987) and differs to Longobardi (1994)[11] in that;

 "no definite Det need be lexically specified [+Def]………..definite articles have no semantic or other lexical content; they are lexically empty pleonastic Dets, with the function of indicating by their presence that DP is projected. The same analysis can be extended to cardinality Dets" (Lyons 1999: 301).

---

[9] For an alternative analysis of features on nouns see Carstens (2000) and Vincent (in progress). They argue that the *phi*-features of the noun are interpretable. I agree that the noun carries semantic information required for interpretation but if there is count – mass syntax it does not know whether the noun is singular or plural e.g. book (singular? or plural?) unless it is irregular e.g. man (singular), men (plural).

[10] For notational purposes I will use the feature [+definite] for *the* and [-definite] for *a*.

[11] Longobardi (1994) claims that there are two types of definite articles. The first type is a substantive form which is meaningful and the second type is expletive (no semantic content). Lyons (1999) only argues for the latter.

Lyons's account of grammatical definiteness corresponds to articles as being prototypical exponents of this category. The article *the* does not have a lexical entry for definiteness.[12] It is always expletive (semantically vacuous) and is only needed if a Determiner or Definiteness Phrase is projected.[13] For a discussion of the different accounts on the meaning of definiteness see section 2.4.

In contrast, the expletive indefinite article *a* is an exponent of 'cardinality' (representing singular), not an exponent of D. I follow Hawkins *et al* (in progress) in assuming that the exponents of indefinite *a*, plural *−s* and numerals like *one* are located in the NumP rather than Card(inality)P (Lyons 1999). The syntactic structure in figure 2.5 is repeated in figure 2.6 for definite count NPs:

Figure 2.6. Definite count NPs
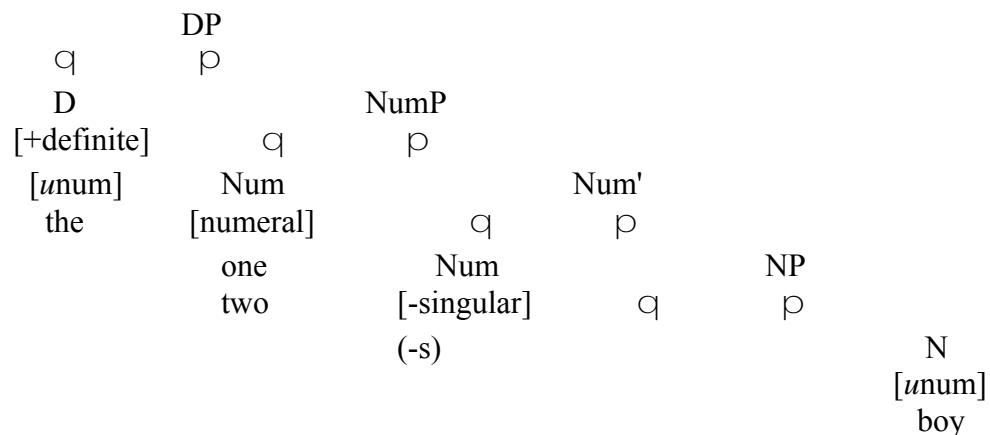
Predicative count Ns are turned into arguments through valuing by Num or D. If DP is projected, Lyons (1999, p. 36) suggests that the co-occurrence of *the* and *a* is blocked by a phonological principle that says two unstressed f-morphs cannot be adjacent as only one of

---

[12] Trenkic (in press) gives a similar account of L2 English article acquisition for Serbian speakers.
[13] The only difference between the Definiteness Phrase and Determiner Phrase is that the former means that definiteness is grammaticalized. I will continue to use the term DP meaning Definiteness Phrase.

these is required to fulfil this licensing function thus preventing illicit structures such as '*the a boy' and '*the a boys'. Perhaps *a* deletes (or is not pronounced) in the phonology. 'The boys' is fine because –*s* is not adjacent to *the*. This allows for stressed forms such as numerals as 'one' in 'the one boy' as they can co-occur with definite *the*. Numerals must be in a higher position than Number because we get co-occurrence between numerals and plural: 'the two boys'. If numerals were the head of Num, they would be in complementary distribution with –*s*. So, it is possible that they are in the specifier position of Num. The other possibility preventing co-occurrence of *the* and *a* is that of feature checking. Count nouns can be licensed by articles (*the* or *a*) or plural –*s* to check and delete their uninterpretable feature. But, why is it possible to have 'The one boy….' and 'The boys….' if the uninterpretable feature on the noun has already been checked and deleted via the numeral *one* or plural -*s*? One possibility is that as definite *the* is part of the derivation, DP projects and it carries an uninterpretable number feature which needs to be checked and deleted. Support for number marking on determiners comes from demonstratives as they can be singular or plural as with *this*/*these* (see chapters 4 and 5 for examples in Spanish). Numerals and plural –*s* can value and delete the [*u*num] feature on definite *the* but indefinite *a* cannot as this causes a feature clash between [+definite] and [-definite] (McCarthy 2004). For indefinite count NPs, following Hawkins *et al* (in progress), DP is not projected as 1.) indefinite *a* or plural –*s* can value and delete the uninterpretable feature on the noun and 2.) there would be a feature clash between [+definite] and [-definite] features:

Figure 2.7. Indefinite count NPs

```
                              NumP
                        ᕐ          ᕑ
                  Num                      Num'
                                     ᕐ          ᕑ
                                 Num                      NP
                              [-definite]          ᕐ          ᕑ
                              [+singular]                              N
                                 (a)
                                                              [unum]
                              [-singular]                       boy
                                 (-s)
```
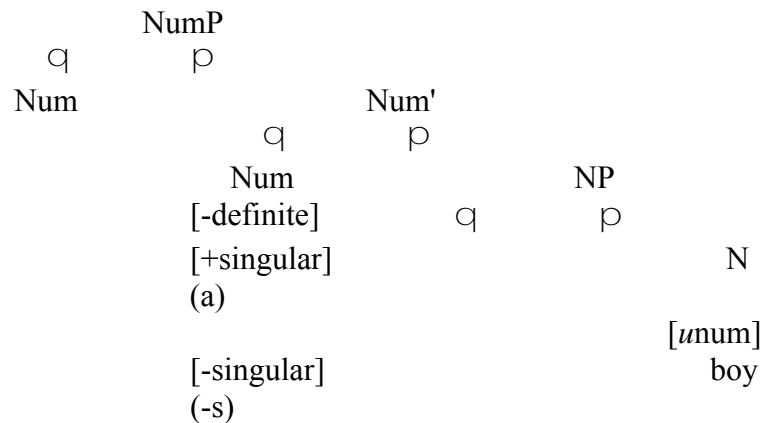
When D is not selected, Num+NP is interpreted as indefinite/generic by default.

The discussion so far has allowed us to develop underlying syntactic structure for predicative NPs. What does this type of account mean for argumental NPs (mass nouns) in English? Mass nouns, according to Chierchia (1998a, 1998b), "are quite literally the neutralization of the singular/plural distinction" (1998a: 347). In other words, they are inherently plural and cannot be counted, hence they lack the feature [unumber] and they do not need to be licensed to appear as arguments, as count nouns do:[14] If mass Ns lack [unum] we might also assume that the definite article lacks [unum]. Mass Ns are not dependent on a c-commanding category to license their appearance in syntactic expressions.

---

[14] One complication is that of *pluralia tantum* nouns in English such as (a pair of) *scissors, shorts* and *trousers*. Pesetsky & Torrego (2004) argue that number must be an intrinsic property of certain nouns. An alternative view proposed by Lyons (1999) is that these types of nouns are semantically mass but morphologically they are marked as count plural as it only applies to a few nouns. This does not apply to similar types of nouns such as *shirt* (a garment with two sleeves = '*a pair of shirts').

This account of English can be extended to languages with the other NMP settings in the following way:[15]

(11)   The syntactic three-way parametric distinction according to the NMP

English: count: [num, sing:pl] [N, *u*num], mass: [N]

Japanese: all: [N]

Greek, Spanish: all: [num, sing:pl] [N, *u*num]

(based on Hawkins *et al* in progress)

Further discussion of the syntactic correlates of the NMP regarding Japanese, Greek and Spanish appears in chapter 4, section 4.3 and chapter 5.

2.3.1. Quantifiers

So far, I have been assuming that the NMP semantically and syntactically captures the differences found between languages like English, Spanish and Japanese. English is a language

---

[15] Zamparelli (2000) proposes that the NP is layered as in (i.) below:

(i.)
```
      SDP_e
   ⌐      ⌐
  SD          PDP_<e,t>
        ⌐      ⌐
       PD          KIP_e
            ⌐      ⌐
           KI         …
                      |
                      NP
                      |
                      N
```
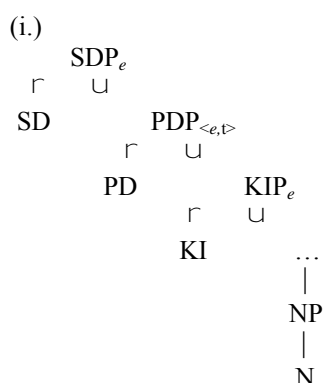
SDP stands for *Strong Determiner Phrase*, PDP stands *Predicative Determiner Phrase* and KIP *Kind Determiner Phrase*. Each layer holds a different semantic function whereby the NP is split into maximal projections for different types of DPs.

with articles and number morphology and measure phrases which can combine with articles,

quantifiers, count plurals and mass nouns.

(12)   a.   articles combing with measure phrases and mass

        He bought **a piece of** ___ in the sale   *chair[16]

                                                    *chairs

                                                  furniture

    b.   quantifiers combining measure phrases and mass

        He bought **many/some/several/few pieces of** ___ in the sale   *chairs

                                                    *chair

                                                    furniture

    c.   quantifiers combining with count plurals

        He bought **many/several/few** ___ in the sale   chairs

                                                    *chair

                                                  *furniture

    d.   quantifiers combining with mass

        He doesn't have **much** ___ of his own   furniture

                                                  *chair

                                                  *chairs

(based on Doetjes 1997 and Radford 2005)

The noun *piece* in the measure phrase is count singular so indefinite *a* can check and delete its

uninterpretable feature. If, however the lexical array selects a count plural or mass noun a

---

[16] Measure phrases portion out stuff as in 'a piece of cake'. 'Cake' appears with a measure phrase as it is mass-like, but 'cake' can be countable as in 'I'd like a cake'. Arguably, it depends on the size of the cake in question. More is said about measure phrases and mass nouns in chapter 7.

quantifier may also be selected. What is of interest here is the syntactic position of quantifiers given that I have assumed up until this point that the nominal structure is [DP [NumP [NP]]]. A possible syntactic position suggested by Doetjes (1997), referring to quantifiers as Adnominal Quantifiers (henceforth AdnQs), is the following in figure 2.8:

Figure 2.8. Adnominal quantifer phrase
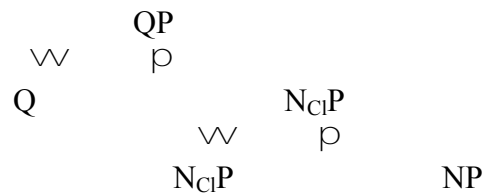
One of the reasons for positing the syntactic structure in figure 2.8 is because most AdnQs cannot combine directly with mass nouns unless there is insertion of a classifier (or measure phrase) e.g. [Q **many** [NCIP *pounds of* [N *meat*]]]. Taking into account cross-linguistic considerations (e.g languages like Chinese and Japanese) and the use of measure phrases in English which allow AdnQs to appear with mass nouns, Doetjes (1997) proposes that "AdnQs might select a functional projection which contains a syntactic marker of countability (i.e a Classifier or Number)" (1997: 191). She suggests that as some classifiers have abstract number and others bear number morphology (measure phrases in English) both seem to have the abstract feature [+countable].[17] Therefore, an alternative to NumP and ClP is the umbrella term CountP in figure 2.9:

---

[17] See chapter 5, section 5.1.4 for further discussion in relation to Japanese.

Figure 2.9. Count phrase as alternative to NumP and ClP

a.

```
                    CountP
              ┌──────┴──────┐
          Numeral              Count'
           one          ┌───────┴───────┐
                      Count                   NP
                      [-definite]    ┌────────┴────────┐
                      [+singular]    N                    N
                      (a)           [unum]              [unum]
                      [-singular]   Measure phrase      boy
                      (-s)          pound of            [mass]
                                                        meat
```

b.

```
        QP
   ┌────┴────┐
   Q                    CountP
  [AdnQ]         ┌───────┴───────┐
  (many)                            Count'
  (some)               ┌────────────┴────────────┐
                     Count                          NP
                     [-singular] (-s)    ┌──────────┴──────────┐
                                         N                        N
                                        [unum]                  [mass]
                                        Measure phrase          meat
                                        pound of
```

c.

```
                    QP
              ┌──────┴──────┐
            Q                    NP
          [AdnQ] (much)   ┌───────┴───────┐
                                             N
                                            [mass]
                                            meat
```

In 2.9a the CountP is projected for count singular and count plural e.g. 'a boy', 'boys' and for

mass nouns with measure phrases 'a pound of meat', 'two pounds of meat'. As it is possible to

have 'a pound of meat' or 'one pound of meat' it is assumed that if indefinite *a* is selected this blocks the selection of numeral *one* as they both are [+singular]. The indefinite can value and delete [*u*num] of the noun *pound* or if [-definite] is not selected the numeral *one* can value and delete the uninterpretable feature. In 2.9b the CountP and QP are projected as an AdnQ and a measure phrase have been selected. Because a quantifier has been selected from the lexical array there is no need to include a [+singular] feature or a numeral in the derivation. There is no CountP as the AdnQ *much* does not select count nouns as complements.

2.4.   Defining definiteness and specificity

Over the years there have been many attempts by philosophers, logicians and linguists to define the concept of definiteness either in semantic or pragmatic terms. Notions of definiteness range from attributive vs. referential (Donnellan 1966), familiarity vs. unfamiliarity, presupposition vs. entailment, inclusiveness vs. exclusiveness, uniqueness vs. non-uniqueness (J. Hawkins 1978) and identifiability vs. non-identifiability (Chafe 1976, Lambrecht 1994). Some examples of the use of the definite article are in (13):[18]

(13)   Types of definiteness

    a. Anaphoric Use:
        Fred was wearing trousers. *The pants* had a big patch on them.

    b. Immediate Situation Use (Visible Situation Use):
        (There is only one bucket in the visible situation)
        Pass me *the bucket*, please.

    c. Immediate Situation Use (Immediate Situation Use):
        (Opening conversation to a passenger, when you cannot see a
        dog) Don't go in there, chum. *The dog* will bite you.

---

[18] For an in-depth discussion of the relevant literature on definiteness see J. Hawkins (1978), Lyons (1999), Trenkic (2000) and Ionin (2003a).

    d.   <u>Larger Situation Use (specific, with presupposed knowledge)</u>
        <u>(In Britain, among British people):</u>
        The Prime Minister has just resigned.

    e.   <u>Larger Situation Use (general, without any specific presupposed</u>
        <u>knowledge):</u>
        (When invited to a wedding)
        Have you seen *the bridesmaids*?

    f.   <u>Associative Anaphoric Use:</u>
        The man drove past our house in a car. *The exhaust fumes* were
        terrible.

(examples from Wakabayashi 1997; based on J. Hawkins 1978)

As part of my study I have included different types of definites. Further discussion can be found in chapter 4, section 4.4.1 and chapter 7.

The notion of specificity ranges from grammatical specificity (scopal elements such as intensional operators or quantifiers) known as 'opaque contexts' to semantic/pragmatic specificity which is termed 'transparent contexts' (Lyons 1999):[19]

    (14)   specific   i. transparent contexts (referential)
                           ii. opaque contexts (wide scope)

             non-specific   i. transparent contexts (non-referential)
                           ii. opaque contexts (narrow scope)

Examples of opaque and transparent contexts can be found in section 2.4.1.

---

[19] For other accounts of specificity see Enç (1991) and Diesing (1992).

2.4.1. The Article Choice Parameter

A more recent proposal for definiteness and specificity is based on the Fregean analysis of definites (Heim 1991) and Fodor & Sag's (1982) proposal of speaker intent to refer to a referent. Contra Lyons's (1999) claim that articles (the/a) lack lexical content, Ionin (2003a) claims that a two-article language like English has lexical entries for *the* and *a*. Formal definitions of definiteness and specificity are given in (15):

(15)   a. Definiteness (Fregean analysis)
         [*the* ζ] ξ expresses that proposition that is . . .
         • true at index i, if there is exactly one ζ at i, and it is ξ at i.
         • false at an index i, if there is exactly one ζ at i, and it is not ξ at i.
         • truth-valueless at an index i, if there isn't exactly one ξ at i.

         (Heim 1991, p. 9)

         b. Indefinites (quantificational analysis)
         A sentence of the form [a ζ] ξ expresses that proposition that is true if
         there is at least one individual who is both ζ and ξ and false
         otherwise.

         (Heim 1991, p. 26)

         c. Specificity
         A sentence of the form [sp α] ζ expresses a proposition only in those
         utterance contexts c where the following felicity condition is fulfilled:
         The speaker intends to refer to exactly one individual x_c in c, and
         there exists a property φ that the speaker considers noteworthy in c,
         and x_c is both α and φ in c. When this condition is fulfilled, [sp α] ζ
         expresses that proposition that is true at an index i if x_c is ζ at i and
         false otherwise.

         (based on Fodor & Sag (1982), with modifications: see Ionin 2003a,
         p. 56)

Ionin *et al*'s informal definitions of definiteness and specificity are in (16):

(16) Definiteness and Specificity

If a Determiner Phrase (DP) of the form [D NP] is…
 (a) [+definite], then the speaker and hearer presuppose the existence of a unique individual in the set denoted by the NP.
 (b) [+specific], then the speaker intends to refer to a unique individual in the set denoted by the NP, and considers this individual to possess some noteworthy property.

(taken from Ionin, *et al* 2004, p.5)

According to Ionin *et al* (2004) the features [+definite] and [+specific] are discourse-related. The crucial difference between the two features is that [+definite] is a shared state of knowledge between speaker and hearer and [+specific] is knowledge only held by the speaker. Thus "the feature [+definite] receives morphological expression in the English article system through the article *the*" (2004: 6). Ionin *et al*'s (2004) definition of [+specific] is a combination of grammatical specificity (opaque contexts)[20] and semantic/pragmatic specificity (transparent contexts). I accept the definition of definiteness given by Chafe (1976) and Lyons (1999) as I will argue in section 2.4.2 that definiteness is grammaticalized in English whereas for specificity I accept the definition given by Ionin *et al* (2004) of 'speaker intent to refer to some noteworthy property'. The use of notation [+definite] will be used to indicate that *the* is selected for syntactic DP and [-definite] will be used to indicate that *a* is selected for syntactic NumP. Examples of definiteness and specificity are in (17) – (20) below:

---

[20] In an earlier study Ionin & Wexler (2003) investigated the *de re* / *de dicto* distinction**:** an indefinite DP is *de re* iff it is not in the scope of an operator such as an intentional verb, a modal, or negation. Otherwise, the DP is *de dicto*.

de re indefinite (referential): I'd like to meet an actor – I really like his movies. (exists in the world).
de re indefinite (non-referential): I'd like to meet an actor after this performance.
de dicto indefinite (non-referential): I'd like to meet an actor – any famous actor will do. (not of our world at this moment).

(adapted from Ionin & Wexler 2003).

For an in-depth discussion of scope see Ionin (2003a, chapter 2).

Opaque contexts (scope ambiguities)

(17)   [+definite]

a.   Joan wants to present the prize to *the* winner –   [+specific]
        but he doesn't want to receive it from her.

b.   Joan wants to present the prize to *the* winner – so   [-specific]
        she'll have to wait around till the race finishes.

(18)   [-definite]

a.   Peter intends to marry *a* merchant banker – even   [+specific]
        though he doesn't get on at all with her.

b.   Peter intends to marry *a* merchant banker –   [-specific]
        though he hasn't met one yet.

(taken from, Lyons 1999, p. 167, ex. 18 and 19)

Transparent contexts (no scope ambiguities)

(19)   [+definite]

a.   We can't start the seminar because *the student*   [+specific]
        who's giving the presentation is absent – typical
        of Bill, he's so unreliable.

b.   We can't start the seminar because *the student*   [-specific]
        who's giving the presentation is absent – I'd go
        and find whoever it is, but no-one can remember,
        and half the class is absent.

(20)   [-definite]

a.   *A dog* was in here last night – it's called Lulu and   [+specific]
        Fred always lets it sit by the fire on wet nights.

b.   *A dog* was in here last night – there is no other   [-specific]
        explanation for all these hairs and scratch marks.

(taken from, Lyons 1999, p. 171 and 172, ex. 39 and 43)

In (17a) – (20a) the speaker's intention is to refer to a specific person who each has a

noteworthy property: - in the opaque contexts the noteworthy property in (17a) is that he (*the*

winner) does not want to receive the prize and (18a) Peter does not get on well with her (*a merchant banker*). In the transparent contexts the noteworthy property in (19a) is that Bill (*the student who's giving the presentation*) is unreliable and (20a) Lulu (*a dog*) sits by the fire on wet nights. The individuals in examples (17a) – (20a) are all [+specific] because they have been picked out from a set of individuals. In contrast, the examples in (17b) – (20b) are all [-specific] - *the winner, a merchant banker, the student who's giving the presentation* and *a dog* because the speaker does not have specific individuals in mind.

An important distinction in English is that [-definite] *a* cannot be interpreted semantically as [+definite] in any context as in (21) and (22):

(21)   [-specific] (no particular person in mind)

a.   A man walked into the room. After thirty minutes   [-definite]
       a man left.

b.   *A man* is in the women's bathroom (but I haven't   ??[+definite]
       dared to go in there to see who it is).

(22)   [+specific] (a particular person in mind)

a.   *A man* just proposed to me in the orangery   [-definite]
       (though I'm much too embarrassed to tell you
       who it was).

b.   A man walked into the room. After thirty minutes   ??[+definite]
       a man left.

?? means semantically anomalous. (23b and 24a taken from Fodor & Sag 1982 ex. (7) and (8) p.359)

The morphological marker *a* is specified as [-definite] where the second use of the indefinite in (21a) and (22a) (*a man*) can be either [+specific] or [-specific], but it cannot be interpreted as [+definite] as in (21b) as *a man* is a non-unique referent which lacks presupposition for

uniqueness. Similarly, in example (22b) the anaphoric referent to the first mention indefinite (A

man), cannot be [-definite] if referring to the same individual.

(23)   [+specific]

   a.   A man walked into the room. After thirty minutes   ??[-definite]
         a man left.

   b.   A man walked into the room. After thirty minutes   [+definite]
         the man left.

The opposite is true of the morphological marker *the* as it can only be specified as [+definite]

and never be interpreted as [-definite]. In (23b) the [+definite] anaphoric referent (*the man*)

links to the first mention indefinite use (A man) because *the* carries the presupposition that *man*

has been identified and is unique within the discourse. Conversely, in (23a) [-definite] *a* cannot

function as an article marking someone being identified as unique. However, definites can also

be [-specific], according to Ionin *et al* (2004):

(24)   [-specific]

   a.   I'd like to talk to *a winner of today's race* –   ??[-definite]
         whoever that is; I'm writing a story about this
         race for the newspaper.

   b.   I'd like to talk to *the winner of today's race* –   [+definite]
         whoever that is; I'm writing a story about this
         race for the newspaper.

(25)   [+specific]

   a.   I'd like to talk to *a winner of today's race* – she is   ??[-definite]
         my best friend!

   b.   I'd like to talk to *the winner of today's race* – she   [+definite]
         is my best friend!

(adapted from Ionin *et al* 2004, p. 8)

The examples in (24b) and (25b) demonstrate that [+definite] *the* carries a presupposition that there is going to be a winner of the race (cf. the notion of *inclusiveness* or *uniqueness* proposed by J. Hawkins 1978 or the *referential/attributive* distinction of Donnellan 1966) and there can usually be only one unique winner. In (24b) the speaker does not know who the winner will be but knows that there will be a unique winner (the person who comes first) and in (25b) the speaker refers to a particular individual in the race who is her best friend.

The claim by Ionin *et al* (2004) is that English is a language that marks for definiteness. Regardless of specificity *the* and *a* only mark for [+definite] and [-definite] contexts. In Standard English there is no marker to encode [±specific] apart from the referential *this* in colloquial (spoken) English:[21] [22]

[-definite]

(26) a. Peter intends to marry *a/this merchant banker* – even   [+specific]
          though he doesn't get on at all with her.

      b. Peter intends to marry *a/??this merchant banker* –   [-specific]
          though he hasn't met one yet.

          (taken from Lyons 1999, 176, ex. 51)

(27) a. John has *a/this weird purple telephone*.   [+specific]

      b. John has *a/??this telephone*, so you can reach me   [-specific]
          there.

          (taken from Maclaran (1982, 88, ex. 85; cited in Ionin *et al* 2004)

In (26a) the speaker (Peter) intends to refer to a particular individual from a set of individuals (merchant bankers) and the individual has the noteworthy property of *Peter not getting on with*

---

[21] See Prince (1981) for further examples of *this*.
[22] Ionin (in press) refers to demonstrative *this* as indefinite *this*ref because it has a different function to deictic *this*, as in 'Look at *this* beautiful flower my friend gave me' with the speaker pointing to the flower.

her. Equally in (27a) there is a particular telephone which has the noteworthy property of being *weird* and *purple*. In (26b) and (27b) there is no particular individual or no particular telephone in the mind of the speaker and no noteworthy property to refer to. The conditions for *this* as a [+specific] marker are satisfied in (26a) and (27a), but *this* cannot be used to mark [-specific] contexts. The indefinite article *a* can be used in either [-definite, +specific] contexts or [-definite, -specific] contexts, thus does not encode specificity.

Lyons (1999: 57-60) makes two observations about definiteness and specificity which are crucial for Ionin's (2003a) proposal of an Article Choice Parameter. There are languages such as English with articles that encode definiteness rather than specificity and languages which do the opposite such as Samoan, Shuswap and Sango (Polynesian languages) by having articles that encode specificity not definiteness.[23] On the basis of cross-linguistic evidence Ionin (2003a) proposes that there is an Article Choice Parameter, as defined in (28):

> (28)   The Article Choice Parameter (for two-article languages)
>   A language that has two articles distinguishes them as follows:
>
>   The Definiteness Setting: Articles are distinguished on the basis of definiteness.
>
>   The Specificity Setting: Articles are distinguished on the basis of specificity.

The ACP applies to languages like Standard English (without referential *this*) and Samoan in the following way:

"Standard English……has the first setting of this parameter. It marks *the* as [+definite], uses *a* in [-definite] contexts, and does not mark any article for specificity. Samoan has the second setting. It marks *le* as [+specific], uses *se* in [-specific] contexts, and does not mark any article for definiteness" (Ionin *et al* 2004: 12).

---

[23] See Lyons (1999) and Ionin (2003a) for a discussion on languages that encode specificity.

This is represented in table 2.1:

Table 2.1. Article-grouping cross-linguistically: Two-article languages

Article grouping by definiteness   Article grouping by specificity
         e.g. English   e.g. Samoan

	+definite	-definite
+specific		
-specific		

	+definite	-definite
+specific		
-specific		

(taken from Ionin *et al* 2004, p.13)

Referential *this* is not included as it has a colloquial use only (see Ionin *et al*, p.13, footnote 7).

2.4.2. Definiteness as a grammatical category

The definition of definiteness proposed by Lambrecht (1994) and Lyons (1999) differs to the one given by Ionin (2003a) as they assume that 'identifiability' is a universal cognitive category and definiteness is a non-universal grammatical category. In other words, languages have semantic/pragmatic definiteness whilst other languages, according to Lyons (1999), grammaticalize definiteness. Lyons proposes that for a language like English "definiteness *stricto sensu* is not a semantic or pragmatic notion as assumed by almost all writers on the subject, but rather a grammatical category on a par with tense, mood, number, gender, etc." (1999: 274, 275). This is a departure from other definitions of definiteness (cf. Abney 1987, Longobardi 1994, J. Hawkins 1978) as grammatical definiteness is a process in which a language grammaticalizes the concept of identifiability. I adopt Lyons's definition of definiteness for English and for languages that do not grammaticalize definiteness I assume to

have semantic/pragmatic definiteness. Semantic/pragmatic definiteness is defined as a concept and can be marked by some language element (e.g. topic markers, classifiers, demonstratives) or normally inferred through word order or context.

To sum up, there have been various definitions for definiteness and specificity in the literature and Ionin's (2003a) definition attempts to bring together definiteness and specificity as semantic features under a binary ACP. However, as discussed in sections 2.4.1 and 2.4.2 a different account is offered whereby it is assumed that *the* and *a* are not lexically specified as [±definite, ±specific]. Identifiability is grammaticalized semantic/pragmatic definiteness which can develop into other uses (see Lyons 1999) and specificity can be grammatical (as in Fodor & Sag's 1982 analysis involving scope) or pragmatic.[24]

2.5.   Distributed Morphology

In the previous sections it has been shown that the distributions and interpretations of English articles are ruled by their syntactic functions in relation to the NMP and the ACP. I argued that the NMP seems to capture the cross-linguistic differences found between languages. For the ACP, I argued that there may be an alternative to articles having lexical content based on Lyons's (1999) account of grammatical definiteness. How can we combine the NMP syntax and semantics with grammatical definiteness? One proposal pursued in this section is a feature based account using the Distributed Morphology model (Halle & Marantz 1993, 1994) which assumes that the syntax generates syntactic terminal nodes that are bundles of morphosyntactic and semantic features which lack phonological form. The phonological forms or 'exponents' are inserted into the terminal nodes once all syntactic operations have taken place in a process

---

[24] For further discussion on whether specificity is purely a semantic or pragmatic notion see Larson & Segal (1995).

known as 'Late Insertion'. A 'Vocabulary' provides a full set of phonological exponents known

as 'Vocabulary Items' with their 'context for insertion' as represented in (29):

(29)   *Vocabulary Item schema*

signal $\longleftrightarrow$ context of insertion
(phonological   (features of the terminal node)
exponent)

(Harley & Noyer 1999: 4)

Phonological exponents are inserted through a process of feature-matching so the exponent

which has the most number of matching features is inserted. 'Underspecification' means that

the phonological exponents do not have to be fully specified to be inserted within the syntactic

structure:

 "Note that the phonological content of a Vocabulary Item may be any phonological string,
including zero or Ø. The featural content or context of insertion may be similarly devoid of
information: in such cases we speak of the default or 'elsewhere' Vocabulary Item" (Harley &
Noyer 1999: 6).

Underspecified phonological exponents eventually are replaced by fully specified forms once

the mapping of morphosyntactic and semantic features to a particular form has been established.

For articles, the syntactic category D along with the phonological exponents of D (*the* and *a*)

have the following terminal nodes and features of phonological exponents, as illustrated in (30):

(30)   Terminal nodes:

D	D	D	D
|	|	|	|
+definite	+definite	-definite	-definite
+singular	-singular	+singular	-singular

vocabulary items		features of phonological exponents
a	↔	[D, -definite, +singular]
the	↔	[D, +definite]
Ø	↔	[D]

I take [+definite] and [-definite] to be morphosyntactic features of the phonological exponents *the* and *a* respectively, not semantic features. For discussion relating to the terminal nodes and phonological exponents of articles in English see chapter 4, section 4.5 and chapter 9.

2.5.1.   Articles as free clitics

The syntax, morphology and phonology connection for DM appeals to work carried out by Selkirk (1996) and others, working within Optimality Theory. It is worth considering the prosodic status of articles in English because a recent proposal by Goad & White (2004) argues that L2 learners have problems in production due to L1 prosodic transfer. They term this as the Prosodic Transfer Hypothesis.

The hierarchy of prosodic constituents, based on Selkirk (1996), is organised into syllables, feet, prosodic words and phonological phrases, as illustrated in figure 2.10:

Figure 2.10. The prosodic structure for adult English phonology

Phonological Phrase
(PPh)
|
Prosodic Word (PWd)
|
Foot (Ft)
|
Syllable (σ)
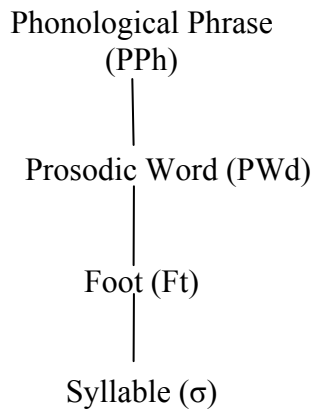
(based on Nespor & Vogel 1986, Selkirk 1996)

According to the Strict Layering Hypothesis (Nespor & Vogel 1986) the constraints on prosodic domination universally characterize the prosodic constituents in the prosodic structure. Selkirk (1996) analyses Vocabulary Items as independent prosodic words and others that appear to be prosodic clitics. Selkirk (1996) identifies three types of clitics 1.) internal clitics 2.) affixal clitics and 3.) free clitics. Internal clitics are organised internal to the PWd as in figure 2.11b and in this regard they respect the constraints on prosodic domination. Affixal clitics involve adjunction to the PWd as in figure 2.11c and free clitics involve adjunction to the PPh (see figure 2.11d).

Figure 2.11. Vocabulary Items as independent Prosodic Words or prosodic clitics

a. independent PWd   b. internal clitic   c. affixal clitic   d. free clitic

PWd   PWd   PWd   PWd   PPh

                                                         PWd   PWd

fnc   base   fnc   base   fnc   base   fnc   base
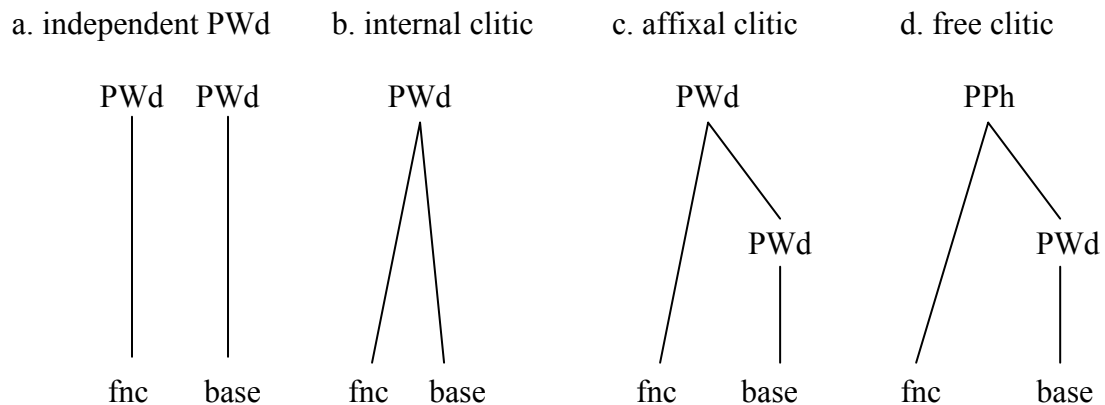
English articles are typically free clitics under Selkirk's (1996) analysis with other languages exploiting other options. The general claim is that the prosodic structure can bootstrap the use of articles in L1 acquisition (see chapter 3, section 3.3.1) as there is a relation between syntactic structure and prosodic structure. This is captured by constraints on alignment of edges of prosodic constituents …"for any constituent of category α in syntactic structure, its R (or L) edge coincides with the edge of a constituent of category β in prosodic structure" (1996: 191):

(31)   Edge-based theory of the syntax-prosody interface
         Right/Left edge of α → edge of β,
         α is a syntactic category, β is a prosodic category

This allows the prosodic structure of various languages to be characterised including the influence of word-internal structure on prosodic structure. The prosodic structures of Japanese and Spanish are discussed in chapter 5.

2.6.   Summary of chapter 2

The main focus of this chapter has been on the Nominal Mapping Parameter and the Article Choice Parameter. Section 2.1 introduced the three-way parametric variation of the NMP with English having the setting [+arg, +pred. I will be adopting Chierchia's (1998a) proposal and the implications of setting the NMP in L1 acquisition (see chapter 3). I will then go on to explore the possibility of resetting the NMP for L2 acquisition (see chapter 4). Alternatives to the NMP were outlined in section 2.2 whereby DP is viewed as a universal category and English is similar to Romance languages with regard to articles as generic plurals and mass nouns can be modified by a null determiner or quantifier. However, Modern Standard English does not have N-movement. Section 2.3 provides the licensing function of Determiner and Count in relation to the NMP setting for English. Further discussion relating to L2 acquisition continues in chapter 4. The semantics of articles was discussed in section 2.4 with reference to the binary ACP in section 2.4.1. The ACP setting [+definite] for English is discussed in chapter 3, relating to L1 acquisition, and chapter 4 relating to L2 acquisition. Section 2.4.2 offers an alternative analysis to Ionin's (2003a) semantic lexical entries [+definite] and [+specific]. The final section 2.5 outlines another approach which incorporates syntax, semantics, morphology and phonology known as Distributed Morphology. In reference to DM for L2 acquisition I consider the Morphological Underspecification Hypothesis (McCarthy 2004) and the Prosodic Transfer Hypothesis (Goad & White 2004) in chapter 4.

Chapter 3

Studies of the L1 acquisition of articles and nouns

3.0.   Introduction

An issue that is of considerable interest in both L1 and L2 acquisition research is whether, when language learners do not produce articles or plural *–s* marking in obligatory contexts for adult native speakers, this is because the underlying functional structure (i.e. the DP projection) is not present, or because it is present but other factors such as prosodic structure and/or semantics lead to articles being omitted (null form *Ø*) or substituted (indefinite *a* for definite *the* or vice versa). Radford (1990a, 1990b, 1991) maintains the view that in early child language the DP projection is absent. By contrast, Borer & Rohrbacher (2002) maintain that a fully specified functional structure is present from the earliest stages of acquisition, even if learners do not produce articles on every occasion where an adult native would require them. It is worth examining the arguments supporting each case because the same problem arises in interpreting the optional production of articles by L2 speakers: does this indicate that they lack an underlying DP, or is a DP present in their ILGs, with some other factor or factors determining that L2 speakers do not always produce exponents of this underlying structure.

The approaches I will be discussing in this chapter are those of Chierchia (1998a), Borer & Rohrbacher (2002), and Ionin *et al* (2004). Chierchia (1998a) proposes that there is a **Nominal Mapping Parameter**, which can account for cross-linguistic differences in the acquisition of count and mass nouns. Borer & Rohrbacher (2002) argue that children do not simply omit functional material because the functional structure is not present. On the contrary, they argue that the full functional structure is present from the very early stages of acquisition.

Ionin *et al* (2004) propose that the semantics of articles is available to children via an **Article Choice Parameter** that has two settings, definiteness and specificity.

3.1.   The Nominal Mapping Parameter in L1 acquisition

Chierchia (1998a) claims that children start off initially with the Chinese setting of the NMP, which is a [+arg, -pred] type language. This means universally that every child starts off with a nominal system resembling Chinese. On the basis of input an Italian child will have to reset the NMP and gradually project DP for argumenthood.[1] However, an English child "will have to figure out item by item whether a noun refers to a kind (and hence is mass and can be a bare argument) or to a predicate (and hence is count and, in the singular, cannot be a bare argument)" (Chierchia 1998a: 401). This process of learning item by item will naturally take time, but it is uncertain how much time an English child needs to work out whether a noun is count or mass. This process of learning item by item will naturally take time, but it is uncertain how much time the lexical classification of nouns takes for an English child to work out which nouns are bare nouns and which nouns need to be licensed by a determiner. The point here is that the English child eventually sets the NMP for English. The L1 learner of that language then has to determine, based on positive evidence alone, whether all nouns like *dog* are always count and nouns like *furniture* are always mass. This depends on how much flexibility individual nouns are allowed, which is governed by their lexical semantics.

Studies of the NMP in L1 acquisition have concentrated on the ability of children to distinguish between count and mass nouns conceptually and/or linguistically.[2] Gualmini (2000)

---

[1] See Clahsen *et al* (1994) and Eisenbeiss (2000) for a constructionist account of DP in child grammars, which assumes that children build up the DP due to morphological triggers in the input.

[2] L1 studies conducted by cognitive psychologists of English children (Gordon 1982, Soja 1992, Bloom 1994, Nicolas 1997, Barner & Bale 2002, Barner & Snedeker 2004, Nicolas 2004, Barner & Snedeker 2005, Papafragou in press, Barner & Snedeker in press, Barner *et al* under revision) and Japanese children (Imai & Gentner 1997,

set out to explore the classification process of count and mass nouns in child language with

three Italian speaking children's spontaneous speech. Data from the Italian children is presented

in tables 3.1-3.3:

Table 3.1. Bare Nouns in Diana's Speech

Age	Singular Count	Plurals	Mass
20;05	75.0%	-	100.0%
22;07	22.2%	81.8%	0.0%
23;07	66.7%	16.7%	50.0%
24;02	9.1%	0.0%	40.0%
24;17	18.2%	33.3%	0.0%
25;25	11.8%	0.0%	11.8%
29;01	**3.4%**[3]	0.0%	50.0%
30;00	28.7%	15.8%	19.0%
30;13	**18.2%**	28.6%	12.5%

Table 3.2. Bare Nouns in Guglielmo's Speech

Age	Singular Count	Plurals	Mass
26;01	22.2%	66.7%	50.0%
27;07	16.7%	33.3%	0.0%
28;12	56.5%	62.5%	33.3%
29;17	40.0%	75.0%	-
31;25	27.5%	10.0%	30.0%
33;06	11.5%	0.0%	31.6%
34;02	12.0%	0.0%	-
35;01	**8.8%**	11.1%	50.0%
35;14	**19.0%**	12.5%	0.0%

Imai & Mazuka 2003, Inagaki & Barner 2006) suggest that the count – mass distinction may be conceptual and/or
linguistic.
[3] For some reason omission of determiners goes down to 3.4% but then starts to rise at later stages of acquisition.
This cannot easily be accounted for if the child has reset the NMP for Italian.

Table 3.3. Bare Nouns in Martina's Speech

Age	Singular Count	Plurals	Mass
19;18	100.0%	-	-
20;02	85.7%	-	16.7%
20;17	100.0%	100.0%	33.3%
21;01	91.7%	-	-
22;29	66.7%	50.0%	-
23;02	34.5%	100.0%	0.0%
23;20	59.1%	83.3%	75.0%
25;12	50.0%	0.0%	100.0%
27;01	47.2%	20.0%	6.7%
27;22	53.7%	25.0%	0.0%
28;13	30.8%	25.0%	23.5%
29;21	36.7%	22.2%	20.0%
31;15	**19.5%**	25.0%	13.3%

(taken from Gualmini 2000, p.80-81)

The results show that even at a late stage of acquisition for all three children there is still omission of articles, around 20% for each child. It could be that many nouns are still linguistically classified as mass. Gualmini (2000) concluded that the Italian children correctly set the NMP from an early stage and were correctly using articles, but the classification for each noun was not yet fully adult-like.[4]

Guasti & Gavarró (2003) set out to test the NMP by looking at child speakers of Catalan. One of the hypotheses tested was whether child speakers of Catalan would behave as other children of Romance languages such as Spanish and Italian in the mapping between syntactic categories and semantic types. Catalan is similar to Italian in that there are no bare nouns. Nouns are predicates which require articles to turn them into arguments. They concluded from

---

[4] There could be a potential learnability problem if the parameter is set to one language setting i.e. Chinese, as the child has to then change the setting to the correct setting for his or her L1. However, this should not be a learnability problem if there is continual positive evidence. In fact, Chierchia (1998b) suggests that the order of parameter setting would be 'Chinese' > 'Italian' > 'English', but for problems with this order see discussion by Kupisch (2006).

the data of the Catalan speaking and Italian speaking children that the NMP is compatible with

an account of article acquisition.

Table 3.4. Means and SD of article omission in Catalan and Italian

Language	Mean	SD
Catalan	.137	.041
Italian	.299	.111

(taken from Guasti & Gavarró 2003, p.295)

The children start off by omitting articles optionally in speech. At this point in development

children have chosen the English mapping for nouns, meaning that the initial setting of the

NMP is the wrong value for Catalan and Italian. Nouns can either be pred or arg where articles

turn predicates into arguments (pred) or they are without articles and are mass-like (arg).

Subsequently, in their developing grammar they realize that the English parameter setting [+arg,

+pred] is not valid for their L1, so they switch to a [-arg, +pred] setting. An alternative

suggested by Guasti & Gavarró (2003) would be that Romance children start off with the

correct NMP setting [-arg, +pred] from a very earlier stage of acquisition as it is triggered from

the input. Evidence supporting the correct NMP setting from an early stage comes from studies

of proto-articles (see section 3.3.1). Any omission errors would be the result of "some prosodic

mechanism .... or some structural mechanism (e.g. truncation) that sometimes forces children

to omit articles" (2003: 297).[5]

The results from L1 studies of the nominal domain are an interesting point of comparison

with what has been found in L2 studies, as will be discussed in chapter 4.

---

[5] For discussion of prosodic constraints being the cause of omission of articles by child learners of Italian see Crisma & Tomasutti (2000).

3.2.   The maturational account of article development in L1 English

Radford (1990a, 1990b, 1991) gives various examples of NPs lacking determiners in the speech

of young child learners of English such as the following (taken from his own corpus):

> (1)   Where helicopter?   (Where is the helicopter?)
>   Open *door*!   (Open the door!)
>   Got *bee*!   (I've got a bee!)

(produced by Stefan at 17 months)

(Radford 1990a, ex. 1, p.83)

On the basis of examples like these, he claims that early child nominals are simply *lexical*

projections of a head N into NP. At an early developmental stage in acquisition (from roughly

17 to 25 months) child grammars lack the further *functional* projection of NP into DP.[6]

If DP is absent in early L1 English, then there should be no examples of other elements in child

speech that belong to the category D, such as pronominal possessors. Such forms, however, do

appear:

> (2)   (a) ADULT: That one's Lisa's
>   CHILD: My…..mine (Hayley 1;8)
>   (b) ADULT: Whose truck is this?
>   CHILD: Me….my (Bethan 1;8)

(Radford 1990a, ex 41, p.109)

If children do produce pronominal possessives such as *my/your/her* etc then these, Radford

(1990a) suggests, are likely to be *imposters*. They are forms that have the same phonological

---

[6] Roeper (2003) gives a similar account arguing that bare nouns reflect the notion of 'Kind', which is a default
form in child grammar.

shape and semantic function but nevertheless have a different morphosyntactic status to those that appear in adult grammars as genitive DPs. He argues that children continue to omit articles and possessives until eventually, around the age of 24 months, they start using a premodifying determiner like *a*, *the*, *my* etc, and go on to fully acquire an adult grammar with a determiner system (Radford 1990b).

In contrast to Radford (1990a, 1990b), Bohnacker (1997) provides evidence from a Swedish child called Embla from age 1:8 to 2:1 and found that on average the omission of articles was around 26.2% of the time (68 of 260 obligatory contexts) and correct suppliance was 73.3% (178 of 243 obligatory contexts). A maturational account fails to explain why Embla would be producing determiners in obligatory contexts as, according to Radford (1990a, 1990b), there is no DP at this stage of the child's developing grammar. Bohnacker (1997) argues that the omission of possessive –s as an indicator of no DP is not a convincing argument. Examples given by Radford (1990a, 1990b) fail to place examples within a context so there is structural and semantic ambiguity. It is not clear whether the child is omitting possessive –s or there is another interpretation given the context i.e. *Mommy vegetable* could mean 'Mommy'*s* vegetables' with use of possessive –s as Radford (1990a, 1990b) claims or it could have a range of other meanings such as 'Mommy, vegetables' with the child pointing at something new 'Mommy, give me vegetables' or a question 'Mommy, can I have vegetables?' or when the mother is at the fridge taking out some vegetables (Bohnacker 1997, p.61).[7]

3.3.   Full competence accounts of article development in L1 English

Bohnacker (1997) and Borer & Rohrbacher (2002) argue for the Full Competence Hypothesis. The claim is that a fully specified functional structure (projections and functional features) is

---

[7] Hyams (1996), Hoekstra, Hyams & Becker (1997) and Deprez & Pierce (1994) have claimed that early functional structure is present but it may have underspecified functional nodes.

present from a very early stage of acquisition as it is clear that children do produce articles (or

proto-articles), though optionally, but there does not appear to be a stage in development where

all NPs are bare.

3.3.1. Prosodic structure

Evidence in support of the Full Competence Hypothesis comes from studies of children who

produce what are known as proto-articles (Demuth 1994, Lleó & Demuth 1999, Lleó 2001,

Guasti *et al* 2004, Giusti & Gozzi 2005), as in (3) with disyllabic nouns:

(3)   Spanish examples of determiner + disyllabic noun

María 1;4   María 1;6

pala	'shovel'	['ha'bɛləʔ]	peine	'comb'	[ʔa'pa:lɛ:h]
		[ʔʊ'paɪlæʰ]	globo	'balloon'	['ɐwɵwɔh]
mamá	'mum'	[ə´'memɛʰ]	cubo	'bucket'	[hɛ'kuwɔ]
cubo	'bucket'	[hʊ'guwə]	papa	'porridge'	[ʔʊm'bɐbɐʰ]

(taken from Lleó & Demuth 1999, ex. 5, p.413)

In languages like Spanish, children learn the relevant prosody faster than in others, hence they

are capable of producing articles (or proto-articles) earlier than children speaking other

languages i.e German.

The general claim is that the prosodic structure available from an early stage of

development can bootstrap the use of articles. Lleó & Demuth (1999) and Lleó (2001) present

developmental evidence from Romance and Germanic languages (Spanish, Italian and German)

of children from the ages of 1;4-2;6 years. The cross-linguistic differences are represented in

figure 3.1.

Figure 3.1. Prosodic Word (PWd) and Phonological Phrase (PPh) structures

(a) PWd / Ft / σ

(b) PWd / Ft / σ σ

(c) PWd / Ft Ft / σ σ σ σ

(d) PWd / σ Ft / σ σ

(e) PPh / PWd / Ft / σ σ σ
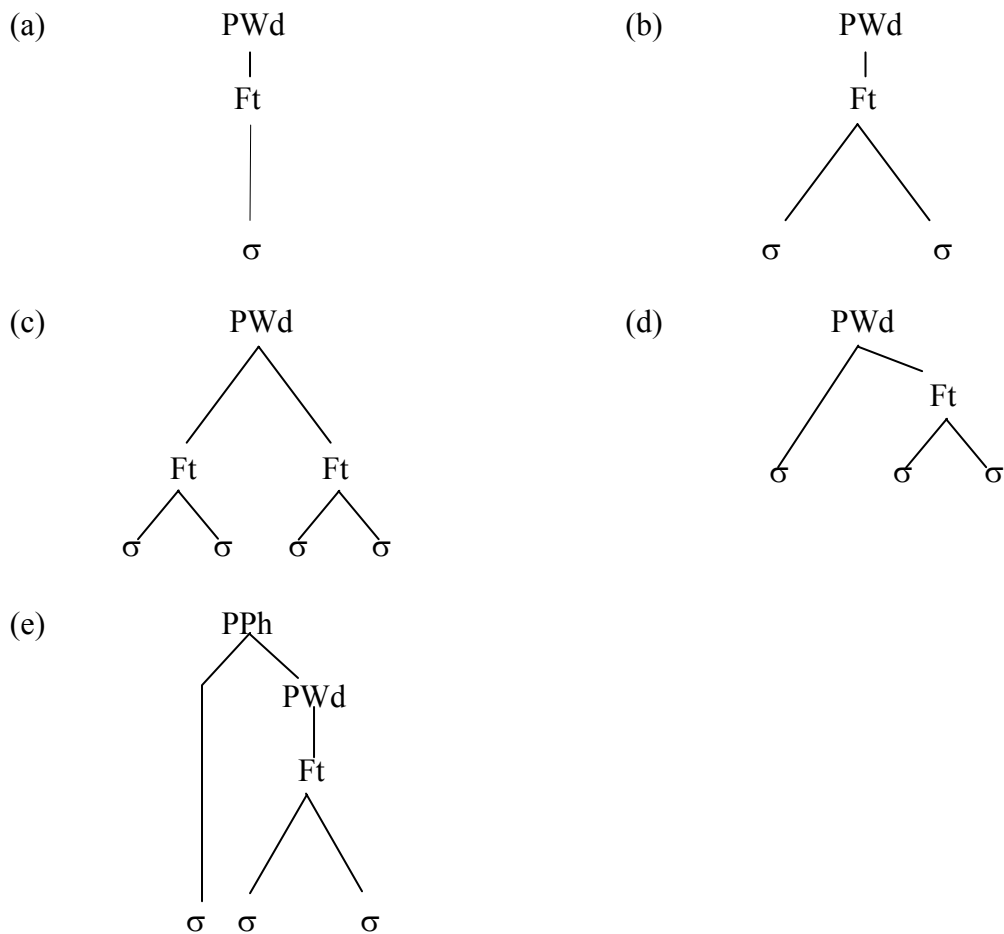
(adapted from Lleó & Demuth 1999, p. 410)

The structures in figure 3.1 (a), (b), and (c) are found in languages such as English and German, whereas in Spanish, children start to produce early words having the structures (a), (b), (c) and rapidly move on to (d). In the early stages of acquisition of German the PWd is represented by a Foot, which is built up from one or two syllables, as represented in (a). Examples of German determiners prosodically represented as a Foot, as full forms or reduced forms that cliticise to the previous word are given in (4):

(4)   Articles in German: forms and prosodification

	DEFINITE		FULL FORMS	INDEFINITE	
	MASC.	FEM.	NEUTER MASC.	FEM.	NEUTER
Sg.					
NOM.	der	die	das ein	eine	ein
ACC.	den	die	das einen	eine	ein
DAT.	dem	der	dem einem	einer	einem
GEN.	des	der	des eines	einer	eines

Pl.		
NOM.		die
ACC.		die
DAT.		den
GEN.		der

REDUCED FORMS

ACC.	aufs	(auf das)	NOM./ACC	[n̩]	(ein)
ACC.	ans	(an das)	NOM./ACC	[nə]	(eine)
ACC.	ins	(in das)	ACC	[nən]/[n̩]	(einen)
DAT.	im	(in dem)	DAT.	[nəm]	(einem)
DAT.	vom	(von dem)			
DAT.	beim	(bei dem)			
DAT.	zum	(zu dem)			
DAT.	zur	(zu der)			

(adapted from Lleó & Demuth 1999, p. 414)

Prosodification

PWd [Ft [der]] PWd [Ft [Mann]]   PWd [Ft [die]] PWd [Ft [Klappe]]

PPh [PWd [Ft [noch]] PWd [Ft [ein]] PWd [Ft [Kipper]]]

PPh [PWd [Ft [noch] n̩]] PWd [Ft [Kipper]]]

Lleó & Demuth (1999) suggest that the differences cross-linguistically can be accounted for because Spanish determiners are proto-clitics and their prosodic status is that they prosodically cliticise onto a preceding lexical word in an unstressed syllable as shown in (5):

(5)   Prosodification: PWd [el [Ft 'pero]] PWd [la [Ft 'pala]]

Lleó (2001) found there were differences between Spanish and German children from the ages of 1;5 to 2;3. By the age of 1;7, Spanish children are producing proto-articles around 50% of the time out of all articles produced, but at the same age German children are producing hardly any articles at all. Gennari & Demuth (1997) and Demuth (2001a) argue that data produced by a Spanish child named Sofía and previous studies' results (Lleó & Demuth 1999, Lleó 2001) support the claim that Spanish children may begin to represent higher-level units of prosodic structure earlier than children of Germanic languages. This means that by the age of 2;0 and above articles are beginning to attach directly to the phonological phrase as in (e).

Guasti *et al* (2004) compared three languages in a study of article omissions. Data was obtained from 3 Catalan children, 3 Italian children and 3 Dutch children. As Catalan and Italian are both Romance languages and Dutch is a Germanic language they expected to find differences between the Romance speakers and the Dutch speakers. The mean age of the three groups of children is 2;5 (Catalan), 2;5 (Dutch) and 2;2 (Italian). They found at stage 1 (1-100 words) there was no difference in omissions of articles across the three languages. At stage 2 (101-200 words) there were significant differences between the Romance speaking children and the Dutch speaking children where the Dutch speaking children were still omitting articles 50% of the time and the Romance speaking children omitted less than 25%. Guasti *et al* (2004) suggest that omissions can be partly explained by prosodic constraints and how articles are prosodified in Romance and Germanic languages. They concluded that Romance speaking children are able to produce articles from an earlier age as they can be represented in unfooted syllables as in figure 3.1 (e).[8]

---

[8] See Guasti & Gavarró (2003) for similar results for child speakers of Catalan.

Giusti & Gozzi (2005) video-recorded spontaneous speech from an Italian child from the age of 1;7 to 2;6 and found that at the first stage (age 1;7-1;10) articles are not produced because they are weak syllables. At the second stage (age 1;10-1;11) there is an emergence of definite and indefinite articles, as represented in figure 3.1 (d). This coincides with the production of trisyllabic bare nouns. By the third stage (1;11-2;2) the Italian child is able to produce articles at the phonological phrase level, represented as an unfooted syllable merged at the left of a PWd.

The implication drawn from the results of studies is that children from Romance languages have a head start in the acquisition of articles because of the L1 prosodic structure.

3.4. Semantics/Pragmatics of article use

There have been many studies on the acquisition of articles investigating the use of definite *the* and indefinite *a* by children in an array of different tasks such as comprehension tasks, truth-value judgement tasks and elicited production (Brown 1973, Maratsos 1974, Maratsos 1976, Warden 1976, Karmiloff-Smith 1979, Zheler & Brewer 1982, Schafer & deVilliers 2000). The conclusion drawn from many of these studies is that young children have a tendency to overuse the definite article *the* with [+partitive] DPs in indefinite contexts (Ko *et al* in press, Wexler in press). An informal definition for *partitive* DPs is given by Ko *et al* (in press):

(6)	**If a DP is [+partitive]**, it denotes an individual that is a member of a
	set introduced by previous discourse (cf. Enç 1991, Diesing 1992).

(taken from Ko *et al*, in press, ex. 7)

Other studies using similar tasks have tended to concentrate on the role of other semantic/pragmatic factors like *the concept of non-shared assumptions* (Garton 1983, Matthewson *et al* 2001, Schaeffer & Matthewson 2005)[9] and *anaphoric referent* use of definites (Emslie & Stevenson 1981, Warden 1976).

Ko *et al* (in press) make a distinction between these studies because the tasks used seem to be testing different semantic, pragmatic and cognitive uses of articles. The terms *partitivity*, *the concept of non-shared assumptions* and *anaphoric referent* are described in (7):

(7) (a) partitivity denotes set membership

Once there was a lady. She had lots of girls and boys. They were very noisy and they kept her awake all the time. One night she went to bed. She told them to be very quiet. She said, 'If anyone makes any noise, they won't get any breakfast tomorrow'. She went to bed. But do you know what happened? **One of them started laughing and giggling.** Let' see. **There were four girls and three boys**. Who was laughing and giggling like that? (Maratsos 1976, p.51).

Child's response: ??*the* boy (or ??*the* girl)

In (7a) the child's response is semantically infelicitous (represented by ??) as the adult target response in a partitive context is *a* boy or *a* girl (or *one* of the boys/girls).[10]

---

[9] Hyams (1996) argues that it is the mapping between grammar and pragmatics which is complex for child learners. The syntax and semantics are more or less functioning like the adult grammar for determiners, but the pragmatic component is less developed.

[10] The child's response may be semantically incorrect, but grammatically it is felicitous as the article has not been omitted in this context.

        (b)   *the concept of non-shared assumptions* (pragmatic or semantic

               = non-partitive) speaker and hearer assumptions are always

               independent

The English adult language article system

(1) A	believed by speaker and hearer	part of common ground	*the*
(2) B	believed by speaker only	not part of common ground	*a*
(3) C	believed by neither speaker nor hearer	not part of common ground	*a*

Schaeffer & Matthewson (2005) predict that children will:

A.   overgenerate the definite article *the* to (adult) B contexts which require the indefinite article *a*;

B.   not overgenerate the definite article *the* to C contexts;

C.   not overgenerate the indefinite article *a* to (adult) A contexts which require the definite article *the*.

(taken from Schaeffer & Matthewson 2005, ex. 34-35, p.70)[11]

Maratsos (1974, 1976) and Schaeffer & Matthewson (2005) argue that errors produced by children as in (7a and 7b) are due to a lack of pragmatic knowledge, referred to in the literature as *egocentricity*. This is when a child uses *the* instead of correctly using *a* in a given context when referring to someone or something in mind, but ignores, or is not aware, that the listener does not necessarily share the same knowledge as the child. Wexler (in press) proposes that these types of errors could easily be described as a lack of semantic knowledge and proposes that "kids take *the N* to presuppose the existence of an N. But they don't have the uniqueness condition on N" (Wexler in press: 17). Children differ from adults as the lexical entry for *the* lacks presupposition for uniqueness or *Maximality Presupposition*.

---

[11] Schaeffer *et al* (2003) argue that children older than 3;0 with Specific Language Impairment omit articles due to a mis-mapping between syntax and semantics. This is not the case for children aged 4;0 (Burns & Soja 1997) as the correct article was supplied in obligatory contexts.

(c)   anaphoric referent

(Picture 1): A man is sitting in a railway carriage and a girl is putting a suitcase on the rack. (Picture 2): **The** man is reading and **the** suitcase is falling on to **the** girl's head. (Picture 3): **The** girl is rubbing her head. A horse is looking through the window.

Emslie & Stevenson (1981) found that children as young as 3 years of age showed mastery in the use of definite referent expressions in spoken production tasks, as in (5c) above (cf. Warden 1976). Introducing a referent with an indefinite (first mention) was significantly different to the adults but overuse of definites was minimal compared to the findings from Maratsos (1976).

For the researcher, the examples in (7) demonstrate that it largely depends on the task and context used for eliciting articles as to the type of response given by children as there are different functions and uses of articles.

3.4.1. Definiteness and Specificity

While L1 studies have focussed on partitivity, the concept of non-shared assumptions and anaphoric referent, a distinction that turns out to be crucial for the investigation of L2s is definiteness vs. specificity in article semantics.

Ionin (2003a) focuses on the semantics of definiteness and specificity (see chapter 2, section 2.4.1). The notion of specificity is based on Fodor & Sag (1982), which denotes speaker intent to refer:[12]

---

[12] Enç (1991) for example, uses the term *specific* for what Ko *et al* (in press) term as *partitive* DPs and partitive indefinites fall under the term *presuppositionality* in Diesing's (1992) discussion of indefinites.

(8)   a speaker's intent to refer

    (i.)   *A man* just proposed to me in the orangery (though I'm much too embarrassed to tell you who it was).

    (ii.)   *A man* is in the women's bathroom (but I haven't dared to go in there to see who it is).

(taken from Fodor & Sag 1982 ex. (7) and (8) p.359)

Ionin's (2003a) informal definition of definiteness and specificity (repeated below from chapter 2), is based on Frege's definition of definiteness and Fodor & Sag's definition of specificity (1982):[13]

Definiteness and Specificity

If a Determiner Phrase (DP) of the form [D NP] is…

(a) [+definite], then the speaker and hearer presuppose the existence of a unique individual in the set denoted by the NP

(b) [+specific], then the speaker intends to refer to a unique individual in the set denoted by the NP, and considers this individual to possess some noteworthy property

(taken from Ionin *et al* 2004, p.5)

Ionin (2003a) states that when English children overuse *the* with specific indefinites they are fluctuating in article choice. This means that the Fluctuation Hypothesis predicts that children whose L1 is English fluctuate between the two settings of the Article Choice Parameter:

---

[13] Ionin (2003a) considers definiteness and specificity as universal semantic features. Others such as Schaeffer & Matthewson (2005) argue that there is a Parameter of Article Semantics where there are only two choices for article systems: either Speaker Beliefs (giving rise to languages such as a St'a´ t'imcets type system) or Common Ground (giving rise to languages such as an English-type system), but not both (giving rise to an A/B/C system).

(9)   The Article Choice Parameter (for two-article languages)

A language that has two articles distinguishes them as follows:

The Definiteness Setting: Articles are distinguished on the basis of definiteness.
The Specificity Setting: Articles are distinguished on the basis of specificity.

(taken from Ionin *et al* 2004, p.12)

Ionin (2003a) claims that English children have difficulty choosing the correct setting for the ACP because input triggers are discourse-based.

"In order to set the Article Choice Parameter, the child needs to establish whether *the* encodes the state of hearer knowledge (definiteness) or the state of speaker knowledge (specificity). Each time she hears *the*, she must decide (on an unconscious level, of course) whether the speaker and listener shared knowledge of the referent, or whether the speaker all along had knowledge of the referent" (2003a: 102).

This means that children mistakenly may choose *the* as a specificity marker, so when something or someone is specific to them, they may overuse *the* with specific indefinites, thus this may be partly due to egocentricity. This is also assumed, though not stated, in the case of indefinite *a* as children may overuse *a* in definite non-specific contexts. Therefore, English children may select the definiteness setting or fluctuate between both settings of the ACP because they have difficulty evaluating the input triggers (Ionin 2003a).

3.5.   Summary of chapter 3

Some of the studies in L1 acquisition have been briefly outlined. In sections 3.1 and 3.2 two different syntactic accounts were given for the acquisition of articles. I argued for the Full

Competence Hypothesis, based on data from English, German and Swedish. In section 3.2.1 evidence in support of the Full Competence Hypothesis was presented from cross-linguistic studies of prosodic structure. In section 3.3 data from various studies demonstrate that the semantics to syntax mapping for count and mass nouns is complex as it is partly conceptual and partly linguistic. The differences between languages seem to generally support the claim by Chierchia (1998a) that there is a Nominal Mapping Parameter. Finally, in section 3.4 the semantic/pragmatic use of articles was discussed, focussing on specificity in section 3.4.1, as defined by Ionin (2003a). Ionin claims that there is an Article Choice Parameter and English children fluctuate between definiteness and specificity until the input leads them to set it to the definiteness setting, the correct setting for English.

Chapter 4

Studies of the L2 acquisition of articles and nouns

4.0.   Introduction

The **Nominal Mapping Parameter** (Chierchia 1998a) discussed in chapter 2 makes various cross-linguistic predictions about how children acquire articles and count – mass syntax in L1 acquisition. Chierchia (1998a) claims that universally children start off initially with the Chinese setting of the NMP, which is a [+arg, -pred] type language. If the L1 is an English or Spanish type language the NMP has to be reset to the correct setting for the L1. Evidence of resetting the NMP in early child acquisition comes from data supporting the full competence account discussed in chapter 3 (Lleó & Demuth 1999, Demuth 2001a, Borer & Rohrbacher 2002). L1 child learners of English and Spanish reset the NMP and have a fully specified functional structure i.e. DP present from a very young age with syntactic and phonological evidence to support this claim (see chapter 3). In this chapter it will be considered how L2 learners acquire articles and count – mass syntax and what role the L1 NMP settings might play in this process. Sections 4.2 – 4.6 report findings from studies on suppliance and omission of articles and plural -*s* in L2 acquisition production tasks.

The **Article Choice Parameter** claims that L1 child learners converge on the target parameter-setting 'definiteness' for English in the early stages of acquisition. In section 4.7 the universal semantic features, definiteness and specificity, of the ACP are discussed. This relates to the interpretation of articles by L2 learners and how it affects article choice of *the, a* and *Ø* in forced choice elicitation tasks.

4.1.   The Nominal Mapping Parameter in L2 acquisition

How do L2 learners of English, whose first language has the NMP setting [+arg, -pred] i.e. Asian languages like Japanese, acquire knowledge of the distribution of articles with count nouns versus mass nouns in English i.e the [+arg, +pred] setting? According to the NMP all nouns in Japanese are 'kinds' or mass-like nouns whereas in Romance languages nouns can be either count or mass. Therefore, it is possible that nouns, when they appear in different contexts (Hiki 1990, Hiki 1991, Yoon 1993), are ambiguous for L2 learners as to whether they are count or mass. If L2 learners make conceptual and linguistic distinctions based on their world knowledge and the L1 NMP setting, we may expect Japanese L2 learners to treat all count nouns (e.g. *a car*) and mass nouns (objects like *furniture* and substances like *cream*) in English as a 'kind' (mass-like), as in Japanese, but Spanish L2 learners may differ as Spanish is a language with count nouns and object mass nouns are countable e.g. *un mueble* (a piece of furniture) and *muebles* (furniture). The task for the Japanese L2 learners and the Spanish L2 learners is to reset the NMP from their L1 settings to the English setting. Therefore, we might expect to find differences between L2 learners who have the NMP setting [+arg, -pred] (Japanese) and L2 learners who have the setting [-arg, +pred] (Spanish). Previous studies (cf. Zobl 1982, Thomas 1989, Wakabayashi 1997) found that L2 learners of English with different L1s follow different paths of acquisition. L2 learners of Asian languages (Chinese, Japanese and Korean) tended to omit articles in obligatory contexts more than L2 learners of Romance languages (Spanish and Italian). If the L2 grammar at the initial state is the result of L1 transfer, then omissions may be more likely to occur in the ILGs of L2 learners whose L1s lack articles and plural –*s* marking.

To try to account for variability in ILGs, some L2 studies of learners at intermediate, advanced and end-state stages of acquisition have focussed on the suppliance and omission of articles in obligatory contexts. These are discussed in sections 4.2 – 4.6.

4.2. The Representational Deficit Hypothesis (RDH)

An alternative account to full access to UG in L2 acquisition is the Representational Deficit Hypothesis (RDH). The RDH claims that L2 learners' syntax is selectively impaired, lacking parameterized formal features not present in the L1 which are no longer accessible following a critical period for acquisition (Smith & Tsimpli 1995, Hawkins & Chan 1997, Franceschina 2001, Hawkins 2005, Hawkins *et al* in progress, Tsimpli in press, Tsimpli & Mastropavlou in press). If Japanese L2 learners of English do not perform in a target-like way in the use of articles and plural marking, the RDH would claim that there is a syntactic deficit in their L2 grammars with partial access to UG (see chapter 1, section 1.4.4). Non-target like use would be omission of articles and lack of plural –*s* marking in obligatory contexts.

Kuribara (1999, 2000) reports on a grammaticality judgement test involving 100 Japanese learners of English. The learners were divided into 10 proficiency groups based on their proficiency level. The participants' performance on three ungrammatical English constructions:- adjective+noun (*AN no determiner), adjective+determiner+noun (*ADN) and determiner+determiner+noun (*DDN) was examined. The results showed a positive correlation between proficiency level and correct performance on individual constructions, but there was no clear cut-off point after which the performance in all three constructions improved. Thus, as no improvement was found in performance on all three constructions parameter resetting has not occured. Kuribara (1999) claims that learners have learnt the distributional characteristics of articles. "L2 learners …..are not able to acquire the D items as properties of the functional head Determiner and therefore … they rely on their knowledge of L1 and general learning mechanisms" (1999: 20). As Japanese does not have a Determiner (D) head, learners transfer their L1 setting and fail to acquire the D head in English.

Hawkins *et al* (in progress) tested whether L2 learners can reset the NMP in a study using an oral production story re-call task.[1] In order to test the NMP in L2 acquisition of English the participants were selected on the basis of their L1 NMP settings. Thus, three different language groups participated: Japanese, with the NMP setting [+arg, -pred], Greek, with the NMP setting [-arg, +pred] and English, with the NMP setting [+arg, +pred]. The participants were intermediate and advanced Japanese L2 learners of English, intermediate and advanced Greek L2 learners of English and native controls. The claim is that as Japanese lacks articles and count syntax there is more likely to be difficulty for Japanese L2 learners acquiring the syntactic functional structure DP and Number.[2] In the case of Greek, it is similar to English in that it uses morphological markers to mark definiteness. Greek L2 learners are not expected to encounter difficulties in the use of articles and count syntax because they can transfer the NMP setting for Greek to English (both languages have a fully specified DP). Greek is similar to English in using articles to mark definiteness, hence may have the same setting of an 'Article Choice Parameter', but appears to be different from English in instantiating the [-arg, +pred] value of the NMP, hence the use of articles with proper nouns and with count plural or mass generics. This means that Japanese speakers have to fix the value of two parameters (set the ACP and reset the NMP), while Greek speakers, assuming transfer, have to reset the value of one parameter (NMP). It is not clear in advance whether the latter will be difficult for Greek speakers or not. Examples of Japanese, Greek and English are given in (1), (2) and (3) respectively:

---

[1] The story re-call task is the same task used for two of my experiments discussed in chapter 8.

[2] A study by Wakabayashi (1997) who compared Japanese speakers with Spanish speakers of English is discussed in chapter 7.

(1)   Japanese: any bare N can be an argument

        Taroo-ga   ringo-o   katta
        Taro-Nom   apple-Acc buy-past
        'Taro bought *an* apple/*the* apple/apple*s*/*the* apple*s*'

(taken from Wakabayashi 1997, p.309)

(2)   Greek: all Ns need to be licensed as arguments

    a.   Enas   / o   apetitikos
           one-masc.sing.nom / *the*-masc.sing.nom demanding-masc.sing.nom

           dhaskalos.
           teacher-masc.sing.nom

           '*A* / *the* demanding teacher.'

    b.   Mia   /   I   ekseretiki
           one-fem.sing.nom / *the*-fem.sing.nom   extraordinary-fem.nom.sing

           embiria.
           experience-fem.sing.nom

           '*An*/ *The* extraordinary experience'

    c.   To pedhi to kalo
           The child *the* good
           'The good child'

    d.   I Maria eftase.
           The-nom Maria arrived
           'Maria arrived.'

    e.   Afto to vivlio
           This *the* book
           'This book'

(taken from Tsimpli in press, Tsimpli & Mastropavlou in press)

In (2a) and (2b) there are examples of definite and indefinite articles. In (2c) there is an

example of determiner doubling (see Tsimpli & Mastropavlou in press), (2d) is an example of a

determiner used with a proper name and (2e) is an example of a demonstrative and determiner

co-occuring in a DP.

(3)   English: allows bare plural and mass nouns (no licensing by D
         required), but count singular nouns require licensing (example (1)
         from chapter 2)

a.) *A/the boy* bought *a/the book*   [±definite] [count singular]

b.) *The* boy-*s* bought *the* book-*s*   [+definite] [count plural]

c.) **Boy* bought *book*

d.) *Boys* like *girls*   [-definite] [count plural]

e.) John received *money* for Christmas   [-definite] [mass]

4.3.   Syntactic correlates of the Nominal Mapping Parameter

To consider the detail of the acquisition of the [+arg, +pred] (English) setting of the NMP by

Japanese and Greek speakers, Hawkins *et al* (in progress) adopt a syntactic analysis of the

English DP that involves the notion of `Agree' defined by Adger (2003). The set of assumptions

based on Radford (2000) (see chapter 2, section 2.3) are repeated below in (4) for count nouns:

(4)   a   boy

       [+singular]   [noun,   animate,   masc,   3p,   *u*num:]   →
       [+singular]   [noun, animate, masc, 3p, ~~*u*num~~: +singular]

Japanese lacks articles and count syntax so nouns do not enter into the derivation carrying an

uninterpretable number feature as all nouns have an argumental interpretation i.e. are 'kinds'.[3]

Greek has articles and count syntax so all nouns in Greek enter into the derivation with an

uninterpretable feature which has to be valued and deleted by an article. English differs from

---

[3] Hawkins (*p.c*) suggests nouns in Japanese could differ between mass nouns which have an interpretable plural
feature and nouns that lack a feature for number. This might explain why *ringo* in (1) can have multiple meanings.

Japanese and Greek as it is a language with articles and a count – mass distinction. Since mass

nouns are inherently plural (Chierchia 1998a, 1998b) there is no need to claim that mass nouns

carry an uninterpretable feature. This is sketched in (5) below:

(5)   The syntactic three-way parametric distinction according to the NMP

English: count: [num, sing:pl] [N, *u*num:], mass: [N]
Japanese: all: [N]
Greek, Spanish: all: [num, sing:pl] [N, *u*num:]

However, languages such as Greek and Spanish do not allow bare plural NPs as in English (see

3c above). The examples in (6a) and (6b) are ungrammatical without a determiner:

(6)   Plurals in a. Greek and b. Spanish

a.   *(I)   isagog-is   (Ø/ton)
        The -nom,   pl importers -nom, pl (Ø/the-gen, pl)

        tsigar-on
        cigarettes-gen, pl

        'cigarette importers'

(taken from Agathopoulou 2003, p. 3)

b.   *(la-s) manzana-s dulce-s
        the apples sweet
        'sweet apples'

(adapted from Franceschina 2001, p. 230)

As the noun *tsigar* (cigarette) in Greek and the noun *manzana* (apple) in Spanish are marked for

plural number by *on* and *–s* respectively, the [*u*number] feature can be valued and deleted by

the interpretable [-singular] feature in the NumP. As a result, the [*u*number] feature has been

valued and deleted via Agreement, so why is there the need for an article?[4] One possibility is to

assume that there is an uninterpretable number feature on the article in languages like Spanish

(Franceschina 2001, Franceschina 2002) and French (Vincent in progress). Agreement or

concord in Spanish for the example *las manzanas* (the apples) is illustrated in figure 4.1:

Figure 4.1. Concord in Spanish
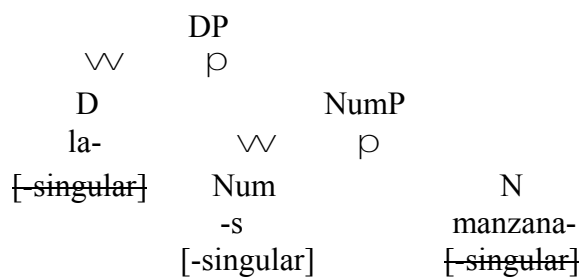
The Number head values and deletes the uninterpretable features on the noun *manzana* (apple)

and on the determiner *la* (the) as it carries an interpretable number feature:[5] In Greek and

Spanish, a DP must be projected above the NumP for determiners to have their [*u*num] feature

valued and deleted, whereas in English indefinites are members of Number, so there is no need

to project a DP. This means that indefinites carry an interpretable feature [+singular] if singular

or [-singular] if plural.[6][7]

---

[4] Greek and Spanish nouns license articles as phonetically overt or phonetically null forms when immediately c-commanded by a lexical category. I follow Chierchia (1998a) in taking this to be a case of deletion of the exponent of the D, not the absence of the D itself.

[5] See chapter 5, section 5.5 and Franceschina (2002) for further discussion of gender and number concord for determiners, adjectives and nouns in Spanish.

[6] An obvious difference between languages like Greek and Spanish on the one hand and English on the other is that there is no morphological realization of number marking on definite *the* in English as it is the same form for singular and plural nouns. See chapter 2, section 2.3 for discussion of demonstratives and indefinites in English.

[7] A potential problem with the approach illustrated in figure 4.1 (pointed out by Andrew Radford) concerns the process of number valuation. 1.) If D enters into the derivation with an uninterpretable number feature it then enters into a probe – goal relation with Num as its goal to value and delete the unvalued number feature of D: but the Num head itself also has to serve as a probe valuing the uninterpretable number feature on the N goal. This dual probe-goal status for the number feature on Num is potentially problematic; moreover, if Num only carries an

Hawkins *et al* (in progress) assume Japanese L2 learners have UG-derived ILGs and have access to all interpretable features made available by UG. However, the difficulty for Japanese L2 learners is that they "may not have acquired the *syntactic* licensing of count singular Ns in English; i.e. there is no syntactic equivalent of articles in Japanese, and these speakers may not (yet) have established such a syntactic position in their ILGs" (in progress). In other words, the Japanese L2 learners have access to the interpretable features of UG but not the uninterpretable features due to a critical period (cf. Tsimpli in press). The results in table 4.1 show the omissions made by the subjects in Hawkins *et al*'s study on a story re-call task. The Japanese L2 learners tended to omit articles more often than the Greek L2 learners in obligatory count singular contexts in this study (the Greeks hardly omitting any articles).

Table 4.1. Results of story re-call task.

Bare NPs in count singular contexts – Japanese speakers

Subj	Prof.*	+definite	-definite
J1	45 (upp-int)	4/35 (11%)	4/43 (9%)
J3	46 (upp-int)	10/36 (28%)	9/29 (31%)
J4	41 (upp-int)	13/39 (33%)	15/37 (41%)
J5	45 (upp-int)	6/41 (15%)	8/32 (25%)
J6	48 (adv)	15/29 (52%)	14/26 (54%)
J8	41 (upp-int)	7/20 (35%)	11/26 (42%)
J9	49 (adv)	8/37 (22%)	5/37 (14%)
J10	47 (upp-int)	2/35 (6%)	1/37 (3%)
J11	52 (adv)	9/22 (41%)	13/28 (46%)
J12	47 (upp-int)	5/13 (38%)	13/27 (48%)
J14	45 (upp-int)	10/28 (36%)	5/32 (16%)
J15	50 (adv)	10/39 (26%)	12/28 (43%)

---

interpretable number feature, it will be inactive for any form of syntactic operation by virtue of not carrying an uninterpretable feature to make it active. A further potential problem arises when considering a structure like i.):

i.) $[_{TP} [_T$ be $[_{vP}$ eaten $[_{DP}$ the $[_{NumP}$ −s $[_N$ apple…

If, as Chomsky (2005) has claimed, DP is a phase the Phase Impenetrability Condition will allow T to probe D, but everything below it will have undergone a transfer operation. If D has already had its uninterpretable number feature valued and deleted via agreement with Num, DP will be unable to value the number feature on the higher structure in i.) – unless we suppose that only features in the domain of D are inactivated (via transfer) on the DP phase.

* Proficiency level is based on the Oxford Quick Placement Test (2001) scores
- Range of Greek speakers' bare NPs: 4%-11%.
- Significant correlation between bare NPs in [+definite] contexts and bare NPs in [-definite] contexts (Pearson r = 0.823, n = 12, p = .001, two-tailed).
(taken from Hawkins *et al* in progress)

Hawkins *et al* (2006) propose a feature-based account based on the 'Separation Hypothesis' (Beard 1987) which can account for the Japanese L2 learners' performance in the use of articles (see section 4.4 for further discussion).

4.4.   The Missing Surface Inflection Hypothesis (MSIH)

Prévost & White (2000) proposed that there is essentially a mapping problem between the morphological or PF component and the syntax, not a representational deficit in the L2 learners' syntactic representations. The problem for L2 learners is mapping function to form (Lardiere 1998a, Lardiere 1998b, Lardiere 2000, Lardiere 2005).

Studies that have investigated the acquisition of articles by L2 learners, which have adopted the position advanced by MSIH, are discussed in the following sub-sections.

4.4.1. Robertson (2000)

Robertson (2000) conducted an experimental investigation into the variable use of the definite and indefinite articles by 18 Chinese L2 learners of English. He used a referential communication task in order to elicit samples of speech from the L2 learners. Due to the nature of the task, the data produced included many referring noun phrases. He then proceeded to analyse the data using a taxonomy based on J. Hawkins's (1991) description of definite articles and demonstratives in English and his own taxonomy of indefinites:

(7)   Types of definite and indefinite NPs

definites

a. Anaphoric use

(The referent of the NP in line 19 can refer back to previous discourse in line 17)

17	B:	and next please draw *a* circle in pink pen
18	A:	mmmm
19	B:	*the* circle is under the pink line

b. Immediate situation use

(The referent exists in the immediate situation, but it needs not be visible to both speakers)

98	B:	umm is it is it *the* blue pen or pink pen?
99	A:	yeah blue pen

c. Larger situation use

(The NP referred to can be uniquely identified by shared knowledge between the speaker and the hearer)

118	B:	okay ++ so +++ *the* right side of the square right?
119	A:	hmmm

d. Associative anaphoric use

(NPs are joined by the preposition (of))

47	A:	to *the* bottom *of* the triangle right yeah good question

e. Unexplanatory use

(The modifier (same) establishes a situation between the speaker and hearer where the referent (the same) refers to what is understood between the two participants)

128	B:	is the length *the* same?
129	A:	yeah length's *the* same

indefinites

f. Existential predication

(When the indefinite NP is introduced by the phrase (there is a...))

3   A: yeah umm *there is a* big tr oh no big triangle there

g. An object of a transitive verb or a complement in a copulative construction

95   B: ++ you need to draw *a line* +
184   B: and the left side is *a triangle*

(based on Robertson 2000)

Robertson found that the Chinese L2 learners of English tended to omit articles in obligatory contexts. A total of 1884 noun phrases were coded in the corpus and he found an overall rate of 78% suppliance of articles in contexts where a native speaker would use the definite or indefinite article. Of the 22% of articles omitted, Robertson proposed the following three principles to explain 5.8% of them (16.2% could not be accounted for by the three principles):

1.) a syntactic principle of 'determiner drop' whereby an NP with definite or indefinite reference need not be overtly marked for [±definiteness] if it is included in the scope of the determiner of a preceding NP.
2.) A 'recoverability' principle, whereby an NP need not be overtly marked for [±definiteness] if the information encoded in this feature is recoverable from the context.
3.) A 'lexical transfer principle', whereby some of these learners are using demonstratives (particularly *this*) and the numeral *one* as markers of definiteness and indefiniteness respectively.

(taken from Robertson 2000, p.135)

The remaining 206 noun phrases without articles (16.2%) could not be explained by applying the three principles. The conclusion he reaches from his study is that the variation in the use of articles by Chinese L2 learners lends support to the following hypothesis:

"these learners are having difficulty mapping the surface forms (*the*, *a*, and the zero article Ø) onto abstract features of the DP ([± number], [± definite])" (2000: 166).

Robertson invokes the Missing Surface Inflection Hypothesis in order to explain variability. The Chinese L2 learners have to 'remap' features available in Chinese to forms (the/a) in English as they move from a discourse-orientated grammar to a syntax-orientated grammar. As Chinese is discourse-orientated it lacks the grammatical features of DP and the morphosyntactic features associated with overt forms. In contrast, English is a syntax-orientated language which grammaticalizes the syntactic features of DP and has overt forms for encoding definiteness and indefiniteness. Robertson concludes that Chinese L2 learners have to acquire the grammatical features of definiteness and indefiniteness in English. It is essentially an adjustment for the Chinese L2 learner to move from mapping between semantic and pragmatic features in Chinese to mapping between the semantic and syntactic features of lexical items in English.

4.4.2. White (2003)

White (2003) reports on production data from a longitudinal study of a Turkish speaker named SD, who received minimal foreign language instruction in English whilst being a student in Turkey. At age 40, SD moved to Canada with her family and subsequently was exposed to English. SD is at end-state and is fossilized in her L2 English grammar. White started testing SD from the age of 50 through a series of interviews. Time 1 of testing was 10 years after first immersion and Time 2 was 18 months later.

Table 4.2. Articles in obligatory contexts

	Definites		Indefinites	
	Time 1	Time 2	Time 1	Time 2
Suppliance in total number of obligatory contexts	319/433 (74%)	122/170 (72%)	303/507 (60%)	149/243 (61%)
Omissions in obligatory contexts	114/433 (26%)	48/170 (28%)	204/507 (40%)	94/243 (39%)

Table 4.3. Plural –*s* in obligatory contexts

	Plural -*s*	
	Time 1	Time 2
Suppliance in total number of obligatory contexts	417/480 (87%)	248/275 (90%)
Omissions in obligatory contexts	63/480 (13%)	27/275 (10%)

(adapted from White 2003, p. 136)

Examples of omission errors are in (8) and (9):

(8)   So Ø brain is already shaped and it's not producing new cells, or whatever.

(9)   But, if you're Ø doctor, if you're Ø lawyer, you cannot come!

(taken from White 2003, p. 136, ex. 16 and 17)

Omission of definite and indefinite articles was high for Time 1 and Time 2, but articles were supplied in the appropriate contexts. In other words, substitution errors were very low compared to omission errors.

Table 4.4. Overuse of articles in bare NP contexts

	Time 1	Time 2
Appropriate null determiner	552	332
*extra determiner (definite)	27	11
*extra determiner (indefinite)	29	10
% oversuppliance	9.2	5.9

(taken from White 2003, p. 136)

Examples of substitution errors are in (10) and (11):

    (10)   These days, generally, business people wear . . . wear *the* ties.

    (11)   Is it *a* furniture ?

(taken from White 2003, p. 136, ex. 18 and 19)

White claims that the results from the oral production task "suggest that SD's suppliance of definite and indefinite articles is totally appropriate……. although she omitted articles to a fairly high extent, when they were produced, they were appropriate" (2003: 138).

    Another task used in the study was a written elicited production task based on Leung (2001).[8] White found target-like performance on 18 elicited answers to questions requiring a definite or indefinite article.

    (12)   Definite context

Calvin had two pets, a pig and a crocodile. He decided to sell one of them. Which one do you think it was? … (expected answer: *the* pig/*the* crocodile)

---

[8] Leung (2001) adapted the task used in her study from Schafer & deVillers (2000).

(13)   Indefinite context

You probably have something on your desk in your room at home. What is it ?
(expected answer: *A* diary./*A* pen./*A* telephone./etc.)

Finally, in a correction task SD correctly supplied 9/10 articles (5 definite and 5 indefinite)

appropriately. White concludes that:

"Given such accuracy in ……. the nominal domain, failure to supply surface morphology is unlikely to reflect a deficit in underlying competence; rather, the results suggest that the relevant underlying categories and features are represented in the interlanguage grammar. Furthermore, SD shows greater accuracy in other tasks, suggesting that variability is largely confined to spontaneous production" (2003: 139).

One explanation offered by White for finding variability in oral production is to appeal to the

MSIH. SD has problems mapping the phonological exponents of the articles onto the (target)

syntax under performance pressure.

However, as White suggests, the MSIH seems to be post hoc as it does not predict when

variability of inflectional morphology will occur.

4.4.3. Lardiere (2005)

Lardiere (2005, in press) reports on data from a longitudinal study of an end-state Chinese L2

learner of English named Patty. Data collection started after Patty had already been living in the

U.S for 10 years. The data consists of 3 recordings and 25 written samples collected over a 16

year period. Lardiere (2004, 2005) found that there were more omission not substitution errors

in oral production data and Patty was significantly more accurate across the two tasks with

definites ($\chi^2 = 7.9$, p<.01).

Table 4.5. Article suppliance in spoken production (obligatory contexts)

	Recording 1		Recording 2		Recording 3	
	Definites	Indefinites	Definites	Indefinites	Definites	Indefinites
Correctly supplied	62/73 (84.9%)	12/19 (63.1%)	91/116 (78.4%)	104/136 (76.4%)	50/60 (83.3%)	44/57 (77.1%)
Omitted	11/73 (15.1%)	5/19 (26.3%)	23/116 (19.8%)	26/136 (19.1%)	10/60 (16.7%)	10/57 (17.5%)
Wrong form (substitutions)	0/73 (0%)	2/19 (10.6%)	2/116 (1.8%)	6/136 (4.5%)	0/60 (0%)	3/57 (5.4%)

Table 4.6. Article suppliance in written production (obligatory contexts)

	Written	
	Definites	Indefinites
Correctly supplied	93/103 (90.3%)	65/87 (74.1%)
Omitted	7/103 (6.8%)	20/87 (23%)
Wrong form (substitutions)	3/103 (2.9%)	2/87 (2.9%)

(adapted from Lardiere 2004, p. 331)

Lardiere (2005) adopts an analysis of Chinese by Aoun & Li (2003) and claims that accuracy with supplying definites may be due to some type of discourse/pragmatic transfer from Chinese. Though Chinese lacks a definite article the Chinese nominal plural/collective marker *–men* appears to be interpreted as definite, according to Li (1998).

> (14) a. wo qu zhao *haizi-men*
> I   go find child-PL
> 'I will go find the children.'
>
> b. wo qu zhao haizi
> I   go find child
> 'I will go find the/some child/children.'

(taken from Li 1998, p.4, ex. 3)

The example in (14b) is supposedly vaguer than (14a) when referring to 'children'.

Lardiere also found that Patty rarely supplied plural marking in quantified expressions such as *several students* or *both students* in recordings 2 and 3. Only around half the time for each recording, plural marking was supplied in obligatory contexts.

Table 4.7. Production of plural marking in obligatory quantified expressions

		Suppliance/contexts	%
Recording	1	2 / 23	8.7
	2	24 / 51	47.1
	3	14 / 24	58.3

(taken from Lardiere 2005, p.183)

Lardiere terms the omission of obligatory plural marking as 'lingering transfer effects' as Chinese does not have plural marking on the noun in quantified expressions.

<blockquote>
(15)   *laoshi   dui   (zhe/na)   *ji-ge*   *xuesheng-men*   tebie   hao
       teacher   to   this/that   several-CL   student-PL   especially   good
       'The teacher is especially nice to those several students.'
</blockquote>

(taken from Lardiere 2005, p.182, ex. 14)

In (15) the plural/collective marker *–men* is used to signify plurality. As the classifier position is filled by *ge* it blocks the noun from raising to Number thus the noun cannot receive plural marking. However, if the classifier position is empty the noun can raise up to Number to check the plural feature of *–men*, as in (16):

<blockquote>
(16)   laoshi   dui   zhe-/na-   xie   *xuesheng-men*   tebie   hao
       teacher   to   this/that-   PL   student-PL   especially   good
       'The teacher is especially nice to these/those students.'
</blockquote>

(taken from Lardiere 2005, p.182, ex. 13)

In (16) –*men* is used to mark definiteness and plurality.

Lardiere argues that Patty has to *re*assemble the features that occur in Chinese (definiteness and plurality) into the way that they are conditioned and realized in English. This does not mean that resetting a parameter from one value to another value needs to be invoked. Rather, this would be the result of feature-to-form 'mapping' or a 're-mapping' problem (see Robertson, section 4.3.1), which is between the morphological or PF component and the syntax.

The idea of mapping between an autonomous morphological component, PF and syntax is based on work in morphology by Beard (1987) and Halle & Marantz (1993) and is discussed in relation to L2 acquisition in section 4.5.

4.5.   The Morphological Underspecification Hypothesis (MUH)

An extension of MSIH has been proposed in the form of the Morphological Underspecification Hypothesis (hereafter MUH) by McCarthy (2004, 2005) in order to attempt to explain why L2 learners produce variant forms in their ILGs (Lardiere & Schwartz 1997, Prévost & White 2000, White *et al* 2004, Lardiere 2005). McCarthy claims that the MSIH only describes inflection required in obligatory contexts as missing, whereas the MUH (based on the DM model) tries to account for the variability found in performance tasks by claming that inflection is underspecified for certain features. According to the Separation Hypothesis (Beard 1987) and the DM model (see chapter 2, section 2.5), there is no lexicon, only syntax, which manipulates abstract categories and arranges them into unlinearized structures. Vocabulary Insertion inserts phonological forms into abstract syntactic structures known as terminal nodes. The terminal nodes are simply bundles of features without phonological exponents. This is known as Late Insertion.

A study by McCarthy (2004) investigated the acquisition of L2 Spanish by 11 participants (L1 English), specifically addressing two domains of which I will discuss the second one, the nominal domain of gender and number in determiners. The participants proficiency levels' ranged from intermediate to advanced. McCarthy states that her study is somewhat different to previous studies on production by L2 speakers as it is not a longitudinal case study of one particular L2 speaker (Lardiere 1998a, Lardiere 1998b, Franceschina 2001, White 2003, Lardiere 2005) or of just a small number of participants (Prévost & White 2000). Her study also includes speakers at intermediate levels, not only advanced or at end-state.

In Spanish, nouns agree with adjectives and determiners (see section 4.3). Vocabulary items, in this case determiners such as *las*, *los*, *la* and *el* (see 18 below) are inserted via a signal to the phonological exponents for insertion into a context. Assuming that the L2 Spanish learners have full transfer of features, we could expect the following feature specification in (17) for definite articles:[9]

(17)	vocabulary items		Features of phonological exponents
	las	↔	[feminine] [-singular]
	los	↔	[-singular]
	la	↔	[feminine]
	el	↔	*elsewhere*

(adapted from McCarthy 2004, p. 5)

McCarthy argues that the features [masculine] and [singular] are unmarked features which are underspecified. The only features available are [feminine] and [plural].[10]

---

[9] McCarthy (2005) discusses the feature specifications of definite articles only.

[10] Evidence supporting the idea that the unmarked feature for gender in Spanish is [masculine] comes from Harris (1991) and Lumsden (1992). See McCarthy (2004) for discussion of [singular] being an unmarked feature.

McCarthy proposes the following hypothesis under the MUH:

(18)   L2 errors are ones of underspecification, not of feature clash

For the hypothesis in (18) to apply, McCarthy does not expect to find the following feature clashes in the L2 learners' ILGs:

(19)   ?la   libro
         DET-fem book (masc, sg)

If the terminal node D in the syntax supplies the feature [masculine] but subsequently in competition for insertion a feminine form is selected, then a feature clash will occur. These types of errors are not predicted to arise, but underspecification errors are expected as the unmarked feature in (20) is [masculine]:

(20)   ?el   noche
         DET-masc night (fem, sg)

As *el* is the *elsewhere* morpheme it lacks gender features, so it can be selected for insertion.

McCarthy found in her study that the L2 Spanish learners produced underspecification errors more than feature clash errors:

Table 4.8. Gender and number agreement in determiners: Error type

	N
Underspecification Errors	82 (85%)
Feature Clash Errors	15 (15%)
Total Errors	97

(taken from McCarthy 2004, p. 9)

The type of underspecification errors included definite and indefinite determiners as shown in

(21) and (22):

(21) ?No quiero   contestar, pedirlo por *un*   otra   letra
     neg want-1sg answer,   ask it   for det-indef-masc other-fem letter-fem
     'I don't want to ask him for another letter'

(Samantha, intermediate)

(22) ?Hay   *el*   sangre   acadian en mi cuerpo
     there-is   det-def-masc blood-fem Acadian in my body
     'There is Acadian blood in my body'

(David, intermediate)

The examples (21) and (22) indicate semantic ambiguity as the articles are underspecified for

gender. As McCarthy argues, the MUH can predict the types of errors and absence of errors

which occur in L2 production, whereas the MSIH can only account for variability in production

by stating that inflectional morphology is missing.

Hawkins *et al* (2006) propose a similar idea to the MUH in order to account for the

variability found in the production of articles in English (see section 4.2 above). The terminal

nodes and features of phonological exponents for articles proposed in chapter 2, section 2.5 are

repeated in (23):

(23)   Terminal nodes and features of phonological exponents:

```
D                D                D                D
|                |                |                |
+definite        +definite        -definite        -definite

+singular        -singular        +singular        -singular
```

vocabulary items   features of phonological exponents

a   ↔   [D, -definite, +singular]

the   ↔   [D, +definite]

Ø   ↔   [D]

(adapted from Hawkins *et al* 2006)

When vocabulary items share similar features, where either can be inserted into the terminal node, the one with the greater number of matching features wins and is inserted. Feature clash avoids the wrong form being inserted when the following feature is specified for example, [+definite]. Since [+definite] clashes with [-definite] the wrong form will never be selected for insertion. The difference between native speakers and Japanese L2 learners is that in the process of selection of features something 'blocks' access to the more specified form, so native speakers do not produce Ø in obligatory definite or indefinite singular and definite plural contexts like *He bought *book* (singular), *He bought the *book* (plural). What we expect from Japanese L2 learners is *the* will never be inserted in [-definite] contexts; *a* will never be inserted in [+definite] or [-singular] contexts; Ø will only be inserted as a default form (the *elsewhere* form) as it is underspecified for [α definite, α number]. This is illustrated in (24):

(24) ILG representation for Japanese L2 learners of English

vocabulary items		context-sensitive rules
a	↔	/ ___N [-definite, +singular]
the	↔	/ ___N [+definite]
Ø	↔	*elsewhere*

(adapted from Hawkins *et al* 2006)

Under the RDH account, Hawkins *et al* (in progress) claim that Japanese L2 learners might not be able to acquire the uninterpretable feature [*u*F:] of N in English and as D values [*u*F:] their ILGs might not yet have established the functional head D.[11] As a result, Hawkins *et al* claim that Japanese L2 learners ".... learn articles as morphemes that are inserted by context-sensitive rules" (in progress).[12] Features of the phonological exponents are not activated directly by the terminal nodes in the syntax, but rather the features [±definite] and [±singular] are activated indirectly via Ns (see 24 above).[13] The Japanese L2 learners' ILG representation differs to that of native speakers of English because they identify different features made available by UG both in the specification of lexical items that enter the syntactic terminal node computations and in the specification of the 'contexts of insertion' of phonological exponents in the Vocabulary i.e. *the* and *a*.

Under the MSIH and MUH accounts there is no representational deficit in the syntax and phonological exponents are not inserted by applying context-sensitive rules as the L2 learners have access to the same feature specifications for vocabulary items as native speakers.

---

[11] Kuribara (1999) argues that Japanese lacks a DP functional projection. See chapter 5 for further discussion.
[12] See Casillas-Navarro (2004) for further discussion of the idea of *context-sensitive late insertion* by L2 learners and the proposal of the Contextual Complexity Hypothesis.
[13] Hawkins *et al* (in progress) claim that the role of input may depend on an individual's performance. The stronger the association between Ns and exponents the better they will perform in producing articles in obligatory contexts.

4.6. The Prosodic Transfer Hypothesis (PTH)

A different approach to variability in L2 production has recently been suggested for L2 learners' omission of inflectional morphology (Lardiere 2003, Lardiere 2004). The focus is not on overt bound morphology or absence of bound morphology for obligatory L1 English morphemes (e.g. past tense *–ed*, plural *–s*), but on how morphology is represented prosodically in L2 grammars. This is known as the Prosodic Transfer Hypothesis (Goad *et al* 2003a, Goad *et al* 2003b, Goad & White 2004, 2006). Recently, the PTH has made predictions about free forms, such as the prosodic structure of determiners (*the* and *a*; see chapter 2, section 2.5.1).

In a study by Goad & White (2004) data from SD was re-examined (see section 4.3.2 above) in light of a possible prosodic account of why articles in obligatory contexts were being omitted. The total number of articles supplied and omitted is in table 4.9.[14]

Table 4.9. Determiners in obligatory contexts (left edge)

	Definite articles		Indefinite articles		Other determiners		Total articles	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Supplied	320/433 (74%)	140/187 (75%)	306/512 (60%)	161/256 (63%)	1118	797	626/945 (66%)	301/443 (68%)
Omitted	113/433 (26%)	47/187 (25%)	206/512 (40%)	95/256 (37%)			319/945 (34%)	142/443 (32%)

(adapted from Goad & White 2004, p. 125)

The Prosodic Transfer Hypothesis (PTH) predicts that:

---

[14] Table 4.2 and Table 4.9 are data from the same L2 learner, SD. However, the total number of tokens produced is higher for definites and indefinites in Table 4.9. I presume the discrepancy between the tables is due to re-coding of the original dataset.

"If the L1 does not permit certain kinds of prosodic representations as required by the L2, then second language speakers will have difficulties in representing such morphology in the outputs of the phonological component of the interlanguage grammar" (Goad & White 2004: 122).

The PTH proposes that L2 learners' syntactic representations are appropriate (no representational deficit) for the target language, although L2 learners may delete functional material in production as the prosodic structure in their L1 may differ, leaving no way of building the correct prosodic structure for the L2. However, if the L1 prosodic structure can be modified to accommodate the L2, then the PTH predicts far greater accuracy in suppliance of functional morphology by L2 learners, perhaps reaching native-like levels in production. To date, predictions made by the PTH have only been applied to L2 learners of English.[15] Goad & White (2004) apply the PTH to the data (verbal and nominal) produced by SD.

In Turkish, there is no definite article, so bare NPs are ambiguous as to whether they signal definiteness, but if *bir* is used it can be indefinite when it is unstressed (see 25b) or numeral *one* if stressed (see 25c):

> (25)   a. kitáp
>   '(the/a) book'
>
>   b. bir kitáp
>   'a book'
>
>   c. bír kitap
>   'one book'
>
>   d. bú kitap
>   'this book'

(taken from Goad & White 2004, p.123)

---

[15] Goad & White (2006) propose a similar analysis for omission of articles by Chinese L2 learners of English.

In order to understand how SD adapts her L1 prosodic representations of *bir* to the English prosodic structure we need to understand the prosodic structure of English (see chapter 2, section 2.5.1) and the prosodic structure of Turkish. As the focus is on the prosodification of articles, which appear at the left edge of the phonological phrase in English, Goad & White provide the relevant prosodic structures for English and Turkish, supplied in figure 4.2.

Figure 4.2. Prosodic structures for English and Turkish

(a) English articles: Free clitic   (b) Turkish indefinite article (unstressed):
                                                Affixal clitic (prefix)
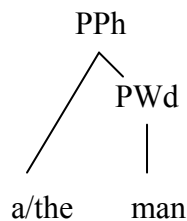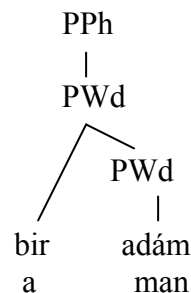
(c) Turkish numeral (stressed):
      independent PWds
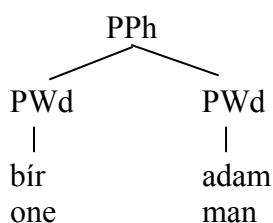
(adapted from Goad & White 2004, p. 131)

The difference between English and Turkish is that in English articles are free clitics, which attach directly to the phonological phrase (Figure 4.2a), whereas in Turkish unstressed *bir* is claimed to be an affixal clitic that adjoins to the prosodic word, which then links higher to the

phonological phrase (Figure 4.2b).[16] Further evidence supporting the claim that *bir* is an affixal clitic, not a free clitic, comes from adjectival constructions, as in (26):

(26) a. iyi   bir adám
       good a   man
       'a good man'

    b. *bir iyi   adám
       a good man

    c. bír iyi   adam
       one good man

(taken from Goad & White 2004, ex. 10, p. 132)

The difference between (26a) and (26b) is that indefinite *bir* cannot have an intervening adjective placed between it and the noun. Goad & White claim that the reason for (26a) being well-formed is because indefinite *bir* attaches as a prefix onto the head noun *adám*. Example (26b) separates the unstressed indefinite article and noun and as it cannot prefix onto an adjective it is not well-formed, as in figure 4.3b. It seems that indefinite *bir* is prosodically dependent on the head noun. However, numeral *bir* is stressed and seems to be an independent prosodic word, as represented in figure 4.3c:

---

[16] Goad & White (2004) give an explanation of vowel harmony as to why indefinite *bir* (unstressed) is outside the lower PWd.

Figure 4.3. Prosodic representations of *bir*
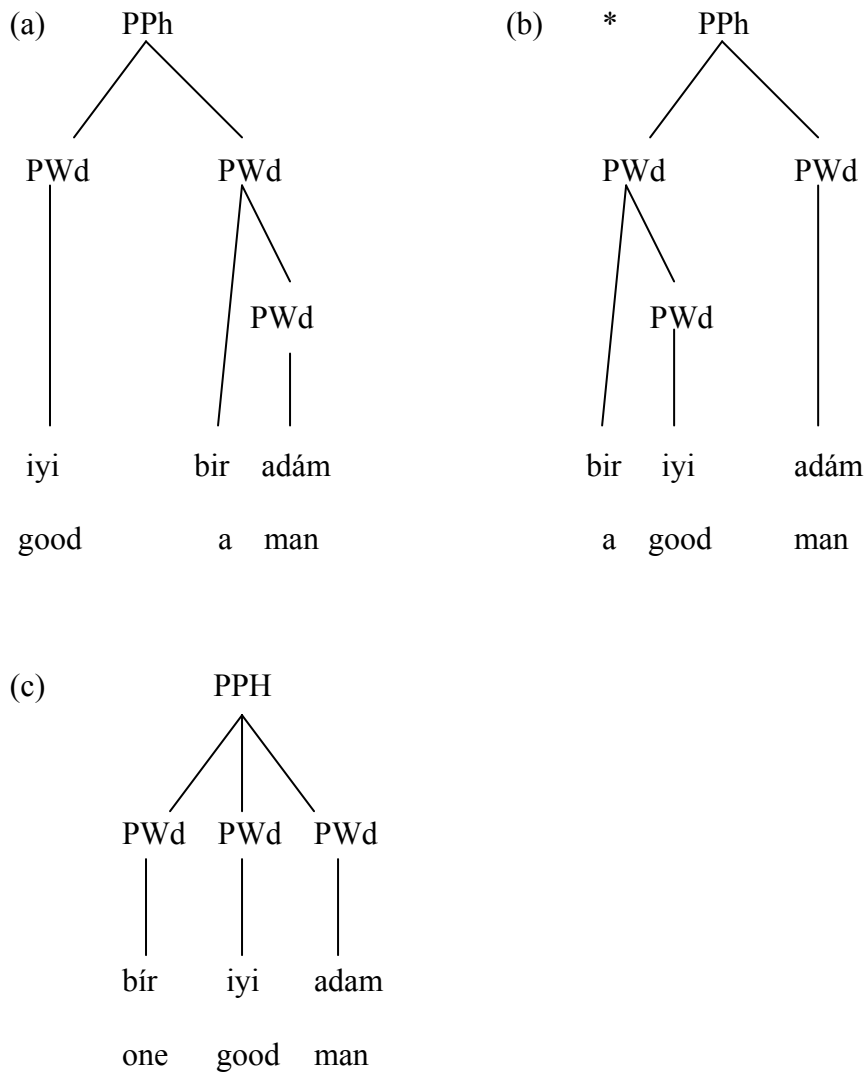
It is now possible to make predications about how SD represents articles *the* and *a* in her ILG.

Possible representations suggested by Goad & White are illustrated in figure 4.4:

Figure 4.4. Possible interlanguage prosodic representations (L1 Turkish, L2 English)

(a)
```
            PPh
             |
            PWd
           /  \
              PWd
             /    \
        the/a     man
```

(b)
```
            PWd
           /   \
               Ft
               |
       σ       σ
       |       |
     the/a    man
```

(c)
```
            PPh
          / |  \
     PWd PWd PWd
      |   |   |
   the/a good man
```
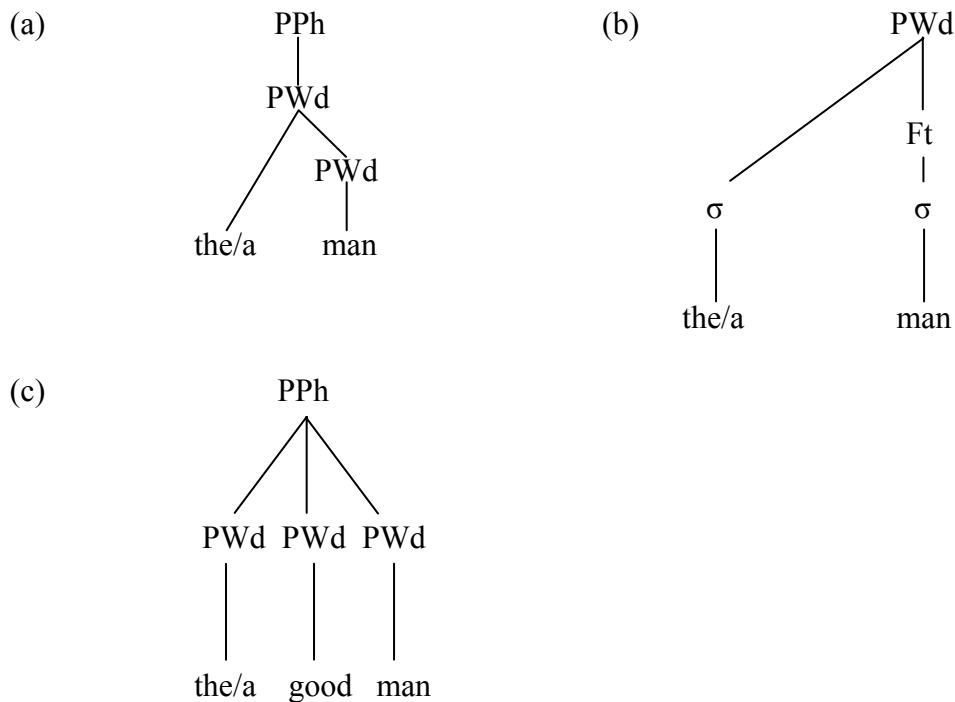
Goad & White propose the prosodic representation in figure 4.4a, which uses adjunction to the PWd. This allows them to predict contrasts between article + noun DPs and article + adjective + noun DPs. They predict that SD will be able to prosodically represent articles in article + noun constructions as the article can adjoin to the PWd, as in the L1, but not in article + adjective + noun constructions as articles cannot adjoin to adjectives in the L1. Therefore, they predict that there will be a greater number of omission errors in the latter type constructions and this is what they found in the data. Complete omission in Art+Adj+N contexts is not predicted as in some cases articles may be produced as independent PWds (stressed) rather than clitics (unstressed):

Table 4.10. Article suppliance: Art+N vs. Art+Adj+N

		Definite	Indefinite
Art + [σ!...]Noun	Supplied	277/361 (77%)	231/329 (70%)
	Omitted	84/361 (23%)	98/329 (30%)
Art + [σ!...]Adj+ Noun	Supplied	61/91 (67%)	121/245 (49%)
	Omitted	30/91 (33%)	124/245 (51%)

(adapted from Goad & White 2004, p. 134)

More omissions were found in article+adjective+noun constructions, supporting the prediction by the PTH that SD cannot modify the L1 prosodic structure.

4.7. The Article Choice Parameter in L2 acquisition

The study by White (2003), the data from which formed the basis for the study by Goad & White (2004), showed that the Turkish speaker SD had assigned appropriate semantic interpretations to the English articles. Studies discussed in this section have observed cases where L2 learners differ from natives in the interpretations they assign to articles.[17] It has been

---

[17] Ionin *et al* (2004) claim that their definition of specificity is different from that of Huebner's (1985) semantic binary distinction based on work by Bickerton (1981). (see chapter 1 for discussion). Consider the following example:

(a) Peter intends to marry *a/this* merchant banker; even though he doesn't get on with her.
(b) Peter intends to marry *a/#this* merchant banker; I have no idea who it is.

For Bickerton, both are +Specific Referent because his definition depends on 'existence in the world'. In both the above cases there is a particular individual who Peter intends to marry. But for Ionin *et al*, the first one is specific (the speaker makes reference to the noteworthy property that Peter doesn't get on with the banker) while the second one is non-specific: the speaker doesn't know anything about this merchant banker. Bickerton's notion of 'non-specific' requires non-existence in the world:

suggested that this may be the effect of the need to set the appropriate value for an Article

Choice Parameter (ACP) in learning an L2 with articles. The ACP claims that there are two

semantic settings for article choice: definiteness and specificity:

Definiteness and Specificity

> If a Determiner Phrase (DP) of the form [D NP] is…
> (a) [+definite], then the speaker and hearer presuppose the existence of a unique individual in the set denoted by the NP
> (b) [+specific], then the speaker intends to refer to a unique individual in the set denoted by the NP, and considers this individual to possess some noteworthy property

(taken from Ionin *et al* 2004, p.5)

The ACP predicts that languages with two articles differ cross-linguistically. Languages with

articles can either be grouped under the definiteness setting (a), as in (standard) English or

grouped under the specificity setting (b), as in Samoan and other Polynesian languages (see

chapter 2, section 2.4.1).

Linked to the ACP, Ionin *et al* (2004) propose the Fluctuation Hypothesis for L2

acquisition which predicts that there will be fluctuation between the two parameter settings

until input leads L2 learners to correctly set the parameter value to definiteness for English.

Ionin *et al* (2004) suggest that L2 learners may adopt neither the L1 nor the L2 parameter

settings, but a possible setting from some third language i.e. Samoan.

"L2 learners should have no initial preference for one setting of a parameter over another. If they have full UG access, then they should have access to all of the possible parameter-settings, until the input leads them to choose the parameter-setting appropriate for their L2" (2004: 16-17).

(c) Peter intends to marry *a* merchant banker, but he hasn't met one yet

Ionin *et al* (2004) show, at least for their Russian/Korean speakers, that they fluctuate between *the/a* in the case of (b), but not in the case of (a) or (c). Bickerton's (1981) definition of +/-SR cannot explain this, because it would treat (a) and (b) as +SR and (c) as –SR.

It is expected that there will be substitution of *a* for *the* in the [+definite] [-specific] contexts and substitution of *the* for *a* in the [-definite] [+specific] contexts for L2 learners to be fluctuating. [18]

The Fluctuation Hypothesis, as formulated by Ionin (2003a), is in (27):

(27)   The Fluctuation Hypothesis (FH) for L2-English article choice:

(a) L2 learners have full UG access to the two settings of the Article Choice Parameter
(b) L2 learners fluctuate between the two settings of the Article Choice Parameter until the input leads them to set this parameter to the appropriate value

(taken from Ionin 2003a, Ch.3 p.86)

The prediction, based on earlier studies (Ionin *et al* 2003, Ionin & Wexler 2003, Ionin 2003a, Ionin 2003b), is that L2 learners of English will fluctuate between the two settings. They are not expected to substitute *the* for *a* in [-definite, -specific] contexts and *a* for *the* in [+definite, +specific] contexts, but are expected to substitute *the* for *a* in [-definite, +specific] contexts.[19] The predictions are illustrated in table 4.11:

Table 4.11. Predictions for article choice in L2 English: [±definite, ±specific]

	[+definite] (target: the)	[-definite] (target: a)
[+specific]	correct use of *the*	overuse of *the*
[-specific]		correct use of *a*

(adapted from Ionin & Wexler 2003, p. 153)

---

[18] Master (1990) suggests for pedagogical purposes that the binary features [±definite] and [±specific] should be collapsed into a single feature [±identified]. See chapter 2 for a similar argument of grammaticalized identifiability (Lyons 1999).
[19] Ionin & Wexler (2003) originally termed specific uses of indefinite *a* as referential. I will use the term 'specific' as defined by Ionin *et al* (2004) based on Fodor & Sag's (1982) definition.

In one of their earlier studies, Ionin & Wexler (2003) tested 27 L1 Russian learners of English. Russian is an article-less language, so they predicted that the L2 learners would fluctuate in article choice. The aim of the study was to see whether wide scope and/or relative clause (RC)-modification would bias a specific reading for indefinites (prompting overuse of *the*) and narrow scope/no scope and no RC-modification would bias a non-specific reading of indefinites.[20] They administered a forced choice elicitation task that contained 52 dialogues written in Russian with the last sentence written in English. The L2 learners were asked to choose between the most appropriate article *the*, *a* and -- (null article) to fill a gap in the dialogue. All contexts in the task used singular DPs and the target item was always placed in object position, thus ruling out any transfer effects from Russian word order (Ionin 2003a).[21] Examples of the types of dialogues used in the task are below with the correct choice of article underlined:

   (28)   [+definite, +specific] (anaphoric use)

A: Miranda bought two birds in the pet shop yesterday; one was healthy and one was a little bit sick.
B: What did she do when she brought the birds home?
A: She gave some seeds to (a, <u>the</u>, --) ____ bird that was sick.

   (29)   [-definite, +specific] (using RC-modification and wide scope)

A: I heard that Mary was sick. Has she found medical help?
B: Yes, she has.
B: She is going to see (<u>a</u>, the, --) ____ doctor who went to medical school at Harvard and now lives in Brookline.

---

[20] Ionin & Wexler (2003: 150-151) included the de re / de dicto distinction. An indefinite DP is de re if it is not in the scope of an operator such as an intensional verb, a modal, or negation. Otherwise, the DP is de dicto.

de re indefinite: I'd like to meet a famous writer – I really like her books.
de dicto indefinite: I'd like to meet a famous writer – any famous writer will do.

As the de re / de dicto distinction was found not to play a role in L2 article choice by Ionin & Wexler (2003) I will not pursue the de re / de dicto distinction here.

[21] Ionin *et al* (2003) included plural contexts as well as singular contexts. For the plural contexts L2 learners were given a choice of *some*, *the* or – (null article). Predictions for article choice focussed mainly on the singular contexts.

(30)   [-definite, -specific]

A: John looked very happy today. Do you know why?
B: He got (a, the, --) _____ dog for his birthday yesterday.

The results of the task are in table 4.12:

Table 4.12. Elicitation task results: percentage of article use by context

Category		Target article	%the	%a	%missing
narrow scope	(non-specific)	a	12%	84.3%	3.7%
narrow scope, RC	(non-specific)	a	13 %	82.4%	4.6%
no scope	(non-specific)	a	18%	77%	5%
no scope, RC	(specific)	a	**52.8%**	**44.4%**	**2.8%**
wide scope	(specific)	a	**44.4%**	**52.8%**	**2.8%**
wide scope, RC	(specific)	a	**63%**	**35%**	**2%**
wide scope, *certain*	(specific)	a	**54.6%**	**34.3%**	**11.1%**
definite		the	83.3%	13%	3.7%
definite, RC		the	86.1%	11.1%	2.8%

(adapted from Ionin & Wexler 2003, p. 157)

They found, as predicted, that the L1 Russians overused *the* in [-definite, +specific] contexts, but far less in [-definite, -specific] contexts. The difference between the contexts is significant on a paired-samples t-test (p< 0.01).

In a more recent study, Ionin *et al* (2004) included the missing [+definite, -specific] context (cf. table 4.11). They predicted that L2 learners of English will fluctuate between the two settings of the ACP overusing *the* in [-definite, +specific] contexts and overusing *a* in [+definite, -specific] contexts. They are not expected to overuse *the* in [-definite, -specific] contexts and *a* in [+definite, +specific] contexts. The predictions are given in table 4.13:

Table 4.13. Further predictions for article choice in L2 English: [±definite, ±specific]

	[+definite] (target: the)	[-definite] (target: a)
[+specific]	correct use of *the*	overuse of *the*
[-specific]	overuse of *a*	correct use of *a*

(based on Ionin *et al* 2004, p. 19)

They tested subjects from languages without articles – 30 L1 Russian speakers (4 beginner, 11 intermediate, and 15 advanced L2 learners) and 40 L1 Korean speakers (1 beginner, 6 intermediate, and 33 advanced L2 learners). All the beginners were excluded from their study. It is predicted that L2 learners of English without articles in their L1's will fluctuate between the two settings under the ACP in the absence of L1 transfer effects. They used a similar forced choice elicitation task containing 76 written dialogues in English. The L2 learners were asked to choose between the most appropriate article *a*, *the* and -- (null article) to fill a gap in the dialogue, basing their choice on the preceding context.[22] There are equal numbers of [+/- definite, +/-specific] combinations in the task. Some examples are below:

(31) [+definite, +specific] (definite, intensional verb, wide scope, speaker knowledge)

Conversation between two police officers

Police officer Clark: I haven't seen you in a long time. You must be very busy.
Police officer Smith: Yes. Did you hear about Miss Sarah Andrews, a famous lawyer who was murdered several weeks ago? We are trying to find (a, the, --) murderer of Miss Andrews – his name is Roger Williams, and he is a well-known criminal.

---

[22] Ionin *et al* (2004) did not supply a blank. Rather, they let the L2 learners choose from *a*, *the* and --. It is not clear if the articles were randomized for each dialogue or that they appeared in the same order for each dialogue. If they were not randomized there may have been an ordering effect (see Ionin *et al* submitted, for changes in the task).

(32) [+definite, -specific] (definite, intensional verb, narrow scope, no speaker knowledge)

Conversation between a police officer and a reporter

Reporter: Several days ago, Mr. James Peterson, a famous politician, was murdered! Are you investigating his murder?
Police officer: Yes. We are trying to find (a, <u>the</u>, --) murderer of Mr. Peterson – but we still don't know who he is.

(33) [-definite, +specific] (indefinite, intensional verb, wide scope, speaker knowledge)

In an airport, in a crowd of people who are meeting arriving passengers

Man: Excuse me, do you work here?
Security guard: Yes.
Man: In that case, perhaps you could help me. I am trying to find (<u>a</u>, the, --) red-haired girl; I think that she flew in on Flight 239.

(34) [-definite, -specific] (indefinite, intensional verb, narrow scope, no speaker knowledge)

In a children's library

Child: I'd like to get something to read, but I don't know what myself.
Librarian: Well, what are some of your interests? We have books on any subject.
Child: Well, I like all sorts of things that move — cars, trains. . . . I know! I would like to get (<u>a</u>, the, --) book about airplanes! I like to read about flying!

Ionin *et al* (2004) produced dialogues to see whether or not scope played a role in article choice.

The intensional contexts (31 – 34) have narrow or wide scope readings with respect to the intensional operators *trying to find* and *would*. The task also included contexts where there were no scope interactions known as extensional contexts. However, they found that the Russian and Korean L2 learners overused *the* in [-definite, +specific] contexts and *a* in [+definite, -specific] contexts, regardless of whether an intensional or extensional operator was used with a wide or narrow scope reading. There were no significant differences found between intensional versus extensional operators and wide scope versus narrow scope readings. For both groups, the main

interaction for choosing *the* or *a* in each context was between the semantic features [±definite, ±specific]. Therefore, Ionin *et al* combined the intensional and extensional contexts and presented all contexts together. The results of all the contexts combined are in table 4.14:

Table 4.14. Definiteness versus specificity: All contexts

L1 Russian Speakers	[+definite]		[-definite]	
[+specific]	79% *the*	8% *a*	**36% *the***	54% *a*
[-specific]	57% *the*	**33% *a***	7% *the*	84% *a*

L1 Korean Speakers	[+definite]		[-definite]	
[+specific]	88% *the*	4% *a*	**22% *the***	77% *a*
[-specific]	80% *the*	**14% *a***	4% *the*	93% *a*

(taken from Ionin *et al* 2004, p. 30)

They found that the Russian and Korean L2 learners fluctuated in the use of articles as they overused *the* in [-definite, +specific] contexts and overused *a* in [+definite, -specific] contexts. In order to determine whether there were significant interactions between definiteness and specificity in the choice of articles, repeated measures analyses of variance (ANOVAs) were performed on the use of *the* and on the use of *a* and for each language group. The results are summarised in tables 4.15 and 4.16:

Table 4.15. Effects of definiteness and specificity in singular contexts

	Use of *the*	Use of *a*
L1 Russian speakers		
Definiteness	$F_{(1, 25)} = 61$***	$F_{(1, 25)} = 57$***
Specificity	**$F_{(1, 25)} = 21$***	**$F_{(1, 25)} = 25$***
Definiteness x Specificity	$F_{(1, 25)} = 1.66$	$F_{(1, 25)} = 1.04$
L1 Korean speakers		
Definiteness	$F_{(1, 38)} = 406$***	$F_{(1, 38)} = 501$***
Specificity	**$F_{(1, 38)} = 29$***	**$F_{(1, 38)} = 27$***
Definiteness x Specificity	$F_{(1, 38)} = 4.9$*	$F_{(1, 38)} = 1.95$

*$p < .05$ **$p < .01$ ***$p < .001$

(taken from Ionin *et al* 2004, p. 31)

Table 4.16. Effects of definiteness, specificity and proficiency level

	Use of *the*	Use of *a*
L1 Russian speakers		
Definiteness	$F_{(1, 24)} = 68.19$***	$F_{(1, 24)} = 63.48$***
Definiteness x Level	**$F_{(1, 24)} = 7.71$*	**$F_{(1, 24)} = 7.5$*
Specificity	**$F_{(1, 24)} = 22.98$***	**$F_{(1, 24)} = 30.8$***
Specificity x Level	$F_{(1, 24)} = 1.9$	$F_{(1, 24)} = 4.05$†
Definiteness x Specificity	$F_{(1, 24)} = 1.47$	$F_{(1, 24)} = 0.71$
Definiteness x Specificity x Level	$F_{(1, 24)} = 0.05$	$F_{(1, 24)} = 1.13$
L1 Korean speakers		
Definiteness	$F_{(1, 37)} = 188.2$***	$F_{(1, 37)} = 257.15$***
Definiteness x Level	$F_{(1, 37)} = 3.32$	$F_{(1, 37)} = 0.02$
Specificity	**$F_{(1, 37)} = 19.13$***	**$F_{(1, 37)} = 17.09$***
Specificity x Level	$F_{(1, 37)} = 0.58$	$F_{(1, 37)} = 0.35$
Definiteness x Specificity	$F_{(1, 37)} = 2.95$	$F_{(1, 37)} = 0.73$
Definiteness x Specificity x Level	$F_{(1, 37)} = 0.04$	$F_{(1, 37)} = 0.04$

†$p < .06$ (marginal) * $< .05$ **$p < .01$ ***$p < .001$

(taken from Ionin *et al* 2004, p. 32)

The finding that there is variation between the uses of the features [±definite] and [±specific] means, according to Ionin *et al*, that specificity plays a role in the ILGs. They found that learners who overused *the* in [-definite, +specific] contexts were also likely to overuse *a* in [+definite, -specific] contexts. Repeated measures ANOVAs were also performed on the effects of proficiency level as it was thought that the intermediate L2 learners in each group could be fluctuating more than the advanced learners. This was only found to be the case for the L1 Russian group. They found that the advanced L2 learners were more accurate than the intermediate L2 learners in using *the* in definite contexts and *a* in indefinite contexts. However, this result was not found for the L1 Korean group. Although there were fewer intermediate L2 learners than the L1 Russian group, they found that there were no significant differences between the intermediate L2 learners and the advanced L2 learners.

They also looked at individual performances within the groups to see if there was a similar pattern in use of *the* and *a*. They found that the group results conceal different individual patterns of use.

Table 4.17. Russian and Korean L2 learners: individual patterns of use

Response type	No. of individuals	%
(a) Definiteness pattern	21/65	32
(b) Fluctuation pattern	20/65	31
(c) Specificity pattern	2/65	3
(d) Partial fluctuation pattern	9/65	14
(e) Miscellaneous patterns	13/65	20

(adapted from Ionin *et al* 2004, p. 39)

The definiteness and fluctuation patterns are expected patterns of use of articles in English under the FH, but the specificity, partial and miscellaneous are unexpected patterns of use.

Ionin *et al* argue that only the partial fluctuation pattern involving nine L2 learners remains a puzzle under their account of fluctuation.[23]

They conclude by claiming that the results from their studies (Ionin & Wexler 2003, Ionin *et al* 2004) support the proposal of an Article Choice Parameter and that L2 learners of English will fluctuate between the settings definiteness and specificity until input leads them to set the ACP to the correct value for English (definiteness).

4.8.   Summary of chapter 4

In section 4.1 the Nominal Mapping Parameter was discussed in relation to sections 4.2 and 4.3. Sections 4.2 and 4.3 investigated claims as to whether there is a syntactic deficit in the ILG of L2 learners. The claim by Chierchia (1998a) that Japanese L2 learners have a NMP setting [+arg, -pred] and that there is a syntactic deficit in their ILGs (Hawkins *et al* in progress) is explored in chapters 6, 7 and 8 as it seems that Japanese has a form of count syntax, by use of classifiers and numerals (see chapter 5, section 5.1.4). In section 4.4 it was argued that L2 learners have a 'remapping' problem of features to forms. The idea of underspecification of features was considered in section 4.5. A prosodic transfer account was offered in section 4.6 as one way of accounting for omission of articles in obligatory contexts. If the Prosodic Transfer Hypothesis can account for omissions in oral production data from Turkish and Mandarin Chinese L2 speakers (Goad & White 2006) due to L1 prosodic differences to the L2, it is interesting to consider Japanese as it is prosodically different to Turkish and Chinese. The prosodic structure of the Japanese nominal domain is discussed in chapter 5, section 5.1.5. The PTH is applied to the Japanese and Spanish oral production data and discussed in chapter 8. Section 4.7 outlined the claim that L2 learners of English have difficulty with the interpretation

---

[23] The partial fluctuation pattern is when L2 learners made the specificity distinction with definites, but not with indefinites.

of articles as they fluctuate between the semantic features definiteness and specificity in trying to set the Article Choice Parameter for the definiteness setting. In light of new data from Japanese and Spanish L2 learners, the binary Article Choice Parameter and the Fluctuation Hypothesis will be discussed in chapter 9.

Chapter 5

A cross-linguistic analysis of Japanese and Spanish: NPs and DPs

5.0.   Introduction

According to the **Nominal Mapping Parameter** (Chierchia 1998a) nouns are all 'kinds' or bare NPs in Japanese, whereas in Spanish all nouns need to be licensed to appear as arguments; they do not have inherent 'kind' reference, in contrast to Japanese, so they must project D. Since Japanese L2 learners of English have persistent problems in the acquisition of articles, it is consistent with the claim by Chierchia (1998a) for a NMP. The fact that Japanese neither has a syntactic D head nor count syntax is transferred by Japanese L2 learners of English into their ILGs which persistently diverge from the grammars of native speakers (Kuribara 1999, Kuribara 2000, Hawkins *et al* in progress). Because Spanish, in contrast, has count syntax and DP, transfer of these properties means that the ILGs of Spanish speakers are already highly consistent with the grammar of English (Franceschina 2001, Franceschina 2002).

Ionin *et al* (2004) claim that L2 learners of English, in the absence of transfer effects from the L1 (i.e. without articles in their L1) will fluctuate between possible parameter settings made available via full access to UG (see chapter 4, section 4.7). They claimed that there is no transfer from Korean to English and no transfer from Russian to English, so as a result L2 learners from these languages fluctuate between the two settings (definiteness and specificity) of the **Article Choice Parameter**. The prediction for Japanese L2 learners is that there is no transfer from Japanese to English as Japanese is also a language without articles. The Spanish L2 learners are expected to transfer their L1 to L2 English as Spanish is a language that has articles.

Goad & White (2004, 2006) claimed that one of the causes of omission of articles in spoken production by L2 learners of English is the result of L1 prosodic transfer and they proposed the Prosodic Transfer Hypothesis. The participants in their studies have Turkish and Mandarin as their L1s. Japanese is also a language without articles, but has not been studied in relation to the effects of its prosodic structure on L2 performance in English. It does have demonstratives and prefixes. The question is how Japanese might prosodify these elements. Do they attach directly at the left edge of the phonological phrase as a clitic (as articles do in English; see chapter 2, section 2.5.1) or are they independent prosodic words?

The aim of this chapter is to discuss the nature of number, definiteness and specificity in Japanese and Spanish and the prosodic structure of Japanese and Spanish. In sections 5.1.1 and 5.1.2 evidence that Japanese has article-like morphemes and a syntactic D head is considered and rejected as it will be argued in section 5.1.3 that definiteness and specificity exist in Japanese solely as semantic/pragmatic concepts (Lyons 1999). The differences between languages like Japanese, Spanish and English is that the latter two languages both grammaticalize definiteness whereas the former does not. Contrary to Chierchia's (1998a) claim of a NMP, it will be argued in section 5.1.4 that there is a count – mass distinction present in Japanese. Section 5.1.5 outlines the prosodic structure of Japanese where it is argued that prosodically Japanese L2 learners of English can accommodate articles in article + noun constructions but it is unclear whether there is a structure available for article + adjective + noun constructions. Arguments for DP and count syntax in Spanish are given in section 5.2. Examples of articles and plural marking in Spanish are provided in section 5.2.1. Section 5.2.2 details the count – mass distinction in Spanish with reference to the NMP. It is predicted that as definiteness and specificity exist in Spanish there will be no fluctuation between definiteness and specificity as the ACP is already set for definiteness. Section 5.2.3 supplies examples of

how definiteness and specificity are expressed in Spanish. Finally, the prosodic structure of Spanish is discussed in section 5.2.4.

5.1.   Determiner and Number in Japanese

There is much debate in the literature as to whether Japanese has a rich syntactic functional structure like Spanish and English (Saito & Murasugi 1990, Kitahara 1993, Tateishi 1994, Kawashima 1998, Ishii 2000, Kakegawa 2000, Watanabe 2006), or is much simpler whereby concepts like definiteness and specificity can be explained by semantic/pragmatic discourse effects (Shirahata 1988, Chaudron & Parker 1990, Shirahata 1995, Wakabayashi 1997, Lyons 1999, Kuribara 2000).[1] Section 5.1.1 considers Japanese demonstratives as equivalents of the English demonstratives and articles. Section 5.1.2 outlines various proposals for a Spec DP by referring to numeral and classifier phrases. Section 5.2 argues that semantic/pragmatic definiteness exists in Japanese but not syntactic (grammaticalized) definiteness. Section 5.3 presents arguments for assuming that there is a count – mass distinction in Japanese.

5.1.1. Demonstratives

Japanese does have demonstratives which are the nearest equivalent to the demonstratives *this* and *that* in English. Wakabayashi (1998) proposes that only the demonstrative *so-no* (that) is the nearest article equivalent of the definite article in contexts such as anaphoric reference. The demonstratives are potential candidates for a functional category D in Japanese, these being *ko-no* (this), *a-no* (that) and *so-no* (that):

---

[1] A previous study of Japanese and Spanish L2 learners of English has assumed a different analysis of Japanese. Trademan (2002) claims that Japanese has article equivalents to *the/a/Ø*.

(1)
    a.   ko-no   hon
        'this   book'

    b.   a-no   shinbun
        'that   newspaper'

    c.   so-no   otoko-no-ko
        'that/the   boy'

Does this mean Japanese demonstratives bear the properties of functional categories?[2] Fukui (1995) argues that they do not have the property of a functional category as they differ from English demonstratives in that they do not have the property of closing the category projection. Fukui (1995) refers to X-bar theory. He states "only functional categories project up to the XP level, a structurally closed level" (1995: 105). The syntactic structure does not project further than DP in English:

(2)
    a.   this book
    b.   *John's this book

    c.   that lecture
    d.   *yesterday's that lecture

    e.   John-no ko-no hon
    f.   *John's this book

    g.   akai John-no ko-no hon
    h.   *red John's   this book

(taken from Fukui 1995, p.106)

---

[2] There are two reasons why Japanese demonstratives cannot occupy the head D position of DP in Japanese. One is (as Andrew Radford points out) that Japanese is a head-final language, so that if demonstratives were heads, we would wrongly predict them to follow the nominals that they modify. The second reason is that (as Fukui 1995 points out), Japanese demonstratives appear to be phrasal in nature, comprising a stem which appears in other forms like *ko-re*, (this), *a-re*, (that) and *so-re* (it), and a genitive case particle *–no* (suggesting that demonstratives may have the status of KP/Kase Phrase constituents). If they are phrasal in nature, they cannot be heads but rather must be specifiers of a nominal head of some kind.

The ungrammaticality of (2b) and (2d) can be accounted for if it is assumed that English demonstratives are just like *the* in that they are, according to Fukui (1995), functional heads without a Kase-grid. However, in (2e) and (2g) Japanese demonstratives do not close the category projection as they are grammatical in Japanese. The observation is that demonstratives in Japanese behave like English adjectives as they can be modified by a preceding (e.g. genitive) expression. Fukui (1995) concludes that Japanese lacks the functional category D and that Japanese NPs are projections of N, namely N', and are never closed.[3]

5.1.2. Numerals and Classifiers

Example (1) from chapter 4 is repeated below:

(3)	Taroo-ga	ringo-o	katta
	Taro-Nom	apple-Acc	buy-past
	'Taro	bought	*an* apple/apple*s*/*the* apple/*the* apple*s*'

(taken from Wakabayashi 1997, p.309)

The example in (3) is evidence in support of a NMP as *ringo* (apple) can be indefinite singular/indefinite plural/definite singular/definite plural. The NMP is consistent with Fukui and Takano's (2000) claim that Japanese lacks a functional D.[4] But, Japanese has numerals + classifiers as shown in (4) and (5):

---

[3] Other authors such as Ishii (2000) and Watanabe (2006) who propose DP in Japanese do not comment on the catergorial status of demonstratives.

[4] See Fukui & Takano (2000) for an interesting account of Number in Japanese. Their account is that "a classifier is a phonological/morphological realization of the [nominal] feature of Num" (2000: 245). This is due to the fact that Japanese does not have N-raising or D so the only way to check the [nominal] feature of Num is by use of a classifier.

(4)   Taroo-ga   mise-de   *i-kko*   ringo-o   katta
         Taro-Nom   shop-at   one-Cl   apple-Acc   buy-past
         'Taro   bought   *an/one* apple at the shop'

(5)   Taroo-ga   mise-de   *san-ko*   ringo-o   katta
         Taro-Nom   shop-at   three-Cl   apple-Acc   buy-past
         'Taro   bought   *three* apples at the shop'

(taken from Wakabayashi 1997, p.309)

In (4) and (5) there are numeral + classifier *i-kko* and *san-ko* respectively. Wakabayashi (1997) suggests that the D and number features in Japanese are optional, but in Spanish and English they are obligatory. Kakegawa (2000) argues that there is a DP in Japanese as NPs with a numeral + classifier acquire different readings depending on word order:

(6)   a.   John-ga [*hon-o*   *san-satsu*]   katta
           -Nom [book-Acc   three-Cl]   bought   (indefinite)
           'John bought three books'

      b.   John-ga [*hon san-satsu-o*]   katta
           -Nom [book three-Cl-Acc] bought   (definite)
           'John bought three books'

(taken from Kakegawa 2000, p.127)

Kakegawa (2000) claims that (6a) has an indefinite reading, while (6b) gives a definite reading. These readings are based on the order of [N+case-marker+numeral classifier] (indefinite) and [N+numeral classifier+case-marker] (definite) and the accusative case marker *o* structurally marks definiteness and is a determiner.[5] (6a) and (6b) are illustrated in figure 5.1 below:

---

[5] Cheng & Sybesma (1999) argue for a similar analysis of the Chinese nominal domain.

Figure 5.1. Numeral + classifier: different readings

a.   Case-medial form (indefinite)

```
                        NumP
                  ᨆ        ᨇ
              DPᵢ                    Num'
          ᨓ    ᨌ               ᨓ    ᨇ
          NP    D            ClP            Num
          hon    o        ᨓ    ᨒ          satsuⱼ
          book  Acc    NmrlP        Cl'
                       san         t i
                       three       tᵢ           Clⱼ
```
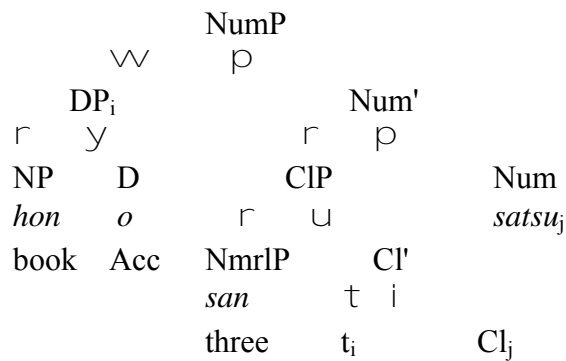

b.   Case-final form (definite)

```
                        DP
                  ᨆ        ᨇ
              NumP                   D
          ᨓ    ᨅ                    o
          NPᵢ          Num'        Acc
          hon      ᨆ      ᨅ
          book    ClP            Num
              t i                satsuₖ
            NmrlP        Cl'
            san         t i
            three       tᵢ           Clₖ
```
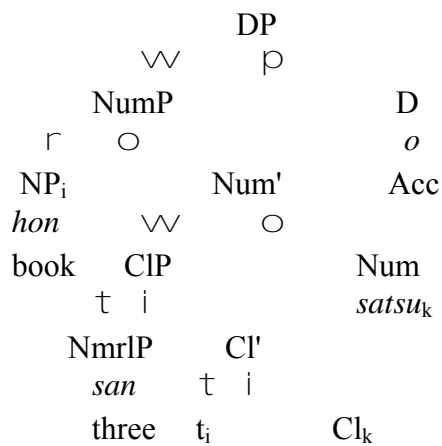

(taken from Kakegawa 2000, p.128)

Kakegawa adopts the Minimalist Program (Chomsky 1995) to explain how the different readings are possible, as this involves movement so that features can be checked and deleted.[6] The indices i/j/k in figure 5.1 show which part of the structure has moved. One reason for arguing that (6a) and (6b) are structurally different is that (6b) has definiteness encoded internally and cannot be used in an indefinite context, as shown in (7) with similar examples:

---

[6] In the updated versions of Minimalism post 1995 movement is not a device used to check and delete features.

(7)   a.   ?biiru san-bon-o   kudasai
             beer three-Cl-Acc give me   (definite)
             'Give me three bottles of beer'

        b.   biiru-o   san-bon kudasai
             beer-Acc three-Cl give me   (indefinite)
             'Give me three bottles of beer'

(taken from Kakegawa 2000, p.131)

The case-medial form (7b) is only acceptable when ordering some beer in a bar as the hearer does not know which bottles of beer are being referred to as it is a discourse initial utterance (see footnote 7 below for further discussion on specificity). Similar accounts of DP are given in Kitahara (1993) and Kawashima (1998).

    Ishi (2000) and Kurafuji (2004) give an analysis of *-tachi* as a plurality and definiteness marker in Japanese analogous to that of Li's (1999) analysis of the plurality and definiteness marker *-men* in Chinese, as *–tatchi* can attach to animate nouns:[7]

(8)   gakusei-tatchi, inu-tatchi, *kuruma-tatchi, *tsukue-tatchi
        student-Pl   dog-Pl   car-Pl   desk-Pl
        'the students' 'the dogs'   'the cars'   'the desks'

(taken from Ishii 2000, p.69-70)

But, it is not the exact equivalent of the plural marker *–s* in English as it can also attach to pronouns and proper nouns:

---

[7] Ishii (2000) gives other examples of suffixes in Japanese which attach to nouns like *-ra* and *-domo* and these can signal some kind of plurality. See chapter 4, section 4.4.3 for Li's (1998) account of *–men* in Chinese.

(9)   a. watashi-tatchi, anata-tatchi, kanajyo-tatchi
            I-Pl   you-Pl   she-Pl
            'we/us'   'you'   'they/them(fem)'
        b. Taroo-tatchi
           Taro-Pl
           'Taro and those in his group'

In (9b) –*tatchi* gives the reading of a particular group of people including Taro, not two people named Taro. Ishii (2000) presents examples for assuming that –*tatchi* behaves in similar ways to plural marker –*men* in Chinese and proposes a similar structure to the one proposed by Kakegawa (2000) in (6b). The same structure can be used to capture the role of -*tatchi*:

Figure 5.2. –Tachi:- definiteness and plurality marker

a.   hon   san-satsu
        book three-Cl   (definite)
        'three books'

b.   [gakusei-tatchi san-nin] ga   kita
        student-Pl   three-Cl-Nom came   (definite)
        'three students came'

		Cl
a.	hon	san-satsu [-human]
b.	gakusei-tatchi	san-nin [+human][8]

---

[8] Kurafuji (2004) argues that if bare/common nouns in Japanese have a [+human] feature (i.e. animate nouns) they are ambiguous between count and mass/kind nouns. This means semantically these nouns would be similar to nouns in English, which has the NMP setting [+arg, +pred]. He suggests that the lexicon has two strata where one incorporates the other. "The superset has the [+arg, -pred] value and the subset the [+arg, +pred] value. The

Under this analysis for Japanese the numeral-classifier complex *san-nin* is base-generated under Cl and the numeral and classifier form a single unit under the Cl head. *–tatchi* is a plural marker and has the uninterpretable features [+definite, +Pl] which must be checked and deleted via movement by the [+Pl] feature in Num and the [+definite] feature in D. The structures are illustrated in figure 5.3:

Figure 5.3. Checking of uninterpretable features via [+definite] and [+Pl] features

a.   DP
   e   O

                        D'
               e   O

            NumP   D
      e   i   [+definite]

                     Num'
               e   i

            ClP   Num
      e   i   [+Pl]

                     Cl'
               e   p

            NP   Cl
      [+definite, +Pl] |
      gakusei-tatchi   san-nin [+human]

b.   DP
   e   O

[+definite, +Pl]   D'
gakusei-tatchi e   O

            NumP   D
      e   i   [+definite]
   t   Num'
               e   i

            ClP   Num
      e   i   [+Pl]
   t   Cl'
               e   p

            NP   Cl
      t   san-nin [+human]
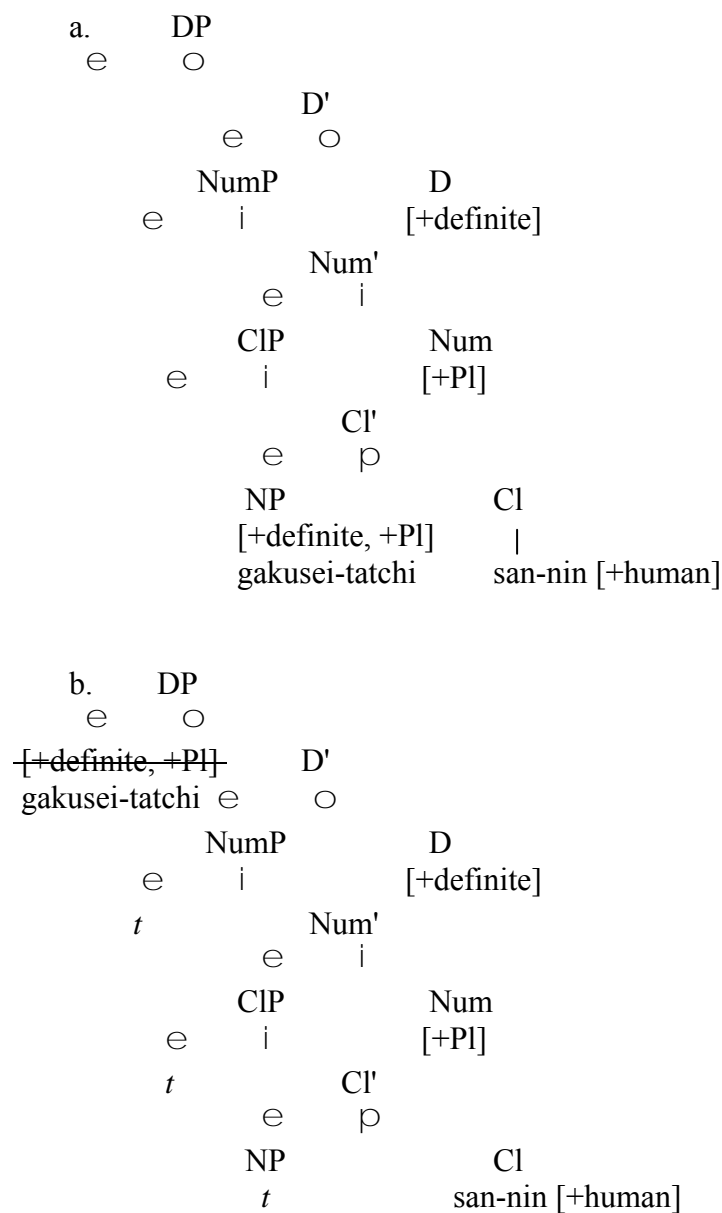
[+human] nouns are members of the subset; that is, they have the [+arg, +pred], so their category-type mapping is determined item by item" (2004: 238).

The entire NP raises to Spec DP via movement through Spec ClP and Spec NumP to give the definite, plural reading. This analysis differs to Kakegawa (2000) in that movement takes place in order to check and delete uninterpretable features. Ishii (2000) argues that if –*tatchi* is not selected, then *gakusei san-nin* receives an indefinite reading. *gakusei* (student) is raised to spec NumP through Spec ClP, as in figure 5.4:[9]

Figure 5.4. Indefinite reading without –tachi

```
          [gakusei san-nin] ga     kita
          student  three-Cl-Nom came          (indefinite)
          'three students came'


             NumP
            ｔ  ｉ
          NP          Num'
          |       ｔ  ｉ
        gakusei   ClP        Num
              ｔ  ｉ        [+Pl]
            t            Cl'
               ｔ  ｐ
             NP              Cl
             t           san-nin [+human]
```
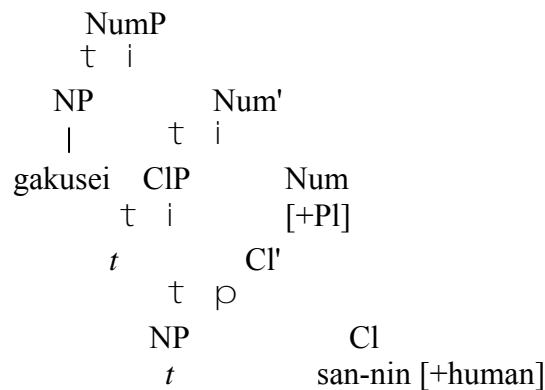
(taken from Ishii 2000, p.83)

As –*tachi* can also appear as an affix on proper nouns (see example 9b) it can have either a plural or collective reading, depending on the position within the structure:

> (10)   a. Yamada-sensei-wa *san-nin-no Taroo-tatchi-o* shokuji-ni shootai- shita
>   Yamada-teacher-Top three-Cl-Gen Taro-Pl-Acc meal-to invited
>   'Professor Yamada invited three Taro's for dinner.'
>   (**plural reading only**)

---

[9] In figure 5.4 the NP *gakusei* (student) raises from Cl head position to Spec NumP because it carries an uninterpretable feature [+Pl] that needs to be checked and deleted.

b. Yamada-sensei-wa *Taroo-tatchi san-nin-o* shokuji-ni shootai-shita
Yamada-teacher-Top Taro-Pl   three-Cl-Acc meal-to invited
'Professor Yamada invited Taro and the other two for dinner.'
(**collective reading only**)

c. Yamada-sensei-wa *Taroo-tatchi*-o shokuji-ni shootai-shita
Yamada-teacher-Top Taro-Pl-Acc meal-to invited
'Professor Yamada invited Taro and those in his group for dinner.'
(**collective reading only**)

(taken from Ishii 2000, p.84)

However, the accounts given by Ishii (2000) and Kurafuji (2004) argue that –*tatchi* is inherently definite and do not consider –*tatchi* as an indefinite marker, but the existential sentence in example (11) has an indefinite reading:

(11)   Kooen-ni *kodomo-tatchi*-ga ita
Park-Loc child-Pl-Nom existed   (indefinite)
'There were children in the park.'

(taken from Nakanishi & Tomioka 2004, p.120)

Example (11) has an indefinite reading because the speaker is not referring to one particular group of children, just a group of children who the speaker witnessed. There is no previous discourse introducing 'children', thus no presupposition that the speaker and hearer share knowledge. Furthermore, if –*tatchi* is only a definite marker it should not enter into a scope relation as in (12):

(12)   Kono kooen-de-wa itsumo *kodomo-tatchi*-ga asonde-iru
this park-Loc-Top always child-Pl-Nom play-Prog
a.   √always > child-Pl: 'In this park, there are always children
playing.'

b.   ??? child-Pl > always: 'In this park, there are some children
who are always playing.'

The felicitous reading is (12a) because *kodomo-tatchi* (children) takes narrow scope under the quantificational adverb *itsumo* (always). This means that there is no reference made to a particular group of children. Hironobu (2005) believes that the type of examples Kakegawa (2000), Ishii (2000), Kurafuji (2004) and Nakanishi & Tomioka (2004) present are related to specificity[10] rather than definiteness as they can interact with scope relations. Further examples support the idea that –*tatchi* may be related to specificity:

(13)   a.   Sono byooin-wa *kangohu*-o sagashi-tei-ru.
            that hospital-Top Nurse-Acc seek-Prog-Pres
            'That hospital is looking for a nurse.'
            ??'There is a nurse that hospital is looking for.'

       b.   Sono byooin-wa *kangohu-tatchi*-o sagashi-tei-ru.
            that hospital-Top Nurse-Pl/-Pl-Acc seek-Prog-Pres
            'There are nurses the hospital is looking for'

(taken from Kurafuji 2004, p. 216)

If the intensional verb *sagasu* (to seek) has a bare NP in object position, as in (13a), it receives a non-specific reading, but in (13b) –*tatchi* has wide scope over the verb and gives the interpretation that the hospital is looking for a specific group of nurses. Given that there is disagreement in the literature over the meaning of –*tatchi*, it looks as though plural marking in Chinese and Japanese are not exactly comparable.

---

[10] Hironobu (2005) bases his version of specificity on Fodor & Sag's (1982) definition. This is different to the definition of specificity given by Ionin *et al* (2004) (see chapter 2, section 2.4.1) as the examples given in (12) and (13) do not refer to some noteworthy property as specified by the speaker. See Muromatsu (2003) for a different definition of specificity, based on Enç (1991). Her discussion is on ordering of head noun + classifier phrase to give specific/non-specific readings:

(i.)   a.   Jiro wa san dai no kuruma o utta
                Jiro-Top three-Cl-Gen car-Acc   sold
                'Jiro sold three cars'

         b.   Jiro wa kuruma o san dai   utta
                Jiro-Top car-Acc three-Cl sold
                'Jiro sold three cars'

In (i.a) *san dai no kuruma* (three cars) has a specific reading, which is based on previous discourse. (i.b) has a non-specific reading.

5.1.3. The concept of semantic/pragmatic definiteness

The syntactic analysis provided by various authors argues that there is a functional category D in Japanese, as this can account for different readings. However, there seems to be no consensus in the literature reviewed as to the purpose of a functional D head in Japanese. Others argue for a simpler structure without the need to postulate so much functional structure (Fukui 1995, Chierchia 1998a, Lyons 1999 Fukui & Takano 2000). There is no need to posit that case markers in Japanese project DP, as an alternative proposal by Tsujimura (1996) argues that case markers can combine directly with the NP. It is more likely that the position of the head noun and numeral + classifier (see section 5.3) gives definite and indefinite or specific and non-specific readings. Therefore, it could be argued that Japanese is a language which is marked by semantic/pragmatic definiteness [11] (Tawa 1993, Wakabayashi 1997, Lyons 1999) and/or specificity[12], but not a functional category D as Lyons (1999) makes a distinction between grammatical definiteness and semantic/pragmatic definiteness. It is argued that Japanese does not grammaticalize definiteness as demonstratives and case markers do not function as articles in Japanese. Demonstratives are more like adjectives in that they cannot close the category projection (see section 5.1.1) and case markers do not function the same way as articles in languages like English and Spanish. Thus, the claim that Japanese does not have a functional D head supports the claim for a Nominal Mapping Parameter, but as Japanese has the concepts of semantic/pragmatic definiteness and specificity it is expected that Japanese speakers can transfer these concepts to the L2 initial state.

As Japanese does not have articles, the difficulty with articles in L2 English will be trying to re-map meaning to form (Robertson 2000, Prévost & White 2000, White 2003, Lardiere

---

[11] Tateshi (1994) claims that Japanese has definiteness as there is topic marking, so *wa* could be construed as occupying a functional category D for definiteness, but Lyons (1999) states that it does not follow "that *wa* is a definite article or even that a category of definiteness exists in Japanese" (1999: 233). See Lambrecht (1994) for discussion on topic marking in Japanese.

[12] See Kitahara (1993) and Kakegawa (2000) for examples of numeral + classifier scrambling in Japanese to give an indefinite non-specific reading.

2005). The implication of L1 transfer effects means that though Japanese L2 learners may have no initial preference for one setting of the ACP over the other, definiteness and specificity are already available to them via the L1 and not via another possible setting from a third language, e.g. Samoan. Problems in acquiring articles in English is not necessarily due to mis-setting the ACP but rather trying to map existing concepts, definiteness and specificity, onto *the* and *a*.

5.1.4.   Count – mass syntax in Japanese

It is clear that Japanese has numerals and classifiers, so is this an argument against Chierchia's (1998a) NMP? Does Japanese have a syntactic count – mass distinction? Chierchia (1998a) comments on this observation:

"saying that all members of category NP are mass-like does not mean saying that something resembling the mass/count distinction cannot be found in such languages….. Obviously, liquids or 'granular' substances (like rice, sand etc.) have important structural properties in common (for example, their minimal parts are inherently vaguer than those things like furniture) and this may well be registered in the syntax of the corresponding nouns (e.g., in the classifier system)" (Chierchia 1998a: 355).

It is believed by some researchers that numerals + classifiers form count syntax in languages like Chinese (Doetjes 1997, Li 1998, Cheng & Sybesma 1999, Li 1999, Simpson & Wu 2000, Borer 2005, Lardiere 2005, Li *et al* 2005). Muromatsu (2003) presents various examples from Japanese supporting her claim that classifiers and measure words in Japanese are semantically and syntactically different.[13] Semantically, they differ in the way they select and combine with nouns as classifiers are used for animateness, shape or function as in (14):

---

[13] Classifiers can be divided into sortal and mensural classifiers. Sortal classifiers categorize nouns in terms of animacy, shape and consistency while mensural classifiers are used with count or mass nouns for measuring units (Aikhenvald 2003).

(14) a. kodomo go-nin
          child   five-Cl [+human]
          'five children'

      b. uma go-too
          horse five-Cl [for large animals]
          'five horses'

      c. enpitsu go-hon
          pencil five-Cl [for long objects]
          'five pencils'

(taken from Muromatsu 2003, p. 73)

Measure words, on the other hand, are used for substance or material, so *kiro* (kilogram) can be

applied to countable nouns or any noun expressing weight or extension:

(15) a. banana ni   kiro
          banana two kilogram
          'two kilograms of bananas'

      b. kin ni   kiro
          gold two kilogram
          'two kilograms of gold'

      c. mizu ni kiro
          water two kilogram
          'two kilograms of water'

(taken from Muromatsu 2003, p. 74)

Syntactically, when classifiers and measures appear together within a NP, the grammaticality of

the phrase is dependent on the position of each within the NP:

(16) a. ichi kiro no suika   san ko
          one kilo-Gen watermelon three-Cl
          'three 1 kilogram watermelons'

b. *san ko no   suika   ichi kiro
    three-Cl-Gen watermelon one kilo
    'three 1 kilogram watermelons'

(adapted from Muromatsu 2003, p. 77)

Muromatsu (2003) claims that the ungrammaticality in (16b) is not semantic because it is

grammatical if the classifier and measure word appear separately, as in (17a) and (17b):

(17) a. san ko no   suika
          three-Cl-Gen watermelon
          'three watermelons'

      b. suika   ichi kiro
          watermelon one kilo
          'one kilogram of watermelons'

(adapted from Muromatsu 2003, p. 77)

Given the differences between classifiers and measure words in Japanese, Muromatsu (2003)

believes that the count – mass distinction is present.

"Japanese nouns that correspond to English count nouns, such as *book*, *car* and *pencil*, have associated classifiers, and they can be counted. On the other hand, Japanese nouns that correspond to English mass nouns, such as *water*, *honey* and *gold*, do not have associated classifiers, nor can they be categorized by them. Nor can they be counted. This leads me to conclude that there is a count/mass distinction in classifier languages after all" (2003: 78-9).

Muromatsu (2003) proposes a hierarchy for the three types of nouns: count, mass and abstract,

which have different dimensionalities. [14] They are represented as spatial metaphors and

illustrated in figure 5.5:

---

[14] Denny (1979) claims that there are specific classifiers, which are used with shape etc (countable or concrete) and the classifier *tsu*, which is a general or unmarked classifier that can be used with abstract nouns such as *idea* and *feeling*.

Figure 5.5. Spatial metaphors of count, mass and abstract nouns in Japanese

a. 'abstract noun'   b. 'mass noun'   c. 'count noun'
1 Dimensional   2 Dimensional   3 Dimensional
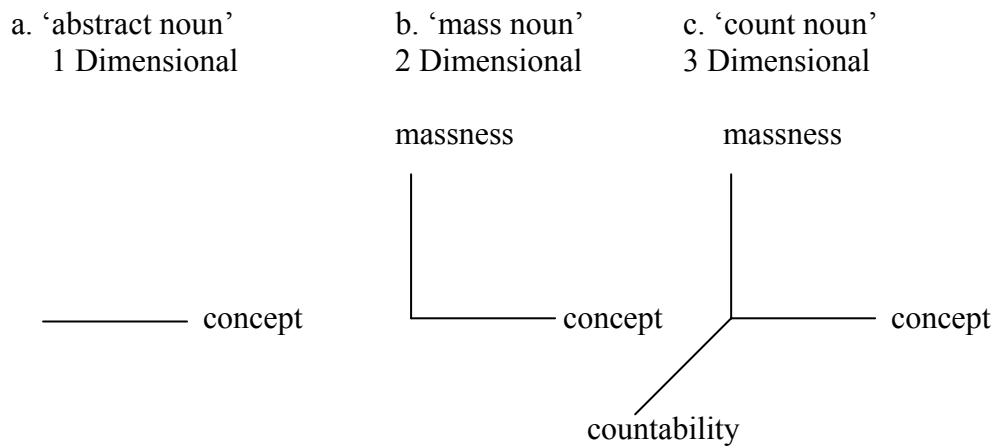
Based on the dimensional system in figure 5.5, the prediction is that abstract nouns will not

occur with classifiers or measure words:

(18) a. *100 grams no heiwa
            100 gram-Gen peace
            '100 grams of peace'
      b. *futa-tsu no   heiwa
            two-Cl-Gen peace
            'two peaces'

And mass nouns do not go with classifiers, only with measure words:

(19) a. five rittoru no mizu
            five litre-Gen water
            'five litres of water'
      b. *futa-tsu no mizu
            two-Cl-Gen water
            'two waters'

As predicted by the model in figure 5.5, measure words and classifiers can occur with count

nouns:

(20)   a.   15 kiro no   inu
             15 kiro-Gen dog
             'a 15 kilo dog'

       b.   ni   hiki no   inu
             two-Cl-Gen dog
             'two dogs'

In support of a count – mass distinction for classifier languages, Borer (2005) states that in all languages nouns are mass, so there is no need to appeal to a NMP.[15] Nouns have to be portioned out in some way before interacting with the 'count' system. Plural marking and indefinite articles in English do this task and in languages like Japanese they use classifier inflection.[16] These happen to be in complementary distribution across the world's languages.[17] [18] Doetjes (1997) proposes a CountP which incorporates languages like English and Japanese (see Chapter 2, section 2.3.1). Languages either have a NumP that mark nouns for [+singular] or [+plural] number or a ClP like Chinese and Japanese where there is a numeral or abstract feature [+countable].

---

[15] Watanabe (2006) provides a similar account to Muromatsu (2003) for count – mass syntax in Japanese.

[16] Borer (2005) holds the view that plural *–s* and the indefinite article *a* in English are "an instantiation of the classifier function" (2005:94). An alternative suggested by Muromatsu (2003) is that English has a null classifier *pro* in numeral expressions:

   (i.)   five *pro* pencils
             five Cl   pencils
             'five pencils'

The idea is to extend the explanation of count, mass and abstract nouns in non-classifier languages so that *pro* in English can be used with count nouns, measure words are used with mass nouns and neither with abstract nouns e.g. *five peaces (count) or *a kilo of peace (measure).

[17] Chierchia (2005) points out that plural inflection and classifier inflection perform the same semantic function but are not necessarily in complementary distribution because they co-occur in English:

   (i.)   *A* pound of meat
   (ii.)   Three pound*s* of meat

Measure words like *pound* and *kilo* and classifiers such as *box* or *bunch* seem to have a count macrosyntax as in (i.) there is a singular form and (ii.) plural marking (see chapter 2, section 2.3.1 for discussion).

[18] Aikhenvald (2003) argues that the type of construction in (ii.) is restricted to a small number of nouns in non-classifying languages like English and they often have lexical meaning of their own whereas mensural classifiers do not.

5.1.5. The prosodic structure of Japanese nominal phrases

Japanese differs from English as it is mora-timed and a pitch-accent language. Speakers of English divide words into syllables, whereas Japanese speakers divide words into moras. The difference between the two languages is shown in (21) from imported words:

		syllable-based (English pronunciation)	mora-based (Japanese pronunciation of English imported words)
(21)			
	a.	Christ.mas	ku.ri.su.ma.su
	b.	text	te.ki.su.to
	c.	Lon.don	ro.n.do.n
	d.	gro.tesque	gu.ro.te.su.ku

(taken from Roca & Johnson 1999, p. 238)

The pitch on a word is usually predictable from the location of accent, so the pitch is crucial in order to identify the word:

(22)		*			*		
	a.	hashi	(high-low)	hashi	(low-high)	[19]
		'chopsticks'		'bridge'		
		*					
	b.	ame	(high-low)	ame	(low-high)	no accent
		'rain'		'candy'		
		*					
	c.	aki	(high-low)	aki	(low-high)	no accent
		'autumn'		'vacancy'		

(taken from Tsujimura 1996)

The words in (22) differ in terms of their pitch pattern. If the pitch pattern changes, then the meaning of the word is changed. The accent is indicated by '*' and this marks the place where

---

[19] Shaw (2005) suggests that *hashi* can also have no accent, which means 'edge'.

the pitch changes on the mora from high to low. The mora is a unit of timing; each of the

following can count as a mora:

(23)
     a. (C)V
     b. The first part of a long consonant (i.e. a geminate)
     c. syllable-final, or "moraic," nasal *n*

However, in some dialects of Japanese the syllable plays a more important role rather than the

mora. The examples in (21) are divided on the basis of mora, but in the Tagajo dialect (northern

Japan) *mikan* (orange) and *gakkoo* (school) are divided into two parts as *mi-kan* and *gak-koo*.

Given that Japanese has morae and syllables, a representation of the prosodic structure for adult

Japanese phonology is illustrated in figure 5.6:

Figure 5.6. The prosodic structure of adult Japanese phonology

PPh

|

PWd

|

(Foot)

|

Syllable

|

Mora
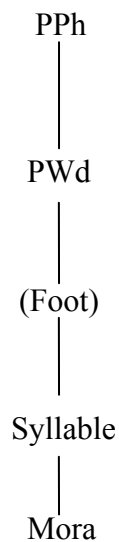
(adapted from Miyakoda 2005, p.50)

With an outline of the basic phonological structure of Japanese in place, I now turn to discuss the implications of Japanese L1 prosodic structure on L2 acquisition of the nominal domain in English.

The Prosodic Transfer Hypothesis (see chapter 4, section 4.6), as proposed by Goad & White (2004), makes predictions about how L2 learners acquire prosodic structure that differs to their L1 prosodic structure. As Turkish (Goad & White 2004) and Chinese (Goad & White 2006) prosodic structures differ to English it was predicted that L2 learners would have difficulty in acquiring articles. The results show that both Turkish and Chinese L2 learners omit articles in spoken production, but in certain cases it may be possible for the L1 prosodic structure to accommodate the L2 prosodic structure (cf. Trenkic in press). In the case of Japanese, there are determiners, as in English. There is the quantifier *dono* (which) and the demonstratives *ano* (that) /*sono* (that) /*kono* (this):

(24)   a.   dono/ano/sono/kono otoko   (Dem+N)
             which/that/that/this   man

       b.   dono/ano/sono/kono   wakai otoko   (Dem+Adj+N)
             which/that/that/this   young man

It looks as though Japanese has similar nominal constructions to English but they differ prosodically. In (24a) the quantifier *dono* is marked by pitch accent on the initial syllable, so it does not attach directly to the phonological phrase in article + noun (Art+N) or article + adjective + noun (Art+Adj+N) constructions. It is in fact what Selkirk (1996) terms an 'internal clitic' in that it forms an accentual phrase: [20]

---

[20] I thank Mits Ota, Heather Goad and Paula Reimers for their suggestions and comments regarding the prosodic structures involving the quantifier *dono* and demonstratives *ano/sono/kono* in Japanese.

Figure 5.7. Prosodic representation of quantifier /dono/

```
                    PPh
                     |
                    PWd
                    / \
                   /   \
                  /     \
                 /       \
              PWd         \
               |           \
               |            \
              dono         otoko
              which         man
```
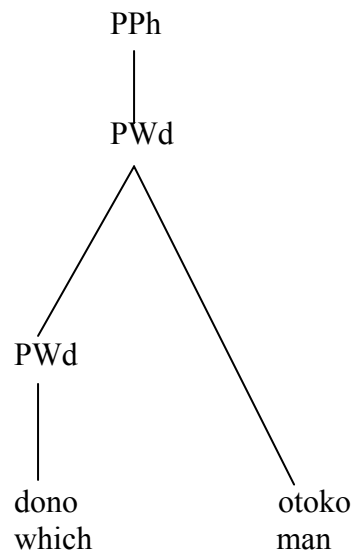
In (24b) when an adjective intervenes between the article and noun in English, the article attaches directly to the phonological phrase as a free clitic:

Figure 5.8. Articles as free clitics in English

```
                PPh
               /  |  \
             /  PWd   PWd
            /    |     |
           a   sweet  bean
```
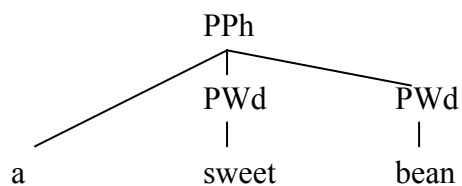
This is possible in some cases for demonstratives in Japanese. In figure 5.9 there is pitch lowering of the initial syllable of ano/sono/kono/ (that/this) and optional pitch lowering on the first syllable of /mame/ (bean). So it seems that there is a PPh boundary between the adjective and the head noun.

Figure 5.9. Demonstratives as free clitics in Japanese

```
        PPh              PPh
       /  |               |
         PWd             PWd
          |               |
ano/sono/kono   amai      mame
  that/this     sweet     bean
```
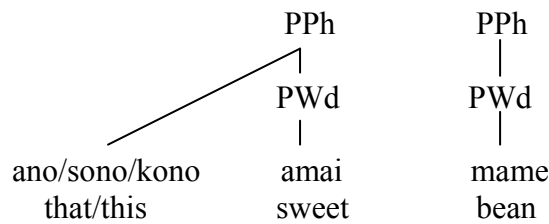
However, this creates a phonology - syntax mis-match as determiners in Japanese do not generally attach to the phonological phrase as they are not free clitics. Selkirk and Tateishi (1988) state the following about the Minor Phrase (meaning phonological phrase) in Japanese;

"Minor Phrasing in Japanese shows that …….it is not the case that each constituent in prosodic structure has a corresponding designated constituent in syntactic structure. The Minor Phrase is defined independently of syntactic structure" (1988: 332).

Therefore, it may be that certain Art+Adj+N constructions in Japanese permit demonstratives to attach directly to the phonological phrase, but it depends on whether there is pitch lowering of the initial syllable.

An alternative analysis for demonstratives suggested by Ota (2005) is that there may be no PWd boundary between the demonstrative /sono/ (that) and the adjective /wakai/ (young), as in figure 5.10:[21]

---

[21] Ota (2005) suggests that Art+N and Art+Adj+N constructions could be argued to be similar in Japanese. However, given that there are potential differences between demonstratives and prefixes I will continue to argue that the structures are potentially different to each other.

Figure 5.10. Demonstratives as Prosodic Words in Japanese

```
                        PPh
                       /    \
                      /      \
                   PWd        PWd
                  /   \        |
                 /     \       |
              sono   wa 'kai  otoko
              that   young    man
```
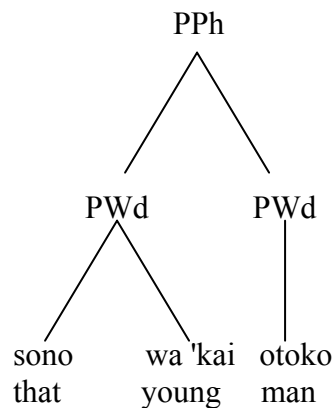
In figure 5.10 there is pitch accent on /wa 'kai/ (young) but there is no pitch accent to separate /sono/ (that) from /wa 'kai/ (young), so it adjoins directly to the prosodic word. This representation once again creates a phonology - syntax mis-match but this is known to happen.

Evidence for proposing that Japanese has prosodic structures similar to English comes from discussion of prefixes in Japanese by Poser (1990).[22] The examples in (25) to (27) show that the words *kidaigaku* (your university) and *motodaizin* (former minister) cannot have intervening adjectives between them because *ki* and *moto* are prefixes:

(25) *ki   yuumei   na   daigaku
      your   famous   Copula   university
      'your   famous   university'

(26) *moto   yuumei   na   daizin
      former   famous   Copula   minister
      'a formerly famous   minister'

(27) *moto   erai   daizin
      former   distinguished   minister
      'a formerly distinguished minister'

---

[22] Poser (1990) refers to the prefixes as 'Aoyagi prefixes' after the linguist who first discovered them, Seizoo Aoyagi.

It seems that no independent PWd can be placed between a prefix and the word that it attaches to as all the examples are ungrammatical. The example in (28) conversely is grammatical:

(28)	sono	yuumei	na	daigaku
	that	famous	copula	university
	'that	famous	university'	

The demonstrative /sono/ (that) does not behave as a prefix but rather it is an independent PWd. The example in (29) demonstrates that /sono/ (that) as an independent PWd can enter into a narrow scope or wide scope reading, but the prefix /moto/ (former) in (30) only has a narrow scope reading as it cannot modify the whole NP:

(29)	sono	uma	no	kubiwa		
	that	horse	Gen	collar		
	'the	collar	of that	horse'		(narrow scope)
	'that	horse	collar'			(wide scope)

(30)	moto	daizin	no	komon		
	former	minister	Gen	adviser		
	'adviser	to	the	former	minister'	(narrow scope)
	'*former	adviser	to	the	minister'	(wide scope)

Demonstratives and prefixes are represented differently in the prosodic structure as prefixes cannot be separated by an adjective and they cannot enter into semantic wide scope readings. As prefixes appear to adjoin to the PWd it is possible for Japanese L2 learners of English to adapt their L1 prosodic structure to accommodate articles in Art+N constructions in English (see figure 5.11a).[23] For Art+Adj+N constructions there is the option of either representing articles as adjunction to a PWd or as free clitics (see figures 5.11b and c). However, of the two

---

[23] I thank Heather Goad for her suggestions regarding the prosodic structure for prefixes in Japanese.

alternatives available it is impossible to tell which representation is being adopted by Japanese

L2 learners.

Figure 5.11. Interlanguage grammars of L1 Japanese, L2 English

a.
```
        PPh
         |
        PWd
           \
            PWd
             |
    ki      daigaku
   your     university
```

b.
```
            PPh
           /   \
        PWd     PWd
        /  \      |
     sono  wakai otoko
   that/the young  man
```

c.
```
         PPh        PPh
        /  |         |
           PWd      PWd
            |        |
  ano/sono/kono amai  mame
    that/this  sweet  bean
```
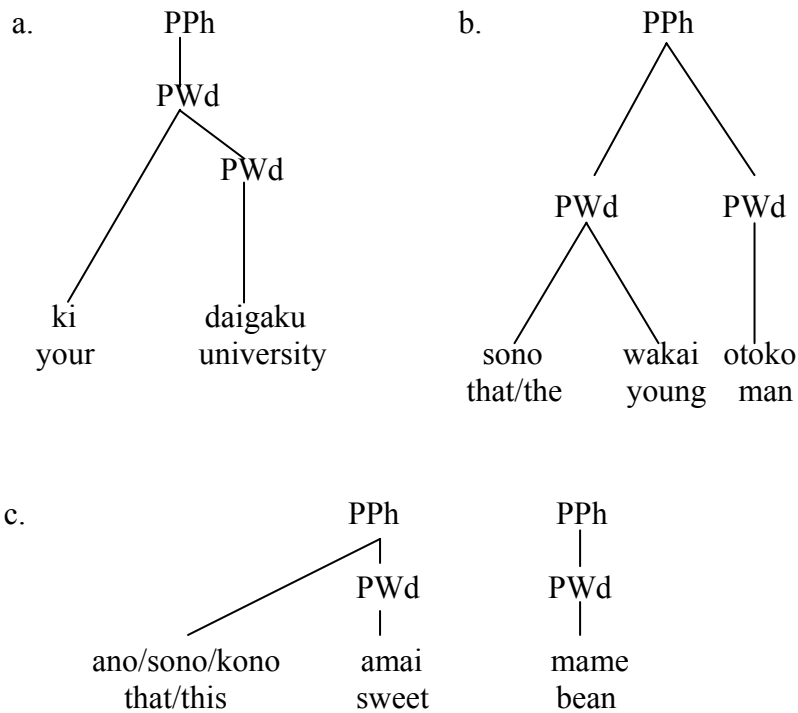
I propose that for Art+N constructions and Art+Adj+N constructions, structures are available in

the Japanese L2 learners' ILGs. Overall omission of articles in spoken L2 production is

predicted to be the same in Art+N constructions and Art+Adj+N constructions, given that the

L1 provides prosodic structures which can accommodate articles.

5.2.   Determiner and Number in Spanish

5.2.1. Articles

Spanish is a language that maps predicates into arguments and has the NMP setting [-arg, +pred]. This parameter setting is different to the English setting of [+arg, +pred]. However, according to Chierchia (1998a), Spanish is similar to English in terms of its semantic and syntactic structure. It is a language that has similar properties to English as it has articles, but in Spanish they are additionally marked for gender and number:

	(31) definite article 'the'		indefinite article 'a'	
	singular	plural	singular	plural
masculine	el	los	un	unos
feminine	la	las	una	una

(taken from Pérez-Leroux and Liceras 2002, p. 34)

As was outlined in chapter 4, section 4.3, it appears that syntactically Spanish, like English, has the functional categories DP (Lyons 1999) and NumP (Ritter 1991, Valois 1991, Bernstein 1993) with interpretable features and uninterpretable features of the DP entering into a checking relationship, known as 'concord' (Carstens 2000, Franceschina 2001, Franceschina 2002, White *et al* 2004), as illustrated in figure 5.12:

Figure 5.12. The Determiner Phrase in Spanish

```
                        DP
                    ┌────┴────┐
                    D              NumP
                [unum]        ┌────┴────┐
                [ugen]        Num            NP
                          [±singular]    ┌───┴───┐
                          [ugen]      AdjP        N
                                    [unum]     [unum]
                                    [ugen]     [±fem]
```
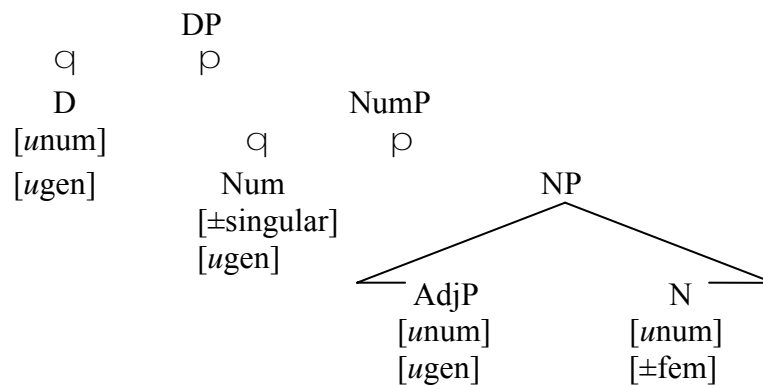
In accordance with the Minimalist Program (Chomsky 1998, p.40) the following condition applies:

(32)   One Fell Swoop Condition

All features of the same type on a given constituent must be checked in one fell swoop (i.e. by a single feature-checking operation)

(Radford 2004a)

Thus, the One Fell Swoop condition in (32) allows concord to apply whereby the interpretable features of the Num(ber) head check, value and delete the uninterpretable number features of determiner, adjective and noun. The Num head has its uninterpretable gender feature checked and deleted via the noun.[24] [25]An example of number and gender concord is given in (33a) and (33b):

---

[24] White *et al* (2004) adopt the account given by Carstens (2000) and assume that nouns carry an interpretable number feature as it is semantically interpretable. However, I follow Harris (1991) in that nouns are marked for grammatical gender but not for semantic gender. For example, usually masculine nouns end in –*o* and feminine nouns end in –*a*, but there are many masculine nouns that end with –*a* (feminine) as in *el dia* (the day) and *el problema* (the problem) so it is not possible to rely on grammatical gender marking (Bruhn de Garavito & White 2002). As the default gender is masculine (McCarthy 2004), the noun has to be valued as either [+/-feminine]. For accounts of gender marking on nouns see Franceschina (2001), Franceschina (2002), Hawkins & Franceschina

(33)

a. $[_{DP}$ la] $[_{NumP} [_{Num'}]]$ $[_{NP}$ blanca] $[_N$ casa]

        [*u*num]   [+singular]   [*u*num]   [*u*num]
        [*u*gen]   [*u*gen]   [*u*gen]   [+feminine]

b. $[_{DP}$ la] $[_{NumP} [_{Num'}]]$ $[_{NP}$ blanca] $[_N$ casa]

        [+singular]   [+singular]   [+singular]   [+singular]
        [+feminine]   [+feminine]   [+feminine]   [+feminine]

Following Franceschina (2001), the noun in (33b) raises from its original NP position to the Num head position as Spanish has strong features in Num, whereas in a language like English these features are argued to be weak.[26] This is known as N-movement (Bernstein 1993, Cinque 1994, Bernstein 2001, Longobardi 2001). Another similarity with English is that Spanish seems to allow bare NPs as in (34), meaning that Spanish would share the same NMP setting [+arg, +pred]:

(34)

a. María   es   doctora.
    María   is   (a)-Fsg   doctor-Fsg.
    'Maria   is   a   doctor.'

(2004), Radford (2004a), Vincent (in progress) and Pérez-Leroux & Liceras (2002) who propose that Num head carries the interpretable [±feminine] feature.

[25] If DP is a phase and all uninterpretable features are deleted and inactive once valued, the number/gender features will be inactive at the end of the DP phase, thus not be able to agree with any higher constituent. However, if features are only inactivated when they undergo transfer, it follows that features on a phase head like D can remain active on the next highest phase (and only features in the domain of D will be inactivated at the end of the DP phase)

[26] Radford (2005) supplies some examples from Early Modern English where the noun raises, as in Spanish and Italian:

(i.)   (a)   hire own *brother* **dere** (= her own brother dear)
     (b)   a *thing* **immortal** (= a thing immortal)
     (c)   blosmy *bowes* **grene** (= blossomy branches green)
     (d)   hire *hornes* **pale** (= her horns pale)

(taken from Radford 2005, p. 110)

The Num head is strong so the noun moves via N-movement.

> b. Ese   estudiante   parece   genio.
>   that-Msg   student-Msg seems   (a)   genius-Msg.
>   'that   student   seems   a   genius.'

It seems that examples like (34a) and (34b) are evidence against the NMP, but in the examples

in (35) a determiner is obligatory otherwise it is ungrammatical:

> (35)
> a. María   reconoció   a   *(una)   doctora.
>   María   recognized   PA   (a)-Fsg   doctor-Fsg.
>   'Maria   recognized   a   doctor.'
>
> b. Ese   estudiante   conoce a   *(un)   genio.
>   that-Msg   student-Msg knows   PA   (a)-Msg   genius-Msg.
>   'that   student   knows   a   genius.'

(taken from Zagona 2002, p. 108)

Chierchia (1998a) follows work by Chomsky (1965), Abney (1987), Longobardi (2001) and

Bernstein (2001) and argues that in Romance languages there is a null determiner or null

quantifier in bare NPs. This differs to English where a bare NP is an argument as a result of

type shifting. So, in Spanish all NPs are in fact predicates where either the determiner is an

overt or covert form, thus Spanish has the NMP setting [-arg, +pred]. In other words, NPs in

Spanish are DPs and the null determiner Ø heads the DP [DP Ø María] and [DP Ø doctora], as

shown in figure 5.13:[27]

---

[27] A different account of predicate NPs in Romance languages and English is offered by Munn & Schmitt (2005)
based on the Free Agreement Parameter. Their account is in conflict with the NMP account proposed by Chierchia
(1998a).

Figure 5.13. Null determiners in Spanish

```
                    CP
        q           p
        C                       TP
        Ø               w       p
                DP                      T'
            e       i           e       i
            D           N       T               VP
            Ø       María       Ø           e       o
                               ↑            V               DP
                               └──── es             r   u
                                                    D           N
                                                    Ø       doctora
```
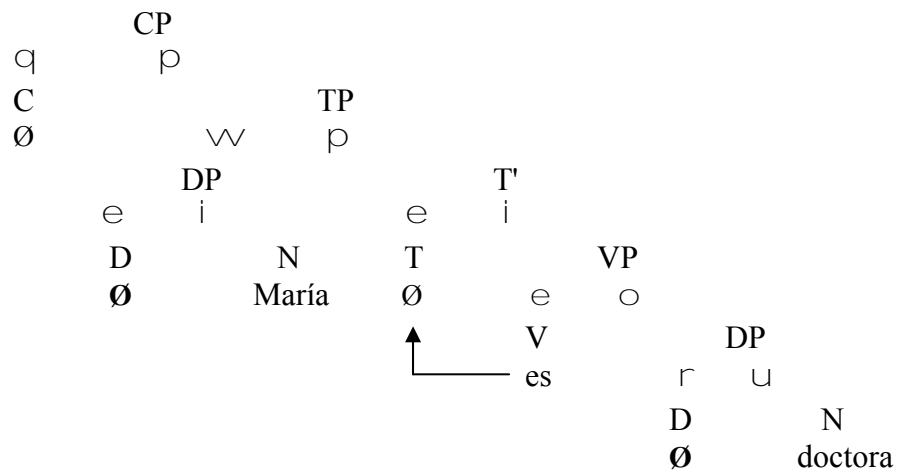
Though Romance languages like Spanish differ to English in gender marking and N-raising, both languages do have number marking on nouns by use of plural –*s* (see 22 above). In English, adjectives do not agree in number but it is possible that demonstratives, not articles, agree in number with the head noun, as in the examples in (36) below:

(36)

a.	*this*	white	house	(singular)
b.	*these*	white	house*s*	(plural)
c.	*the*	white	house	(singular)
d.	*the*	white	house*s*	(plural)

Conversely, determiners and adjectives in Spanish show number agreement with the head noun in (37):

(37)

a.	la	casa	blanca	(singular)
	the-Femsg	house-Femsg	white-Femsg	
	'the	white	house'	

b.   las   casas   blancas   (plural)

the-Fempl   house-Fempl   white-Fempl

'the   white   houses'

As in (33), repeated in (38) for the plural version of *la casa blanca* (the white house), the Num

head checks, values and deletes the uninterpretable features on the D, Adj and N and the noun

casas (houses) raises to Num':

(38)

a.   [$_{DefP}$ la]   [$_{NumP}$-s [$_{Num'}$]]   [$_N$ casa]   [$_{NP}$ blanca]

[*u*num]   [-singular]   [*u*num]   [*u*num]
[*u*gen]   [*u*gen]   [+feminine]   [*u*gen]

b.   [$_{DefP}$ las]   [$_{NumP}$-s [$_{Num'}$]]   [$_N$ casas]   [$_{NP}$ blancas]

[-singular]   [-singular]   [-singular]   [-singular]
[+feminine]   [+feminine]   [+feminine]   [+feminine]

5.2.2.   Count – mass syntax in Spanish

To sum up so far, Spanish differs to English as it can have a covert or overt article present in D

(i.e. [+pred]) but in English under the NMP an NP without an article is [+arg]. However, both

Spanish and English use count syntax to mark nouns (and determiners and adjectives in

Spanish) as either singular or plural and it seems as if Spanish lacks mass syntax as every

argument becomes a predicate. For example, in table 5.1, nouns that are used with measure

phrases in English can be count nouns in Spanish.

Table 5.1. A comparison between mass nouns in English and count nouns in Spanish

English			Spanish translations	
Mass noun		Measure plus mass noun	Plural count noun	Singular count noun
furniture	(object)	a piece of furniture	muebles	un mueble
water	(liquid)	a bottle of water	aguas	un agua
ice cream	(substance)	a scoop of ice cream	helados	un helado
advice	(abstract)	a piece of advice	consejos	un consejo

(from Stockwell *et al* 1965, p. 82)

The four types of nouns in table 5.1 show that Spanish does not use mass syntax for any particular type of semantically concrete mass noun such as object, liquid and substance or abstract mass noun, as they can all be pluralized.[28] The same applies to generics that convey a kind-reading in Spanish as bare plural NPs are not allowed, as illustrated in table 5.2.

Table 5.2. NP types and mapping of generics in English and Spanish

Language	Bare plural generics	Definite plural generics
Spanish	no	yes
English	yes	no

Chierchia (1998a) predicts that in Romance languages like Spanish, bare NPs referring to 'kinds' are not possible, because Spanish has the NMP setting [-arg, +pred] so they are ungrammatical, as in (39b), but grammatical with a 'kind' interpretation if they are not bare NPs (i.e. DP is projected), as in (40b):

---

[28] There are some nouns in Spanish which do seem to be genuine mass nouns because if they are countable they change their meaning e.g. *carne* refers to meat but *carnes* refers to flesh of an overweight person. There are some abstract nouns such as *obediencia* (obedience), *justicia* (justice), *quietud* (peace) which also appear to be mass nouns as they are not countable (Stockwell *et al* 1965). For further discussion on the ontological distinction between count and mass in Spanish see Colunga & Gasser (2002).

(39)
    a.   Zebras have stripes.   (√kind)
    b.   *Cebras tienen rayas.

(40)
    a.   The tigers eat meat.   (√definite/√object/*kind)
    b.   Los tigres comen carne.   (√object/√kind)

(adapted from Pérez-Leroux *et al.* 2003)

It is also possible to convey a kind-reading with singular definite NPs, as in (41a) and (42a):

(41)

    a.   Graham Bell   inventó   el   teléfono.   (√kind)
        Graham Bell invent-past the-sg phone-sg.
        'Graham Bell invented the phone.'

    b.   ??/* Graham Bell   inventó   los   teléfonos.   (*kind)
        Graham Bell invent-past the-pl phones-pl.
        'Graham Bell invented phones.'

(42)

    a.   El   hombre puso el   pie en la   Luna en 1969.   (√kind)
        The man   set   the-sg   foot-sg on the-sg Moon-
        sg in 1969.
        'The man/ Man set foot on the Moon in 1969.'
    a'.   'There is a man that belongs to man-kind and that
         man set foot on the Moon in 1969.'

    b.   *Los   hombres pusieron el   pie en   la   Luna   (*kind)
        en 1969.
        The-pl men   set-3pp the   foot on   the Moon
        in 1969.
        'Men set foot on the Moon in 1969.'

(taken from Ticio 2001)

However, in (41b) and (42b) the kind reading is disallowed. In (41b) the kind-predicate

inventar (invent) cannot appear with a definite plural NP in this context as it has the reading

'Graham Bell invented every kind of phones'. In (42b) we are stating that one individual out of a group of individuals which makes up man-kind fulfills the kind-reading. But, under Chierchia's (1998a) approach, Ticio (2001) argues that the meaning of (41a) is not captured as it would be true if and only if 'Graham Bell invented the group containing all the phones'. The Logical Form for (41b), according to the NMP, should be grammatical since it gives the denotation 'Graham Bell invented the phone-kind', but this is not the meaning of (41b). The predicted meaning for (42a) is 'the totality of men set foot on the Moon in 1969' and this is not the correct meaning for this sentence. Therefore, it seems that different denotations of definite generics in Spanish predict the wrong truth conditions under the NMP. Nevertheless, given Chierchia's (1998a) account, the semantics of generics in examples (41) and (42) may have the wrong interpretation, but importantly for the discussion on count – mass syntax, singular and plural generics license articles in Spanish while in English they are bare NPs.

5.2.3. Definiteness and specificity

Spanish, like English, has articles and is a language with grammaticalized definiteness. It also, like English, has demonstratives which can mark specificity:

(43)	Demonstratives					
	singular	plural	singular	plural	singular	plural
Masculine	este	estos	ese	esos	aquel	aquellos
Feminine	esta	estas	esa	esas	aquella	aquellas
	this		that		that (distal)	

Ticio (2003) provides examples from Spanish with scope ambiguities. She claims that demonstratives in Spanish are specificity markers and articles are definiteness markers. In (44a) and (44b) it is possible to get the same ambiguity as there is the narrow scope reading 'Juan saw

one picture of a group' or the wide scope reading 'Juan saw several pictures', but the wide

scope reading is not possible in (44c):

(44)

    a. Juan vio una   foto de todo el mundo   narrow/wide

        Juan saw a   picture of everybody

    b. Juan vio la   foto de todo el mundo   narrow/wide

        Juan saw the   picture of everybody

    c. Juan vio esta   foto de todo el mundo   narrow/*wide

        Juan saw this   picture of everybody

(taken from Ticio 2003, p. 34)

The example (44c) can only have a narrow scope reading as extraction from a DP argument at

LF is not allowed, whereas wide scope readings allow LF movement of the quantified element

'todo el mundo' (everybody). These examples demonstrate that articles and demonstratives

behave similarly in Spanish and English as definite DPs (articles) allow extraction and specific

DPs (demonstratives) do not.

    Rivero (1975) discusses definiteness and specificity in Spanish based on Donnellan's

(1966) attributive and referential descriptions (see chapter 2, section 2.4). In Spanish, referential

NPs behave like specific NPs and attributive like non-specific NPs, as in examples (45) where

the semantic distinctions affect the mood of the verb:

(45)

    a.   *Me interesa (la, una) guía que tiene mapas y que esté escrita en español.
           I am interest-3sg (the, a) guide which has-IND (**specific**) maps-pl and which is-SUBJ (**non-specific**) written in Spanish.
           'I'm interested in (the, a) guide which has maps and which is written in Spanish.'

    b.   Me interesa (la, una) guía que tenga mapas y que esté escrita en español.
           I am interest-3sg (the, a) guide which has-SUBJ (**non-specific**) maps-pl and which is-SUBJ (**non-specific**) written in Spanish.
           'I'm interested in (the, a) guide which may have maps and which is written in Spanish.'

(taken from Rivero 1975, p. 39)

An NP modified by a restrictive clause cannot be in indicative mood (specific) and subjunctive mood (non-specific) simultaneously as in (45a). But, in both examples a definite or indefinite article is possible regardless of mood. The verbs *tener* (to have) and *estar* (to be) change to subjunctive mood for a non-specific reading and to indicative mood for a specific reading. Similar examples in (46) illustrate the point that mood, not the article, determines whether someone the speaker is referring to is specific or non-specific:

(46)

    a.   Quiere casarse con (la, una) muchacha que sea rubia y con pecas.
           Want-3sg to marry-Refl with (the, a) girl who is-SUBJ (**non-specific only**) blond and with freckles.
           'He wants to marry (the, a) girl who is blond and with freckles.'

    b.   Quiere casarse con (la, una) muchacha que es rubia y con pecas.
           Want-3sg to marry-Refl with (the, a) girl who is-IND (**specific only**) blond and with freckles.
           'He wants to marry (the, a) girl who is blond and with freckles.'

(taken from Rivero 1975, p. 40)

In (46a) the mood of the verb *ser* (to be) is subjunctive and that indicates the referent is non-specific i.e. the speaker wants to marry a blond girl with freckles but no such girl exists in the universe of discourse. In (46b) the mood of the verb *ser* (to be) is indicative and that indicates the referent is specific i.e. the speaker wants to marry a particular blond girl with freckles which exists but the hearer cannot identify her. The correlation between mood and specificity is the result of different semantic functions for indicative mood and subjunctive mood.[29] This differs to English as the verb does not change to indicate mood for specificity.

In a study by Velasco (2005) 15 Spanish speakers were asked to choose, in a forced choice elicitation task, which article was most appropriate to fill the blank in a series of short dialogues – the definite or indefinite article. A target sentence from one of the short dialogues in a definite anaphoric singular context is provided in (47):

(47)   [+definite, +specific]

   a. La empresa contratará a (la) secretaria que sabe inglés.
       The-sg company hire-Fut a-PP <u>the</u>-Fsg secretary-Fsg that know-IND English.
       'The company will hire the secretary that knows English'

       [+definite, -specific]

   b. La empresa contratará a (el) secretario que sepa inglés.
       The-sg company hire-Fut a-PP <u>the</u>-Msg secretary-Msg that know-SUBJ English.
       'The company will hire the secretary that knows English'

The examples in (46) from Rivero (1975) suggest either the definite or indefinite article is possible as it is the mood which governs whether someone or something is specific or non-specific. But, in the examples from Velasco's (2005) study 96.6% of the Spanish speakers preferred the definite article *la* for (47a) and *el* for (47b) because definiteness is

---

[29] See Lambrecht (1994) for a similar discussion on examples from French.

grammaticalized in Spanish. The prediction for Spanish L2 learners of English would be that there would be no problems in acquiring articles in English as both languages share the definiteness setting of the Article Choice Parameter.

5.2.4. The prosodic structure of Spanish nominal phrases

Spanish is a stress-timed language like English (Harris 1983). The prosodic structure for adult Spanish phonology is represented in figure 5.14 below:

Figure 5.14. The prosodic structure for adult Spanish phonology

PPh
|
PWd
|
(Foot)
|
Syllable
|
Mora
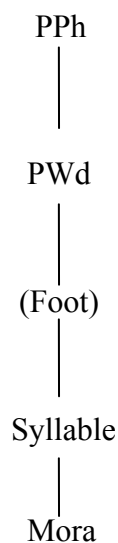
In chapter 3, section 3.3.1 the early prosodic structures of L1 Spanish children were discussed. L1 Spanish children develop from using proto-clitics (determiners), which prosodically cliticise onto a preceding lexical word in an unstressed syllable, to representing determiners as free clitics[30] that attach directly to the phonological phrase. Demuth (2001b) states that 'filler

---

[30] I thank Iggy Roca (*p.c*) for clarifying that articles in adult Spanish would have the same phonological representation as articles in English.

syllables' like proto-articles do "…..play a role in the developing prosodic phonology of the child, and gradually disappear as children's prosodic constraints are reranked" (2001b: 247). The reranking of prosodic constraints means that development of the phonological structure allows access to higher levels of the prosodic hierarchy, such as the phonological phrase, shown in figure 5.15:

Figure 5.15. Art+N and Art+Adj+N constructions in Spanish

```
a.              PPh                    b.              PPh
                 |                                      /|\
                PWd                                    / | \
                 |                                  PWd  PWd
                 |                                   |    |
                 |                                   |    |
     el/un     hombre               el/un   hombre   joven
     the/a       man                the/a     man    young
                                     'the/a young man'
```
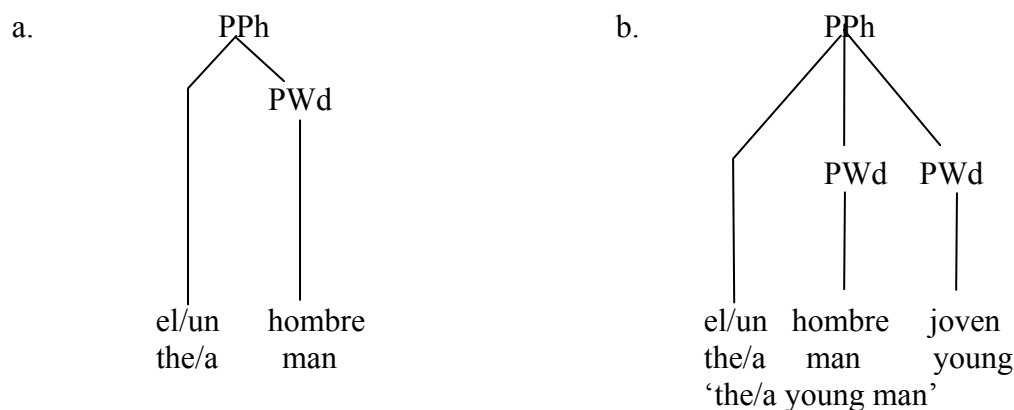
The articles *el*/*un* in figure 5.15 attach directly to the phonological phrase.[31]

Therefore, it is predicted that Spanish L2 learners of English do not omit articles in production due to prosodic transfer as the L1 prosodic structure is very similar to the L2 prosodic structure.

5.3.   Summary of chapter 5

In sections 5.1.1 – 5.1.3 it was argued that Japanese is a language without articles and a syntactic D head, but Japanese, like all languages, have the concept of semantic/pragmatic definiteness and specificity. It was suggested that transfer at the conceptual level of definiteness

---

[31] See Gennari & Demuth (1997) for further discussion of the phonological phrase in Spanish.

and specificity is likely and that Japanese L2 learners of English do not mis-set the ACP but instead have to remap meaning to form. In section 5.1.4 count – mass syntax in Japanese was discussed and it was claimed that, contrary to the NMP, Japanese has a count – mass distinction. In section 5.1.5 it was suggested that the prosodic structure of nominal phrases in Japanese is similar to English for Art+N constructions and Art+Adj+N constructions i.e. free clitics. In section 5.2.1 it was argued that Spanish is a language very similar to English with regard to articles. In section 5.2.1 evidence was presented in support of count syntax in Spanish. Following the DP hypothesis and Chierchia (1998a), it was claimed that count nouns that appear without an overt article have a null form in Spanish, thus ruling out mass syntax. In section 5.2.3 examples were given to show how definiteness and specificity interact in Spanish along with the claim that Spanish is similar to English as both languages have grammaticalized definiteness (Lyons 1999). In the final section 5.2.4 a brief outline of the prosodic structure of nominal phrases was shown to be similar to English in that articles appear as free clitics.

Chapter 6

Experiment 1: the count – mass grammaticality judgement task

6.0.   Introduction

This chapter presents the first of five experiments to test L2 learners' knowledge of the English nominal domain. The first experiment is designed to test L2 learners' knowledge of the count – mass distinction in English. The second experiment tests the L2 learners' ability to distinguish between different types of definite NPs (based on J. Hawkins's 1978 taxonomy) and indefinite NPs in count and mass contexts. The third and fourth experiments test the L2 learners' production of articles and plural –*s* marking. The fifth experiment is designed to test article choice in L2 English.

This chapter is organised as follows. Section 6.1 discusses L2 studies of the count – mass distinction. The discussion focuses on studies of Japanese and Chinese speakers. Section 6.2 presents a hypothesis and prediction relating to this experiment. The hypothesis was formulated on the basis that there are two different L1 groups who have different NMP settings and both L1 groups are acquiring the English NMP setting. Section 6.2 introduces experiment 1 and the results are presented in section 6.3. There is a discussion of results in section 6.4 and this chapter closes with a summary.

6.1.   Previous L2 studies of the count – mass distinction in English

Research into the count – mass distinction in L2 English is not extensive as studies tend to focus on the acquisition of articles (see chapter 7). However, there are a few studies that have investigated L2 acquisition of articles and the problems L2 learners encounter with count and

mass nouns (Hiki 1990, 1991, Yoon 1993, Young 1996, Trenkic 2002b, Dirdal 2005, Hua & Lee 2005).

6.1.1. Hiki (1990)

Hiki (1990) investigated Japanese L2 learners' judgements of noun countability in English. The focus of his study was on the selection of articles *a* or *Ø* and how choosing the correct article relates to noun class and countability environment. Nouns can be classed as collective, material, proper names and abstract nouns and depending on the class of noun and the environment it appears in Hiki predicted that the easier or more difficult the noun will be to acquire. Two hypotheses that he tested were 1.) The difficulty choosing the right article (a or *Ø*) is related to noun class 2.) The difficulty choosing the right article is related to 'countability environment'. He tested 61 subjects who were all residing in Japan at the time and each subject had had at least seven years of EFL instruction. The subjects' proficiency level was judged to be intermediate and advanced and this was based on their TOEFL scores. Eight native controls were included in the study. The task was an editing test which consisted of 25 passages. There was a total of 46 test items which were underlined and required editing by the subjects. Examples of the types of passages that needed editing are in (1) to (4):

(1)   Tom keeps <u>snake</u> at home and thinks it is cute when the snake sticks out its tongue. But, strangely enough, he has <u>fear</u> of cats. The moment he sees or hears a cat he runs away in <u>a fear</u>. This doesn't make <u>a sense</u> to me.

(2)   Mr. Bond has had <u>a bad luck</u> since he moved to Tokyo. His wife died. His children are sick. And his company is about to go bankrupt.

(3)   George Bush is the president of the United States. He is 65 years old. Compared with Ronald Reagan, however, Bush is <u>young president</u>. As long as he holds the office of <u>a president</u>, he must represent the country to the best of his ability.

(4)   [A conversation between friends]
        Susan: Do you like <u>a bread</u>?
        Diana: Yes. Of course.
        Susan: Have you tried Pumpernickel?
        Diana: What's that? I've never heard of it.
        Susan: Pumpernickel is <u>bread</u> that originated in Germany. It's delicious.

The subjects were asked to imagine that they were English teachers checking work given to them by their students. They had to check the underlined nouns and decide whether or not to make changes to each one. If the form was the appropriate one then they were asked to write 'ok' directly underneath the noun. If the subjects were not confident in their judgement they could place a question mark next to the noun. The test consisted of 23 inappropriate uses of *a* in the obligatory contexts of *Ø* and 23 inappropriate uses of *Ø* in the obligatory contexts of *a*. The reasoning for this type of test was that if Japanese speakers have native-like knowledge of articles and noun countability they should get all 46 contexts correct. The same 23 nouns were used in both contexts – once appearing as countable and the other appearing as uncountable.

The results show that there was a main effect of countability environment and an interaction between noun class and countability ($p < 0.01$). Individual nouns (count nouns) were favoured as being countable meaning that subjects correctly judged individual nouns appearing with *a* as grammatical but were unsure when *Ø* was used. Accuracy with abstract nouns was the lowest regardless of countability environment as subjects did not know when to use *a* or *Ø*. Material and proper nouns were favoured to appear in an uncountable context using *Ø* with subjects rejecting the use of *a* in countable contexts e.g. a Bob Knight, an IBM, a Tokyo.[1] An item analysis revealed that errors between noun class and countability environment are not due to a few items but rather it is spread across all items.

Hiki concluded from his study that given the two factors of noun class and countability environment one can expect them to be important variables in article acquisition. Hiki (1993)

---

[1] The last proper noun 'Tokyo' appeared after the prenominal adjective 'quiet'. I suggest that subjects had difficulty with this item because a modifier already appears before the noun.

did a follow-up study testing the judgements of native speakers to see if there would be variation between 7 EFL instructors and 50 college students. He found no variation amongst the EFL instructors but there was variation amongst the college students. Of a total of 62 test items there was variation between 51 of the items. Hiki acknowledged that a weakness of this study was that the group of EFL instructors was too small to be compared with 50 college students and that the former group are more likely to be careful about the selection of noun countability. However, he concluded that "speakers do not always perceive the same noun in the same context in the same way, and different speakers categorize the noun differently in terms of number at least in some contexts" (1993: 115). In a similar study of Japanese speakers Yoon (1993) investigated the perception of noun countability and obtained similar results to the studies conducted by Hiki. The results from these studies will be discussed in relation to the results of the count – mass grammaticality judgement task used in my study.

6.1.2. Hua and Lee (2005)

A recent study of Chinese L2 learners of English has been conducted by Hua & Lee (2005). In one of three studies they administered a count – mass grammaticality judgement task involving 20 nouns in total. The nouns appear below in table 6.1:

Table 6.1. Nouns used in the grammaticality judgement task

Count	Concrete (objects)	*computer, dictionary, mobile phone, credit card*
	Abstract	*sentence, idea, month, dilemma*
Mass	Concrete (substances)	*water, beef, rice, smoke*
	Abstract	*work, information, evidence, help*
	Collective	*furniture, equipment, data, stationery*

(taken from Hua & Lee 2005, p. 141)

The 20 nouns appeared in two types of count contexts 1.) preceded by a numeral 2.) preceded by the fuzzy quantifier *many*. The same nouns also appeared in mass noun contexts preceded by the fuzzy quantifier *much*. This produced a total of 60 test sentences (20 nouns x 3 contexts) as in the following examples:

> (5)   Count nouns in count-selective contexts (*many*)
>
> Not *many computers* in the private study area exploded this afternoon, but a number of students were injured.
>
> (6)   Count nouns in mass-selective contexts (*much*)
>
> *Not *much computer* in the private study area exploded this afternoon, but a number of students were injured.
>
> (7)   Mass nouns in mass-selective contexts (*much*)
>
> The neighbours did not see *much smoke* coming out of the chimney of Mr. Ramsey's house; this suggests that he was often away from home.
>
> (8)   Mass nouns in count-selective contexts (*many*)
>
> *The neighbours did not see *many smokes* coming out of the chimney of Mr. Ramsey's house; this suggests that he was often away from home.

They tested three groups of ESL learners 1.) senior high school students in Shanghai (n=9), 2.) first and third year university students in Shanghai (n=15 for each group) and 3.) a group of first and second year university students in Hong Kong. There was also a group of 6 native speakers. Table 6.2 provides the results of the students' judgements of count nouns in count contexts and mass nouns in mass contexts. The groups appear to behaving like the native controls except for the abstract mass context with the quantifier *many*.

Table 6.2. Mean numbers of acceptances for count nouns in count contexts, and mass nouns in mass contexts (maximum=4)*

			SH	U1	U3	HKU	Native
Count	Concrete	numeral	2.22	3.33	3.40	3.47	3.67
		many	3.22	3.27	3.47	3.65	3.17
	Abstract	numeral	2.33	2.80	2.93	3.35	4.00
		many	**1.89**	3.33	2.93	3.18	3.33
Mass	Concrete	*much*	2.89	3.33	3.67	3.65	2.67
	Abstract	*much*	2.56	3.13	3.53	3.35	2.50
	Collective	*much*	2.11	3.27	3.27	2.41	3.17

*SH=Senior high students
U1=First-year university students in Shanghai
U3=Third-year university students in Shanghai
HKU=First- and second-year university students in Hong Kong
Native=Native English speakers

Table 6.3 shows judgements of count nouns in mass contexts and mass nouns in count contexts.

Table 6.3. Mean numbers of acceptances: count Ns in mass contexts, and mass Ns in count contexts

			SH	U1	U3	HKU	Native
Count	Concrete	*much*	0.78	0.40	0.20	0.47	0.17
	Abstract	*much*	**1.89**	**1.53**	**1.13**	**1.24**	0.33
Mass	Concrete	numeral	1.11	1.13	0.40	0.71	0.33
		many	0.44	1.07	0.37	0.82	0.00
	Abstract	numeral	1.44	1.73	0.80	1.65	0.00
		many	**0.44**	**0.87**	**0.33**	**1.65**	0.00
	Collective	numeral	1.44	1.47	0.67	1.71	0.17
		many	**0.67**	**1.73**	**0.73**	**1.65**	0.17

Learners tended to accept count nouns in mass contexts (using the mass quantifier *much*) more often than when they were abstract nouns. There was a significant difference in acceptance between abstract and concrete nouns in mass contexts (t= 4.43, p<0.001 for U1 students; 1.13 vs. 0.20, t= 4.53, p<0.000 for U3 students; 1.24 vs. 0.47, t= 3.49, p<0.005 for HKU students). For mass nouns occurring in count contexts (using the quantifier *many*) the learner judgements were more accurate for the mass concrete nouns. The results show that Chinese L2 learners of

English are sensitive to the distinction between count concrete nouns and mass concrete nouns. They know that count represents a count denotation i.e. individuated objects and that mass denotes substance.[2] Their findings relate to my own study discussed in chapters 6 and 7.

6.2. Experiment 1

6.2.1. Hypothesis and predictions

The following hypothesis was formulated in order to test the NMP in L2 acquisition:

H[1]   L2 learners from different L1 backgrounds can reset the NMP: Japanese speakers can reset the NMP from the [+arg, -pred] setting and Spanish speakers can reset the NMP from the [-arg, +pred] setting to the English setting [+arg, +pred].

Hypothesis (1) is a prediction of resetting the Nominal Mapping Parameter for L2 English. Spanish is a language with articles and count syntax; therefore it has the NMP setting [-arg, +pred]. Spanish L2 learners may perceive mass nouns in English to be countable e.g. *much furnitures and *much butters but not count nouns to be mass-like. Errors such as *few cyclist and *much customer are not expected. Whereas if all nouns are argumental [+arg, -pred] (mass-like) in Japanese, Japanese L2 learners may perceive singular count nouns in English to be mass e.g. *many toy and *few athlete. The opposite type of errors are unlikely to happen where mass nouns in English are thought to be countable e.g. *many evidences and *few sunshines.

---

[2] Chinese is in the same language group as Japanese under Chierchia's (1998a) NMP with the setting [+arg, -pred].

Though full L1 transfer is a prediction it is possible that the Japanese L2 learner can conceptualize the difference between what is countable (what denotes individuation) and what is uncountable (mass-like).

6.2.2. Method

6.2.2.1. The participants

In total, 75 participants took part in the study. There were 15 native speakers of English, 30 native speakers of Japanese and 30 native speakers of Spanish (see table 6.4 for details).

Table 6.4. Participants in the count – mass grammaticality judgement task

	L1 Japanese	L1 Spanish	L1 Japanese	L1 Spanish
Proficiency level	Intermediate	Intermediate	Advanced	Advanced
Number of participants	15	15	15	15
Age range	21 – 34 (mean = 27)	21 – 40 (mean = 27)	22 – 44 (mean = 30)	22 – 40 (mean = 29)
Age range of first exposure	5 – 13 (mean = 12)	3 – 34 (mean = 12)	3 – 13 (mean = 11)	4 – 16 (mean = 10)
Length of stay in English speaking countries (months)	0 – 21 (mean = 6)	2 – 60 (mean = 16)	0 – 96 (mean = 31)	0 – 36 (mean = 16)

All participants were students at the University of Essex and were tested on campus. Factors such as age were controlled for as most of the participants were in their late twenties. All participants (apart from the native controls) were asked to complete the Oxford Quick

Placement Test (2001) (hereafter OQPT) which took each participant thirty minutes to complete as it is a timed test.

6.2.2.2. The grammaticality judgement task

The task was designed with four conditions 1.) count singular 2.) count plural, 3.) mass 4.) *mass plural (see Appendix B) and is based on a task used by Hawkins *et al* (in progress). Some examples of the conditions with nouns are in table 6.5:

Table 6.5. Adnominal quantifiers and nouns used in the grammaticality judgment task

AdnQ + count plural	AdnQ + mass	AdnQ + count singular	AdnQ + mass plural
some shirts	some information	*much car	*some butters
many tickets	*many money	*many sweet	*many evidences
* much roses	much paper	*much cookie	*much fruits
few tourists	*few information	*few cyclist	*few sunshines

All the AdnQ + noun combinations appeared in contexts, which were randomized. An example of a context is in (9):

> (9) Terry needed …
>   some milk √
>   many butter X
>   much sugar √

Each subject was required to choose which continuations produce a possible sentence of English (that is, one that you could say), and tick those continuations. If they thought a continuation was not possible they were instructed to place a cross next to it. Before the main

study was administered a pilot study was conducted with a small group of Japanese, Spanish and native control subjects. It was found that L2 learners and native controls accepted the quantifier *some* with count singular nouns e.g *some ticket, *some train* as it was being used as a determiner. As a result, the count singular nouns co-occurring with *some* were removed from the task.

6.2.2.3. Procedure

The count – mass task appeared as one of a series of four tasks. There were two versions of the task so as to avoid any ordering effects. It was given to the subjects after they had completed the OQPT. There was no time limit to complete the task. The instructions for the task were in English and the researcher was present in the room if the participant had any questions concerning the task.

6.3.   Results

An item analysis was conducted before examining the scores for each group (see Appendix C). Certain items were not included in the analysis of results as they proved to be problematic for the native controls (see Appendix C). Both the Spanish and Japanese groups had difficulty with item 24, an abstract noun, (*many evidences*), so it was not included in the analysis. After removing certain items, the responses were scored as number of correct responses versus number of incorrect responses. To see whether the L2 groups behave differently across the different adnominal quantifiers an item analysis was conducted (see Appendix D). Across the 33 items in the task the Spanish groups had difficulty with one particular item *few sunshines*. Most of the participants accepted it as being grammatical. There was only one token of the adnominal quantifier *few* with a mass plural. The native controls and the Japanese also had

some difficulty with this item. However, the Japanese groups had difficulty across all the quantified mass N contexts (mass and *mass plural).

The scores from individual quantifiers were collapsed for each group and were converted into percentages. All the groups' performances in the four conditions - count singular, count plural, mass and *mass plural are reported in table 6.6:

Table 6.6. Total number of correct responses

groups	proficiency level	count singular nouns	count plural nouns	mass nouns	*mass plural nouns
Japanese	INT (n = 15)	77/90 (86%)	117/120 (98%)	65/90 (**72%**)	58/90 (**64%**)
	ADV (n = 15)	83/90 (92%)	115/120 (96%)	77/90 (**86%**)	71/90 (**79%**)
Spanish	INT (n = 15)	82/90 (91%)	110/120 (92%)	80/90 (**89%**)	62/90 (**69%**)
	ADV (n = 15)	85/90 (94%)	118/120 (98%)	81/90 (**90%**)	76/90 (**84%**)
Native controls	(n = 15)	87/90 (97%)	114/120 (95%)	90/90 (100%)	78/90 (87%)

In order to give a clearer overview of the results, graphs in percentages were produced.

Figure 6.1. Total percentage of correct and incorrect judgements
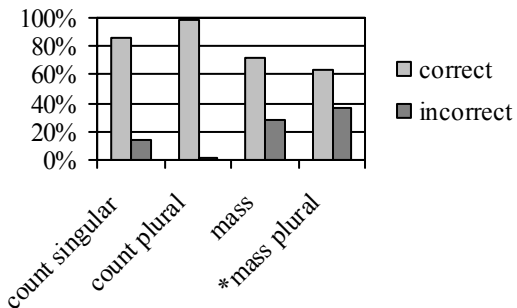
a. Intermediate Japanese   b. Intermediate Spanish
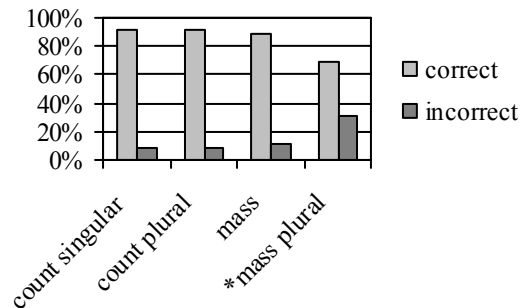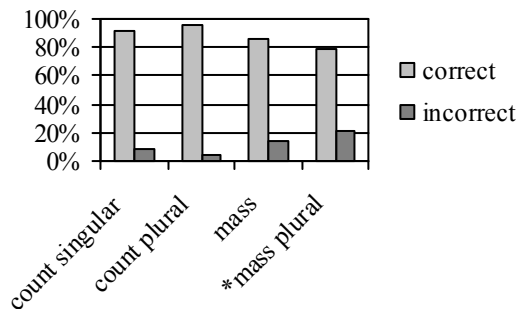
c. Advanced Japanese   d. Advanced Spanish
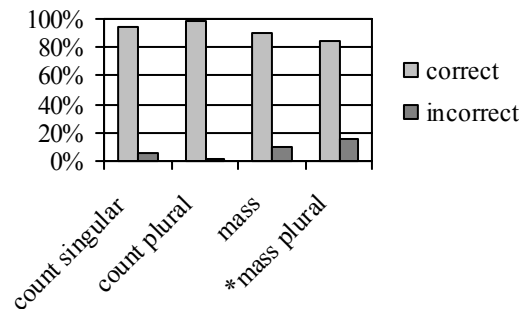
e. Native controls
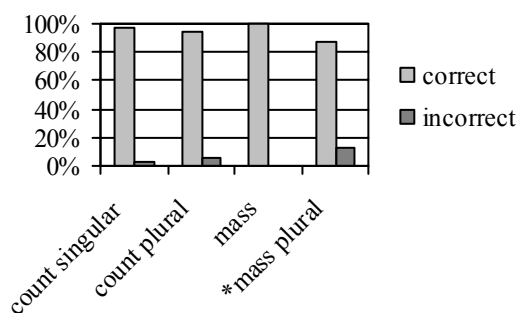
In order to address hypothesis (1) and the predictions a one-way ANOVA with post-hoc Tukey

tests was performed between the intermediate groups and native controls and again a separate

ANOVA was performed with post-hoc Tukey tests between the advanced groups and native

controls. Multiple comparisons for the intermediate groups revealed a significant difference between the Japanese and native controls and Japanese and Spanish groups in the mass context (p<0.05). There is also a significant difference between the native controls and the Japanese group in the mass plural context (p<0.05). For the advanced groups a significant difference was found between the native controls and the Japanese group in the mass context (p<0.05).

6.4. Discussion

The results show that the L2 groups seem to be able to reset the NMP. The findings support hypothesis (1) repeated below:

H[1]   L2 learners from different L1 backgrounds can reset the NMP: Japanese speakers can reset the NMP from the [+arg, -pred] setting and Spanish speakers can reset the NMP from the [-arg, +pred] setting to the English setting [+arg, +pred].

Japanese speakers did not judge count nouns in mass contexts to be acceptable, but instead judged mass nouns to be acceptable as count nouns. The Japanese speakers did not have difficulty with count nouns which is unexpected given that the L1 NMP setting is [+arg, -pred]. The results suggest that the Japanese speakers are aware of the conceptual differences of what is countable versus what is uncountable. The fact that they accepted mass plural nouns as countable nouns and rejected count nouns as uncountable may be because certain AdnQ + noun combinations are more acceptable than others. The results have to be treated with caution as it seems that part of the difficulty may have to do with adnominal quantifiers.

In chapter 5 it was argued that there is a count – mass distinction in Japanese as there are different types of noun which denote count when used with certain classifiers and others which

denote abstract mass. In the case of the Spanish speakers we could simply argue for full L1 transfer effects until at advanced levels they have worked out from the input that mass plural nouns are not possible in English. The problem for L2 learners is how nouns are perceived within context, as Hiki found in his studies, as there equally seems to be confusion amongst native speakers (see Hiki 1993). In my study a number of items were not included because the native controls were accepting mass nouns as count plurals and rejecting mass nouns in mass contexts.

A couple of questions recently posed by Inagaki & Barner (2006) is "How do morphological and syntactic representations of language affect our conceptual representations of objects and events? Do all humans share a universal conceptual repertoire that is made explicit to differing extents by natural language, or do the morpho-syntactic structures of language actually supply certain concepts?" The answers to these questions are of great interest to scholars from a number of disciplines e.g. Philosophy, Psychology and Linguistics. How do learners of a first language acquire conceptual knowledge and how does this relate to components of linguistic representations such as syntax and semantics? Work by Imai & Genter (1997), who investigated the differences between English child speakers and Japanese child speakers, found that there are differences, which are perhaps due to language. Inagaki & Barner (2006), who investigated the differences between English adult speakers and Japanese adult speakers, claim that they found evidence for a universal semantics underlying linguistic quantification. The Japanese essentially access the same meanings as speakers of languages like English, but lack the syntax for disambiguating these meanings when they have to interpret whether the NP is count or mass.

Evidence suggesting that Japanese L2 learners of English can conceptualize the difference between what is countable (what denotes individuation) and what is uncountable (mass-like) comes from Athanasopoulos (2005). An interesting question raised by

Athanasopoulos (2005) is what will happen to the cognition of speakers of an L2 like English where individuation is emphasized more than in their first language? In order to test the NMP he investigated the way Greek and Japanese L2 learners of English judge a number of solid objects and non-solid substances based on shape and material. He found that advanced Japanese L2 learners performed like the Greek L2 learners in that there was a higher preference for shape when it was presented as countable rather than mass and vice versa for material. Changes in cognition seem to occur and he argued that "the Japanese L2 English advanced speakers are displaying a strong cognitive shift from the L1 towards the L2 norm" (2005: p.105). The difference found between the intermediate and advanced speakers in my study is more likely to be related to lexical learning. The more vocabulary they know, the more likely it is that they will perform better on count – mass judgement tasks.

The results from the grammaticality judgement task support the argument that L2 learners can generalize what is countable and what is uncountable.

6.5.   Summary of chapter 6

The results support hypothesis (1). However, if Japanese has a count – mass distinction then there is no reason to posit the resetting of a parameter.

The experiment in chapter 7 tests the L2 groups' use of different types of definites in number and mass conditions.

Chapter 7

Experiment 2: the forced choice elicitation task: types of (in)definite

7.0.   Introduction

This chapter presents the second experiment of five in the L2 acquisition of the nominal domain in English by Spanish and Japanese speakers. The experiment tests the L2 learners' ability to distinguish between different types of definite (based on J. Hawkins's 1978 taxonomy) in count and mass contexts. The experiment also tests indefinites in specific and non-specific mass contexts.[1] I plan to answer the following research questions in this chapter.

i.)   If there is substitution of *the*/*a* for Ø (= no article) in indefinite mass contexts could this be a result of L1 transfer from Spanish to English?

ii.)   If the L2 groups continue producing substitution and omission errors could this be the result of a conceptual difficulty relating to the ontological properties of nouns in context?

The first research relates to the L1 NMP setting and possible transfer effects. The second question departs from the claim of the NMP. If Japanese and Spanish speakers can conceptualize the difference between objects and substances (Athanasopoulos 2005) as both Japanese and Spanish have count syntax (see chapter 5) we might expect that they will make a distinction between count and mass nouns in English.

---

[1] See chapter 9 for discussion of indefinite *a* in singular contexts and indefinite Ø (= no article) in plural contexts.

7.1.   Previous L2 English studies of article acquisition

There are numerous studies of L2 English learners acquiring articles (Parrish 1987, Tarone & Parrish 1989, Chaudron & Parker 1990, Shin-ichi 1991, Shirahata 1995, Takahashi 1997, Robertson 2000, Kowaluk 2001, Snape 2002, White 2003) but there are fewer studies where one group of L2 learners from a language without articles is compared with a group of learners whose L1 has articles (Thomas 1989, Murphy 1997, Wakabayashi 1997, Liu & Gleason 2002, Trademan 2002).

7.1.1.   Wakabayashi (1997, 1998)

A study by Wakabayashi (1997) compared 44 Japanese (15 advanced and 29 intermediate) L2 learners of English with 15 Spanish L2 learners of English in the acquisition of the number features (indefinite *a* and plural *–s*) in DPs. He compared the two groups by administering a computer-based grammaticality judgement task and recorded their judgements and reaction times. Example test sentences are below:

(1)   (a)   \<Type 12: DP (number) 1: plural marker *-s*\>

Jack went to the market yesterday. He bought *five apple* and one big pineapple to make for dessert.

(b)   \<Type 13: DP (number) 2: indefinite article *a*\>

Yesterday Mike saw *tall*, *handsome man* in the class. He was their new headmaster.

(examples taken from Wakabayashi 1997, p.166)

Wakabayashi found that the Japanese L2 learners were significantly different to the Spanish L2 learners in their treatment of bound and free morphemes. The Japanese subjects tended to be

more successful when the NP was [singular] rather than when it was either [plural] or [uncountable]. He claims that Japanese L2 learners cannot transfer their L1 grammar to assist in acquiring D and Num in English because Japanese has no properties concerning features associated with D and Num. He proposes that there is an optional/obligatory parameter, which is termed the D parameter (1998). English and Spanish have setting (a) obligatory D and Num in every NP and Japanese has setting (b) which is to use D and Num optionally. Japanese speakers must acquire the specification of English D from 'scratch'. Therefore, the appearance of *a*/-*s* comes later for Japanese speakers. Wakabayashi does not explicitly state whether Japanese L2 learners have a representational deficit in their ILGs. He simply argues that there are persistent L1 transfer effects due to parameter setting (b). In another study, Wakabayashi (1998) examined the use of the definite article by 55 Japanese speakers. Examples of the types of definite article are repeated from chapter 2 below:

(2)   Types of definiteness

    a.   Anaphoric Use:
      Fred was wearing trousers. *The pants* had a big patch on them.

    b.   Immediate Situation Use (Visible Situation Use):
      (There is only one bucket in the visible situation)
      Pass me *the bucket*, please.

    c.   Immediate Situation Use (Immediate Situation Use):
      (Opening conversation to a passenger, when you cannot see a dog)
      Don't go in there, chum. *The dog* will bite you.

    d.   Larger Situation Use (specific, with presupposed knowledge)
      (In Britain, among British people):
      The Prime Minister has just resigned.

    e.   Larger Situation Use (general, without any specific presupposed knowledge):
      (When invited to a wedding)
      Have you seen *the bridesmaids*?

    f.   Associative Anaphoric Use:
      The man drove past our house in a car. *The exhaust fumes* were terrible.

(examples from Wakabayashi 1998; based on J. Hawkins 1978)

In a gap-filling task the 55 participants were asked to supply the definite or indefinite article in a text extracted from a Japanese textbook used in high schools. The objective of his study was to test whether Japanese L2 learners would transfer the optional setting of D to their ILGs. He also hypothesized that the demonstrative *sono* (that) in Japanese, at initial stages of acquisition, may be used as a translational equivalent to the definite article *the* in anaphoric contexts. However, he claimed that it is equally possible that Japanese speakers develop knowledge of the use of the definite article independent of their L1 grammar. For analysis of results, (2d) and (2e) uses of the definite article are placed into two different categories because Wakabayashi claims that they are associated with culturally specific uses. He found that the culturally specific uses of the definite article were the most difficult along with the anaphoric associative use. He also found that the Japanese speakers were more successful in supplying the definite article when the NPs were [singular] rather than [uncountable]. Hiki (1990, 1991) reported similar results in his study. Wakabayashi concluded that the Japanese speakers can acquire the definite article and do not transfer the demonstrative *sono* (that). A possible explanation for greater accuracy in suppliance of a definite article in [singular countable] NPs is Japanese speakers believe that it is obligatory but optional when the NP is either [plural] or [uncountable]. He suggests that in the Japanese speakers' ILGs "the definite article is not only associated with [+definite] but also with the number feature of the noun phrase" (1998: 103). This is due to L1 transfer of the D parameter which has the [optional] value in Japanese. The findings from Wakabayashi's study suggests that the Japanese L2 learners have difficulty with certain pragmatic uses of the definite article required in given contexts and a difficulty with plural and mass Ns. In my study discussed in section 7.2 I will test Japanese L2 learners' use of the definite article in similar contexts using count and mass Ns.

7.1.2. Liu and Gleason (2002)

In a similar study to Wakabayashi (1998) the use of the definite article by L2 learners of English was tested by using a cloze test. Liu and Gleason decided to collapse the types of definite in (2) above into 4 main types:

(3) a. Cultural:
         where *the* is used with a noun that is a unique and well-known referent in a speech community.

         We went hiking in (the) Lake District last autumn.

     b. Situation:
         where *the* is used when the referent of a first-mention noun can be sensed directly or indirectly by the interlocutors or the referent is known by the members in a local community, such as the only dog in a family or the only bookstore in a town.

         A woman, with her hands full, says to a man standing in front of the office, "Open (the) door for me, would you?"

     c. Structural:
         where *the* is used with a first-mention noun that has a explanatory or unexplanatory modifier.

         (The) movies that are shown here now are all rated R.

     d. Textual:
         where *the* is used with a noun that has been previously referred to or is related to a previous mentioned noun.

         We rented a boat last summer at a lake. Unfortunately, (the) boat hit another boat and sank.

(taken from Liu & Gleason, p.7)

The test instrument consisted of 91 sentences in total. There were 15 types of each definite article per category in the cloze test. 60 obligatory uses of the definite article were deleted from 51 of the sentences. The remaining sentences were distracters or control items. The participants

were asked to supply a definite for each sentence.[2] Data were collected from three levels of proficiency (low, intermediate and advanced) from students attending intensive English programs at several universities in U.S. The participants came from 18 different L1 backgrounds, though the majority were Chinese, Korean and Japanese (n=101) and the remaining participants (n=27) were of Indo-European languages.[3] They found that there were significant differences between the two groups in omission of *the* in the cultural and situation uses. However, the overall results revealed that the L2 learners seem to acquire definite article types in order of difficulty. That is, the order of acquisition suggests that certain uses are easier for the L2 learners. The order is as follows; firstly, the situation use, then the structural and textual uses and lastly the cultural use.

They concluded with some pedagogical implications for teaching practice and instructional material writing.

7.1.3. Ionin *et al* (in press)

Ionin *et al*'s main focus was on article choice in L2 English. They tested Russian and Korean L2 learners of English using a forced choice elicitation task. I will discuss the task and their results in chapter 9.

The second task they administered was a written narrative task to test whether L2 learners would fluctuate between definiteness and specificity in their choice of articles. The motivation for using this type of task is that they claimed that it would give them a better idea of how L2 learners use articles in every day life. It also allowed them to examine overuse of *the* with indefinite NPs when the learners were not focussed on article choice as in the forced choice

---

[2] There are potential problems with the test instrument. Many of the sentences had articles present. This could act as a priming effect as to whether or not a definite article is needed. As no blank space was provided it may not be obvious to all the participants that an article is required. There is no way of knowing whether the L2 learner simply does not know a definite article is required or they miss it because it looks grammatical.

[3] Liu & Gleason (2002) do not give any further details about the participants in their study. They admit that having more East Asians and less participants from other languages is a shortcoming of their study.

elicitation task. They included singular, plural and mass nouns which allowed them to look at omissions of articles in obligatory contexts. Their predictions for the use of *the* and *a* as well as omissions (-- = no article) of articles are in table 7.1:

Table 7.1. Article choice, definiteness, and specificity in written narrative data

	+definite	-definite
	Target: *the*	Target: *a* (sg), -- (pl, ms)
+specific	correct use of *the*	overuse of *the*
-specific	overuse of *a, --*	correct use of *a, --*

sg = singular count noun   pl = plural count noun   ms = mass noun

As Ionin *et al* point out, it is easier to code whether something is [+definite] or [-definite] but more difficult to tell whether the L2 learners were referring to something or someone [+specific] or [-specific] under their definition of specificity (see chapter 4 for discussion). The participants in the study were 30 Russian speakers, 40 Korean speakers and 40 native controls. They were provided with a set of questions and were asked to answer each question with 3 to 6 sentences. They were told in the instructions not to worry about grammar or spelling mistakes. The L2 learners were not aware that the task was testing article choice. A list of the questions is in (4):

    (4)   a.   Talk about some valuable object that you own or owned in the past: either (1) talk about something that you received as a gift, and tell about how you received it; or (2) talk about something valuable that you lost, and tell about how you lost it.

           b.   Talk about the day when you first arrived in the U.S. Describe your experiences of that day – what you did, where you went, to whom you talked, etc.

           c.   Describe your room – talk about what objects you have in your room, and describe them.

      d.   Talk about what you did on one of your recent vacations (for example, winter vacation, Thanksgiving week-end, or summer vacation). Talk about where you went and what you did.

      e.   Imagine that you get $1000 as a gift, and you have to spend it right away (you can't put it in the bank). Talk about how you would spend this money.

The coding procedure for production data is discussed in chapter 8.

Upon analysis of the results they found that there was very little overuse of *the* or *a* with plural and mass nouns across wide scope and narrow scope contexts. Overuse of *the* in indefinite contexts was more frequent in singular noun contexts. The definite articles that were supplied as a result of the written narrative task were grouped into four types of definite based on J. Hawkins (1978) taxonomy of definites (cf. (2) above):

(5)   Types of definite DPs:

    a.   <u>Anaphoric Use:</u>

       I have *a beautiful sweater* that my mom made [description of how the narrator's mother made it follows] And I still wear <u>the sweater</u> and I love it.

    b.   <u>Unique by Entailment Use:</u>

       I'm really thankful to <u>the doctors of Moscow Hospital #20</u>.

    c.   <u>Associative Use:</u>

       Our room is pretty big [a description of the room's furniture follows] Unfortunately <u>the windows</u> looks to <u>the yard</u>, therefore we don't have enough light.

    d.   <u>Obligatorily Unique Use:</u>

       It was already too cold to swim, but still quite nice to enjoy <u>the sun</u>.

Ionin *et al* claimed that the anaphoric use is obligatorily [+specific] as the speaker has a referent in mind which has a noteworthy property as in (5a) *x is the sweater that my mom made and which I wear and love*. The unique by entailment use "may be [+specific] or [-specific], depending on whether or not the speaker has in mind some noteworthy property" (Ionin 2003a: 215). It is likely that many of these uses are [-specific] but there is no way of telling for sure what is in the mind of the speaker. The associative use of the definite article is more likely to be [+specific] rather than [-specific] as the referent of the DP singles out some noteworthy property of the room in (5c) such as *the windows don't allow enough light in because of the yard*. The obligatory unique use refers to referents in the actual world and are therefore likely to be [+specific] since the narrator is usually referring to a particular sun which there is only one of for the inhabitants of planet Earth, but the example in (5d) is [-specific] under Ionin *et al*'s definition as the narrator does not refer to some noteworthy property. The results of the written narrative task revealed that the Russian and Korean speakers tended to overuse indefinite *a* in unique by entailment and associative contexts, though overall there was little overuse of *a*. As it is not possible to know what was in the mind of the speaker, overuse of *a* may be related to the context being interpreted as [-specific] or [+specific]. Examples of overuse of *a* in obligatorily definite contexts by the Russian and Korean speakers are in (6) and (7):

(6)   overuse of 'a' in [+definite] contexts: L1-Russian speakers

       entailment context: may be [-specific]

       Before I got here I have lost my keys from my apartment. [description of the loss follows] After I had to change <u>a lock of front door</u>.

(7)   overuse of 'a' in [+definite] contexts: L1-Korean speakers:

       a. anaphoric context: must be [+specific]

       There's a bed for me and my wife and crib for my baby. Also there's a chain on which my wife feed baby. I have a humidifier and air purifier to keep pleasence for <u>a baby</u>.

b. entailment context: may be [-specific]

First impressive thing was that people are gentle and generous. Later, I came to know that there is a reason of that generousity. It is welfare of this country. In my country people should compete each other to live well. It might be <u>a reason why people in Korea are less generous</u>.

c. associative contexts: may be [-specific]

My daughter is very precious to me. She was born about 16 months ago. At that time I was in great pain and almost lost my conscience. But when <u>a nurse</u> show me my daughter, I thought she was an angel. Now I raise an angel.

Therefore, for the researcher, coding the entailment and associative contexts was a difficult task because a decision had to be made whether the speaker meant to refer to something or someone as [-specific] or [+specific] as there is no noteworthy property. The results on omissions are discussed in chapter 8.

7.2.   Experiment 2

7.2.1. Hypothesis and predictions

Hypothesis (1) was tested in chapter 6. I now move on to hypotheses (2). The following hypothesis was formulated in order to test the NMP and whether the type of definite affects suppliance. Though the pragmatic use of the definite article does not relate to resetting the NMP, it is worth investigating whether L2 learners are better at supplying one type of definite over another type of definite given that previous L2 studies have found differences: [4]

---

[4] Kowaluk (2001) conducted a similar study using different types of definite based on J. Hawkins (1978) taxonomy. Unfortunately, no statistical analysis was provided to show whether one type of definite was more difficult to acquire than another.

H^2 Japanese L2 learners can reset the NMP but there may be a difference in the suppliance

of definites in singular, plural and mass noun contexts due to the different pragmatic

uses of the definite article.

7.2.2. Method

7.2.2.1. The participants

All participants were the same individuals who participated in the count – mass grammaticality

judgement task. Factors such as age were controlled for as most of the participants were in their

late twenties. All participants (apart from the native controls) were asked to complete the OQPT.

The participants were then placed into intermediate or advanced groups depending on their

OQPT scores.

Table 7.2. The participants in the forced choice elicitation task

	L1 Japanese	L1 Spanish	L1 Japanese	L1 Spanish
Proficiency level	Intermediate	Intermediate	Advanced	Advanced
Number of participants	15	15	15	15
Age range	21 – 34 (mean = 27)	21 – 40 (mean = 27)	22 – 44 (mean = 30)	22 – 40 (mean = 29)
Age range of first exposure	5 – 13 (mean = 12)	3 – 34 (mean = 12)	3 – 13 (mean = 11)	4 – 16 (mean = 10)
Length of stay in English speaking countries (months)	0 – 21 (mean = 6)	2 – 60 (mean = 16)	0 – 96 (mean = 31)	0 – 36 (mean = 16)

7.2.2.2. The forced choice elicitation task

The forced choice elicitation task consists of 92 short dialogues in total. I wanted to include distracters where the L2 learner had to choose an article so generic contexts (singular, plural and mass) were included in the task. The test instrument was designed to incorporate definite and indefinite specific contexts, indefinite non-specific contexts and three definite contexts. I discuss the definite specific, definite non-specific, indefinite specific and indefinite non-specific singular and plural contexts in chapter 8. The three types of definite were anaphoric, encyclopaedic and larger situation uses and all the target definite articles were removed from the short dialogues. Instead, a blank space remained which the participants were asked to fill with an article. The dialogues were designed in order to avoid any priming effects, so no definites or indefinites appear before the blank space. Each short dialogue either had a count or mass noun following the article. Based on previous studies it was believed that the L2 learners would have difficulty selecting the correct article due to the type of definite and/or the type of noun. In order to ensure reliability and validity, the test instrument was used in a pilot study involving three Japanese speakers, three Spanish speakers and three native controls.[5]

The short dialogues in (8) to (10) are designed to test hypothesis (2) and the research questions:

(8)   Types of definiteness (count singular nouns)*

a. Anaphoric Use (specific, with presupposed knowledge):[6]

A: Could I have some water, please?
B: Sure, I'll bring you another glass.
A: Just use ____ *glass* I had wine in.

a   the   Ø   an

---

[5] See Snape (2005a) for results on a study involving five subjects from each L1 background: Japanese, Spanish and English.

[6] The dialogue in (8a) is classed as anaphoric use of the definite but this could equally be classed as immediate situation use of the definite as the speaker's glass was not previously mentioned.

b. <u>Larger Situation Use (encyclopaedic, obligatorily unique or cultural knowledge):</u>

A: Jason isn't taking his boat out tomorrow.
B: Isn't he?
A: He has seen ____ *ocean*, and he thinks it is too rough.

Ø   an   a   the

c. <u>Larger Situation Use (general, without any specific presupposed knowledge):</u>[7]

A. Are you interested in our internship programme?
B. Yes, I would like to work in your Colchester bank.
A. OK, then, I will contact ____ *branch manager* for you.

the   a   an   Ø

*(see Appendix B for definite plural contexts)

(9)   Types of definiteness (mass nouns)

a. <u>Anaphoric Use (specific, with presupposed knowledge):</u>

A: Jason just asked me for some more cash!
B: I don't understand why he is always so short.
A: He says he will use ____ *cash* to pay off his credit card bill.

an   Ø   the   a

b. <u>Larger Situation Use (encyclopaedic, obligatorily unique or cultural knowledge knowledge):</u>

A: I went to Italy on holiday last summer.
B: Did you enjoy it?
A: Yes. In particular, I enjoyed ____ *sunshine*.

Ø   an   a   the

c. <u>Larger Situation Use (general, without any specific presupposed knowledge):</u>

A: I've just finished our new patio.
B: That must have been hard work.
A: Not really. Mixing ____ *cement* was difficult, though.

an   Ø   the   a

---

[7] My larger situation use is equal to Ionin *et al*'s (in press) unique by entailment use and associative use.

(10)   Types of indefinite mass nouns

a.   Substance mass noun (specific: RC-modification):

A: I didn't like visiting uncle Billy.
B: Why not?
A: He served _____ *tea* that I thought was disgusting.

a   the   Ø   an

b.   Substance mass noun (non-specific de re):

A: Alan has been across to France again.
B: What for?
A: He says he bought _____ *wine*, but I haven't seen any of it.

the   a   an   Ø

c.   Substance mass noun (non-specific de-dicto):

A: What kind of floor would you like in your new kitchen?
B: I don't know.
A: I could lay _____ *wood* and then varnish it.

an   Ø   the   a

The types of mass nouns in the task were not controlled for as the main focus was the context that the nouns appeared in (i.e. specific, non-specific de re and non-specific de-dicto). All the short dialogues were produced by the Second Language Acquisition Discussion Group at the University of Essex and were in part based on dialogues used by Ionin & Wexler (2003) in their study of article choice.

7.2.2.3. Procedure

The task was administered directly after the count – mass grammaticality judgement task. There were two versions of the task, so as to avoid any ordering effects. The task was not timed but all participants were encouraged to read each short dialogue and choose from four possible

items that could fill the gap provided. They were asked to choose the item that they felt was most appropriate to fill the gap and put a circle around it. They were asked not to take too long in deciding which article should be inserted. Rather, they should choose the article that they thought was the most appropriate article to fill the gap. The average amount of time to complete the task was forty five minutes. Written instructions for completion of the task were given and once each participant had read the instructions the researcher then asked each of them if they had clearly understood what they were being asked to do.

7.3.   Results of experiment 2

An item analysis was conducted before examining the scores for each group (see Appendix C). Certain items were not included in the analysis of results as they proved to be problematic for both the native controls and the L2 groups. Items 3, 5 and 50 (see Appendix C for item list) were removed from the analysis as all the L2 groups had problems with abstract nouns. Item 66 was removed as all the L2 groups continued to omit *the*. I believe this is partly due to ambiguity of the plural 'colours' in the short dialogue in (11) below as it can have the encyclopaedic interpretation 'the colours' meaning all the colours in German, which is the desired interpretation, or it can mean how to say the word 'colours' in German:

(11)   A: I started learning German just last week.
       B: Have you learnt anything interesting yet?
       A: Yes, I know how to say ____ *colours* in German!

       an   *Ø*   *the*   *a*

After removing the four items the responses were scored as correct suppliance of *the*, substitution of *a* for *the* and omission of *the* in obligatory contexts. Figures 7.1 and 7.2 (a-d)

present graphs showing the total percentage of articles supplied by each proficiency group (JLEs = Japanese speakers and SLEs = Spanish speakers) and native control group (NS).

Figure 7.1. Intermediate groups' performance in all contexts

a. definite singular use

b. definite plural use

c. definite mass use

d. indefinite mass use
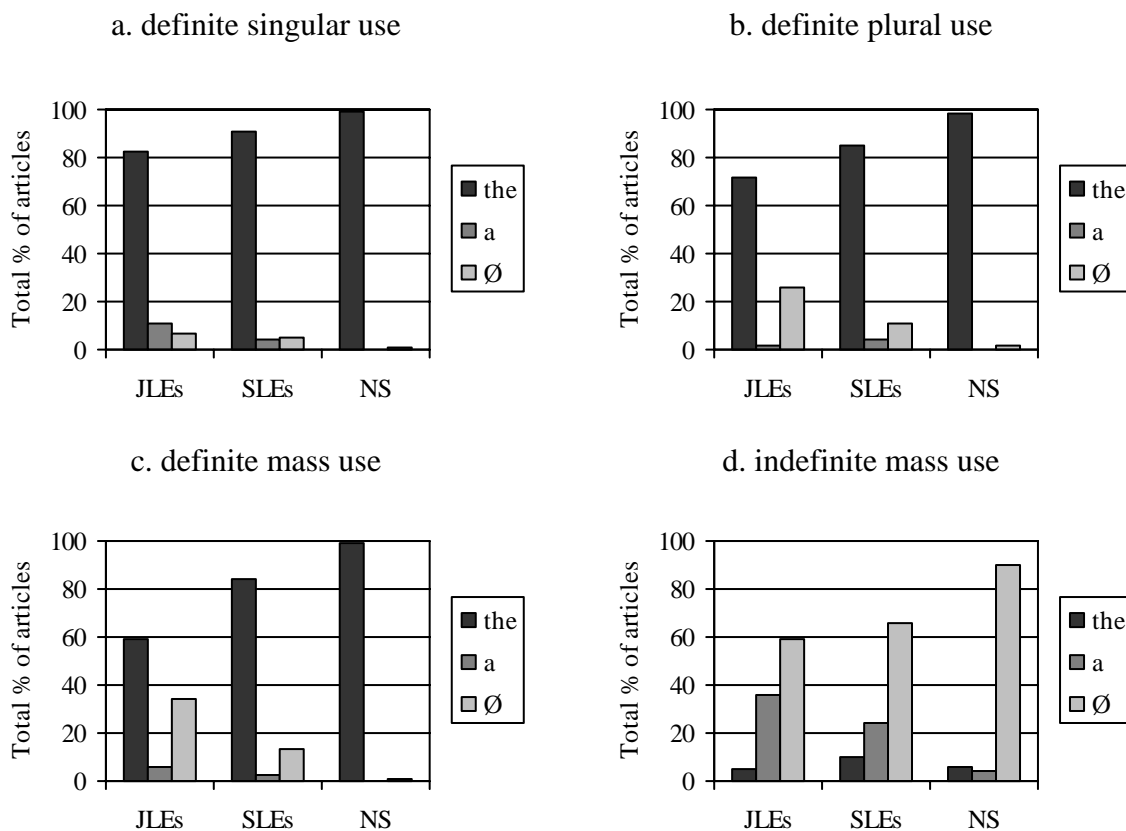
(see Appendix D for percentage tables of definite anaphoric, encyclopaedic and larger situation uses)

Figure 7.2. Advanced groups' performance in all contexts

a. definite singular use

b. definite plural use

c. definite mass use

d. indefinite mass use
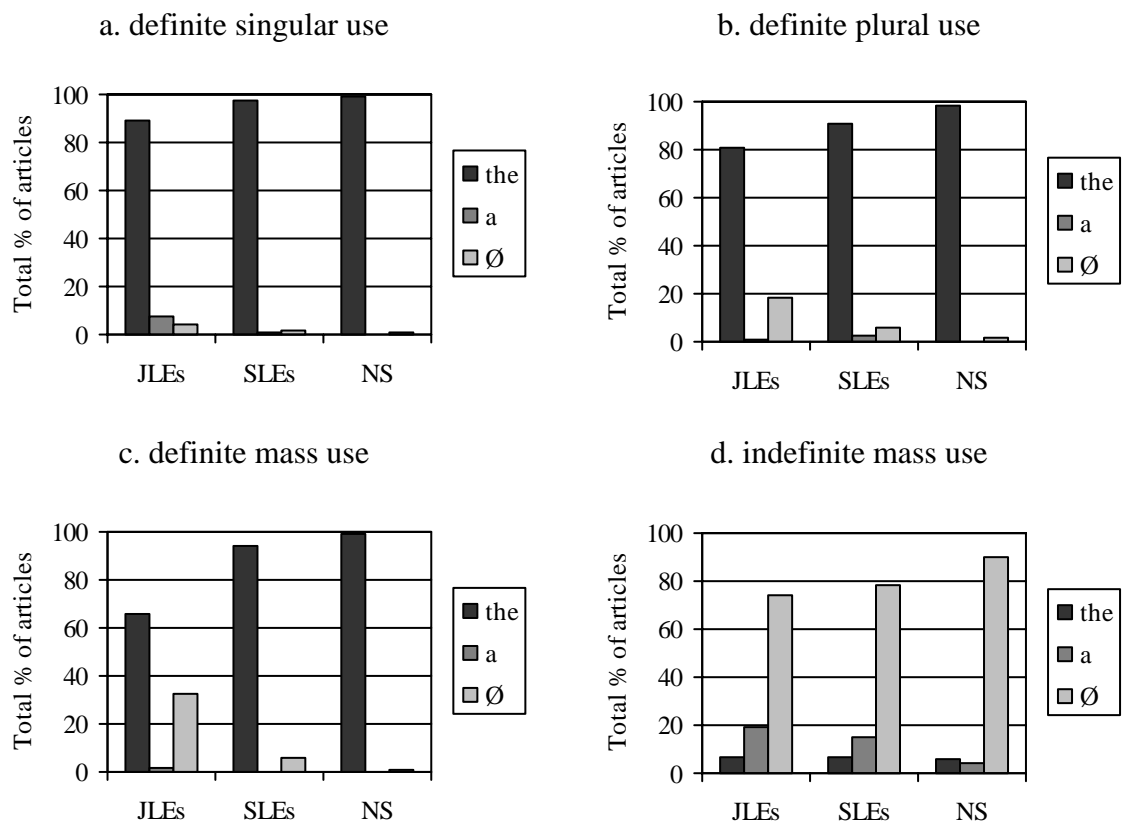
One-way ANOVAs with post-hoc Tukey tests were performed between the intermediate groups and between the advanced groups on the use of *the* for definites in each condition and use of *Ø* for the indefinite mass condition.

Table 7.3. Results of one-way ANOVAs between intermediate groups

	use of *the*	use of *Ø*
definite singular	F = 13.836***	
definite plural	F = 16.236***	
definite mass	F = 30.333***	
indefinite mass		F = 9.841***

*p <.05. **p <.01. ***p <.001.

Table 7.3 shows that there are significant differences between groups in each condition. Post-hoc Tukey tests revealed that the significant differences are between the native controls and the Japanese group, between the native controls and Spanish group and between the Japanese and Spanish groups. For the indefinite mass condition there is a significant difference between the native controls and the L2 groups, but there is no significant difference between the two L2 groups.

Results for the advanced groups are in table 7.4.

Table 7.4. Results of one-way ANOVAs between advanced groups

	use of *the*	use of Ø
definite singular	F = 7.094***	
definite plural	F = 23.680***	
definite mass	F = 35.848***	
indefinite mass		F = 4.282*

*p <.05. **p <.01. ***p <.001.

Table 7.4 shows that there are significant differences in each condition. Post-hoc Tukey tests revealed that the significant differences are between the native controls and the Japanese group and between the Japanese and Spanish groups in the definite singular condition. For the definite plural condition there are significant differences between all groups and for the definite mass condition there are significant differences between the native controls and Japanese group and between the Japanese and Spanish groups. For the indefinite mass condition there is a significant difference between the native controls and the Japanese group.

However, the results conceal differences between the types of definites (anaphoric, encyclopaedic and larger situation uses) that appear in singular, plural and mass conditions.

Figure 7.3. Intermediate groups' performance in singular contexts

a. definite anaphoric use

b. definite encyclopaedic use

c. definite larger situation use
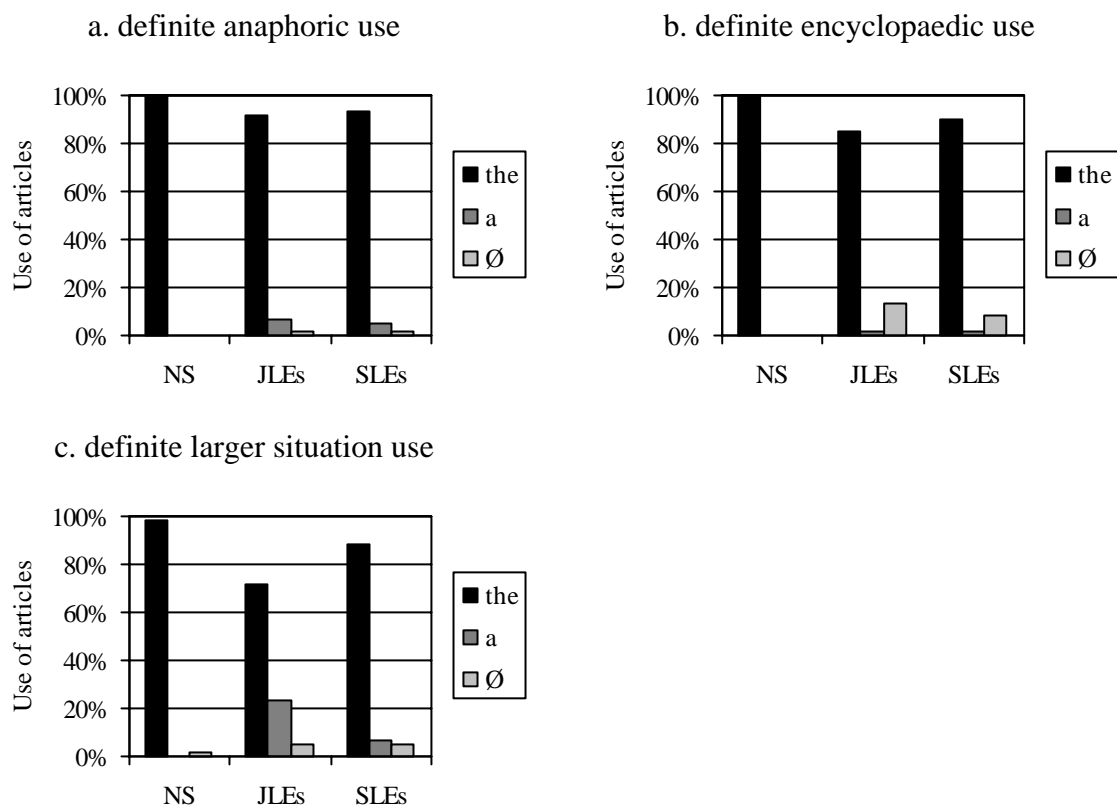
Figure 7.4. Intermediate groups' performance in plural contexts

a. definite anaphoric use

b. definite encyclopaedic use

c. definite larger situation use
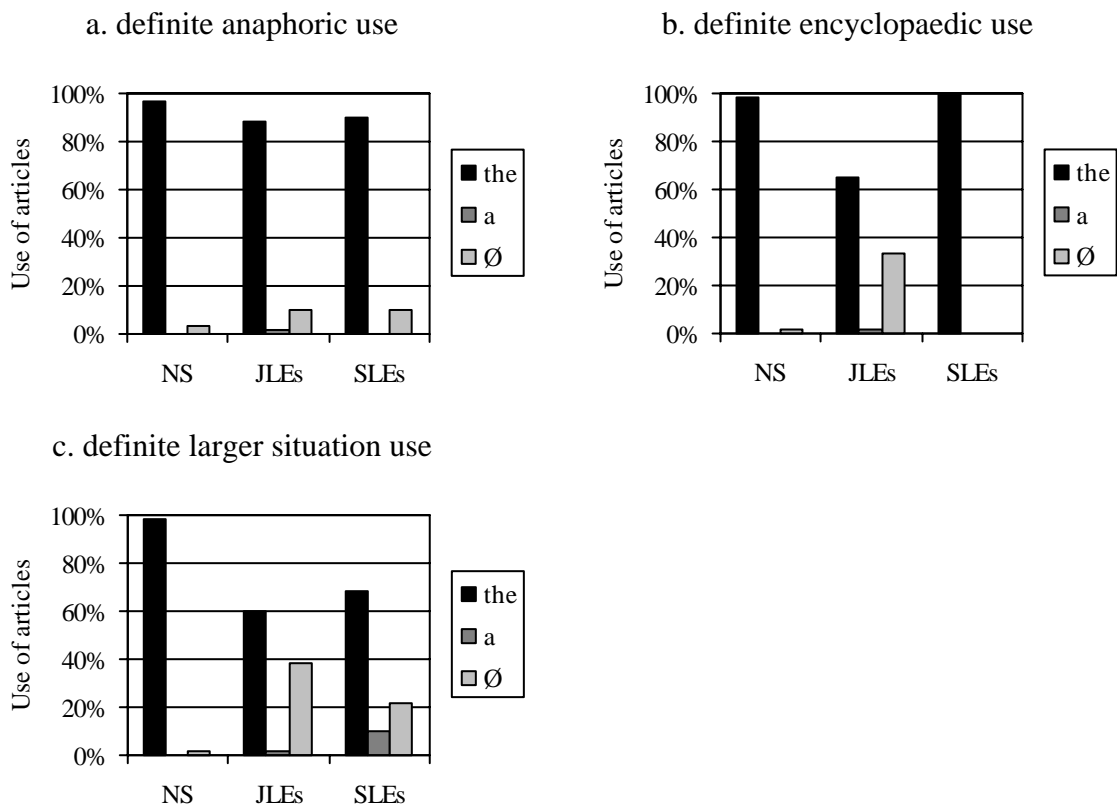
Figure 7.5. Intermediate groups' performance in mass contexts

a. definite anaphoric use

b. definite encyclopaedic use

c. definite larger situation use
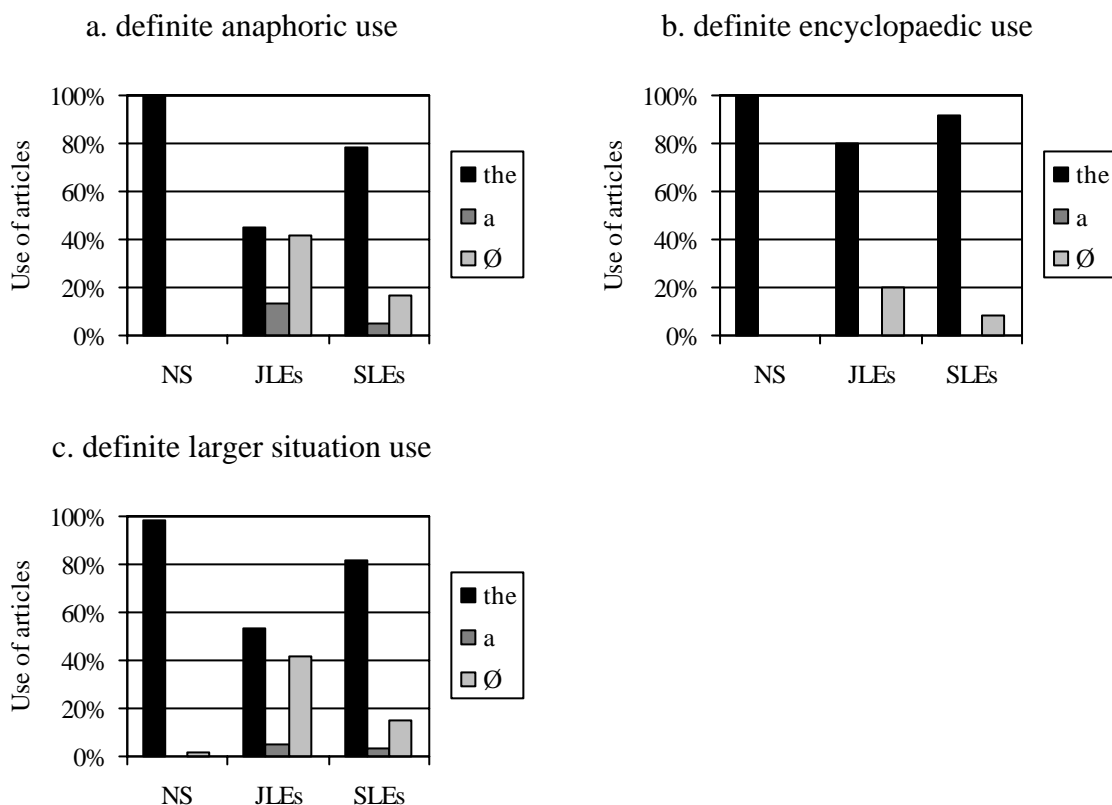
In order to find out whether the Japanese L2 learners had difficulties with different types of definites (anaphoric, encyclopaedic and larger situation uses) one way ANOVAs with planned comparisons were performed on the use of *the* (definites) between the native controls and intermediate groups. The ANOVAs with planned comparisons were conducted to address hypothesis (2).

7.3.1. Types of definite article

7.3.1.1. Comparison between intermediate groups

It is predicted that the Japanese L2 learners will differ in suppliance of the definite article in singular, plural and mass noun conditions.

Definite singular conditions

For the Japanese group there is a significant difference between the native controls and Spanish group in the encyclopaedic use (t= -2.191, p<0.05) and larger situation use (t= -3.011, p<0.05). All groups performed equally in the anaphoric use (t= -1.131, p>0.05).

Definite plural conditions

A one way ANOVA with planned comparisons revealed that the Japanese group are significantly different to the native controls and Spanish group in the encyclopaedic use (t= -3.552, p<0.05) and larger situation use (t= -3.428, p<0.05) but all groups performed equally in the anaphoric use (t= -.787, p>0.05). Post-hoc Tukey tests revealed significant differences between the native controls and the Spanish group in the larger situation use (p<0.05).

Definite mass conditions

For the definite mass condition significant differences were found in the anaphoric (t= 7.290, p<0.05), encyclopaedic (t= 2.477, p<0.05) and larger situation (t= 4.320, p<0.05) uses between the native controls and the Japanese group. Post-hoc Tukey tests revealed significant differences between the native controls and the Spanish group in the anaphoric (p<0.05) use.

The results from the advanced groups are presented in figures 7.6 – 7.8.

Figure 7.6. Advanced groups' performance in singular contexts

a. definite anaphoric use

b. definite encyclopaedic use

c. definite larger situation use
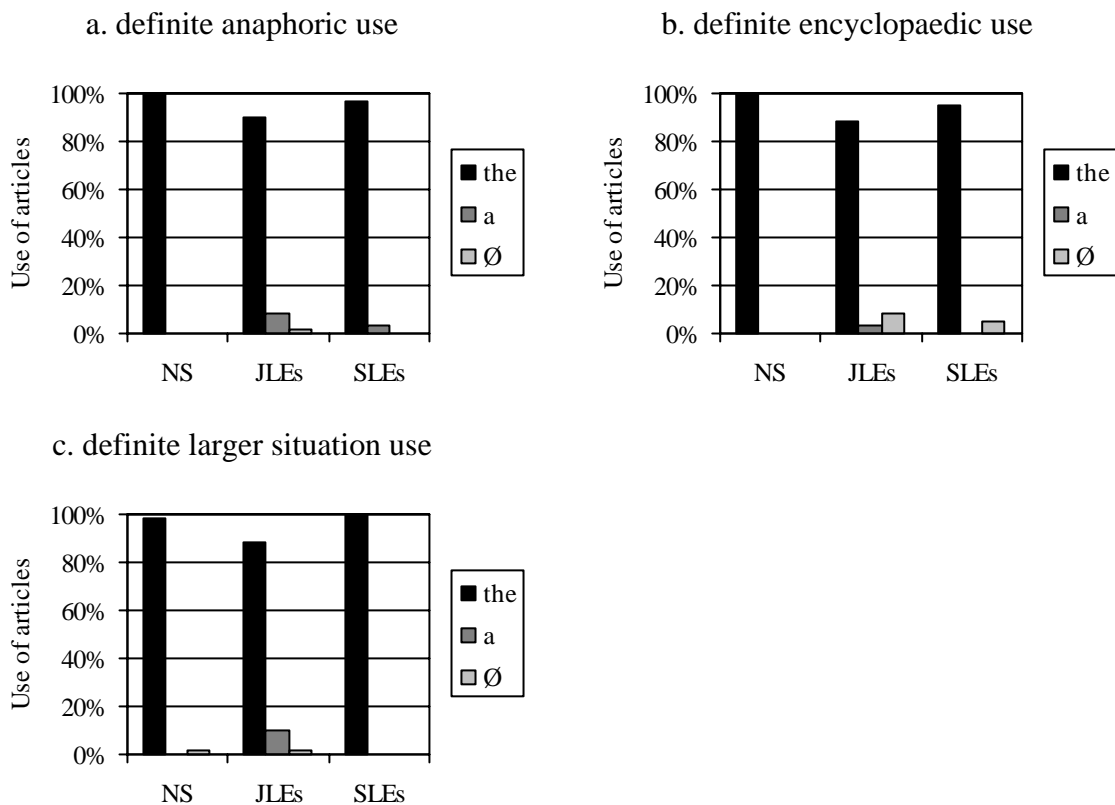
Figure 7.7. Advanced groups' performance in plural contexts

a. definite anaphoric use

b. definite encyclopaedic use

c. definite larger situation use
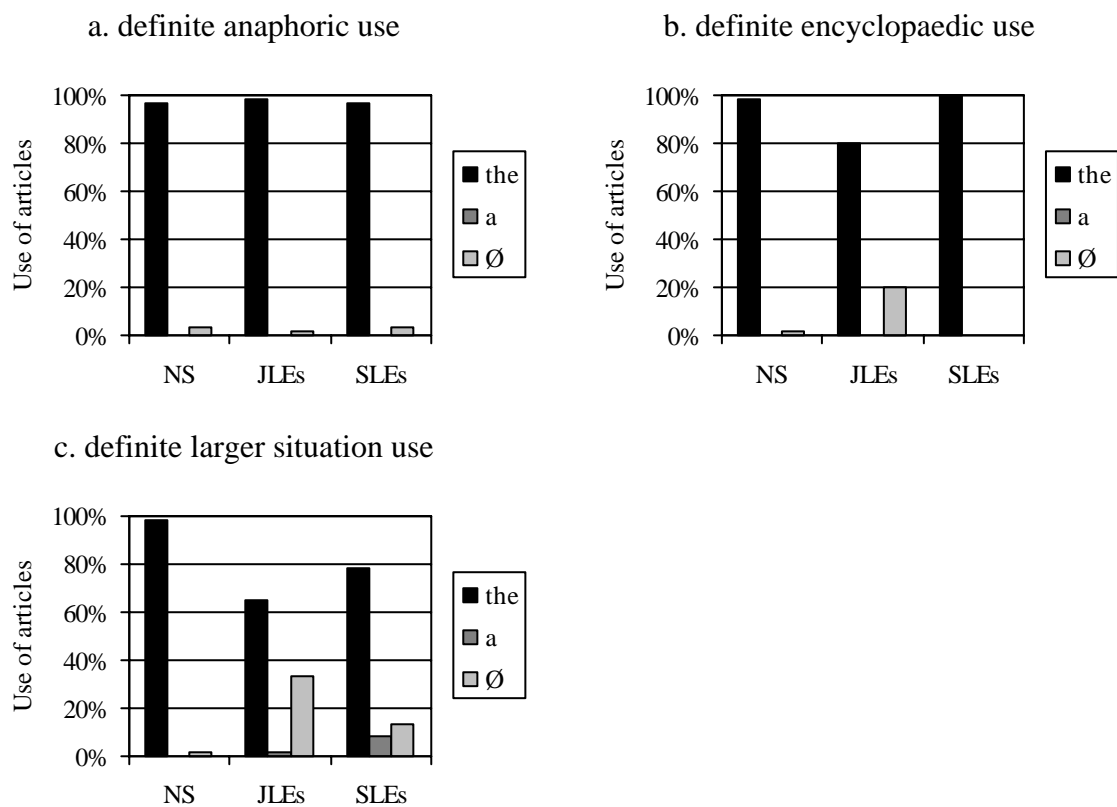
Figure 7.8. Advanced groups' performance in mass contexts

a. definite anaphoric use

b. definite encyclopaedic use

c. definite larger situation use
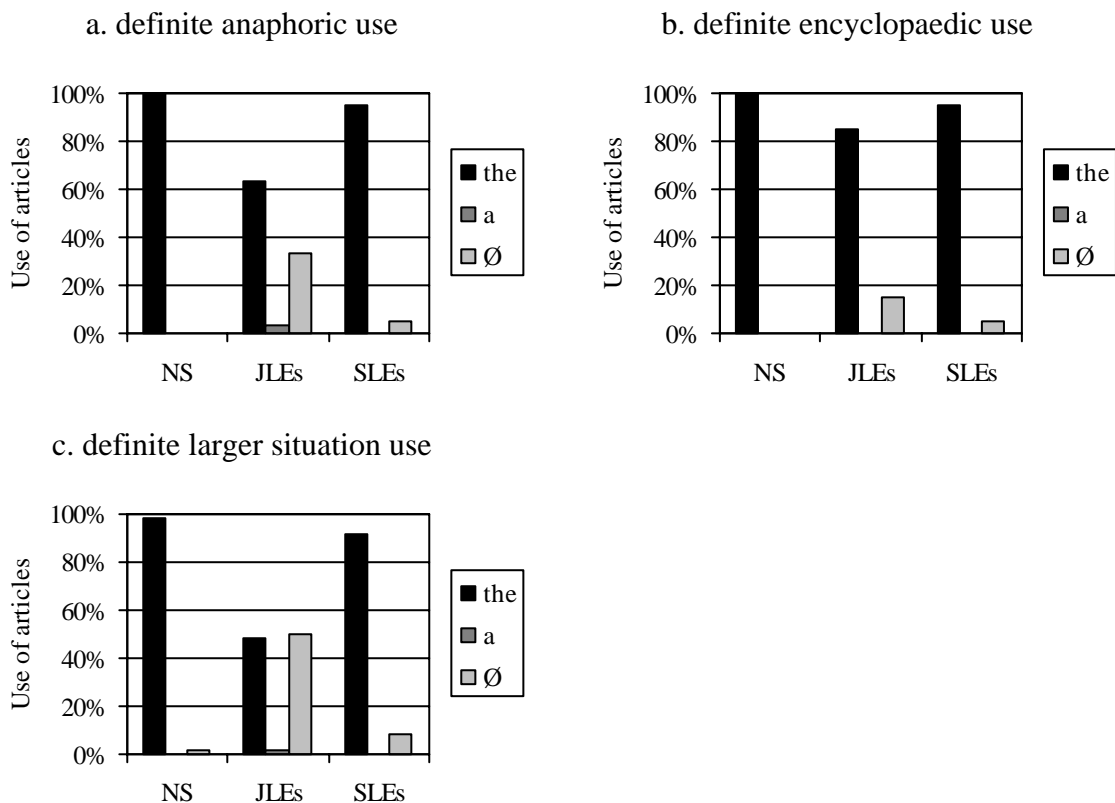
7.3.1.2. Comparison between advanced groups

Definite singular conditions

For the Japanese group, no significant differences were found between the Spanish group and the native controls in all definite uses.

Definite plural conditions

Significant differences were found between the Japanese group and the native controls in the encyclopaedic (t= 3.154, p<0.05) and larger situation (t= 3.713, p<0.05) uses. No significant difference was found in the anaphoric use (t= -.651, p>0.05). Post-hoc Tukey tests revealed a significant difference between the native controls and the Spanish group in the larger situation use only (p<0.05).

Definite mass conditions

For the Japanese group, significant differences were found in all three definite mass conditions between the native controls: anaphoric (t= 4.015, p<0.05), encyclopaedic (t= 2.269, p<0.05) and larger situation (t= 7.651, p<0.05) uses.

7.3.2. Indefinite mass conditions

An ANOVA with planned comparisons was performed in order to address research question 1 for the indefinite mass conditions of specific, non-specific de re and non-specific de-dicto (see Appendix D)[8] No significant differences were found between the intermediate Spanish group

---

[8] Originally, I intended to include the mass contexts in the discussion of fluctuation between definiteness and specificity, but Ionin (2005) suggested that certain specific mass contexts in my task may be interpreted as non-specific, as in i.):

i.)   A: Brian is home.
           B: What's he doing?
           A: He is baking _____ bread, but I don't think it will taste very nice.

           Ø   an   a   the

and the native controls in any of the indefinite mass contexts. Post-hoc Tukey tests revealed a significant difference between the intermediate Japanese group and the native controls in the non-specific de re context (p<0.05). No significant differences were found between the advanced Spanish group and the native controls in any of the indefinite mass contexts. Post-hoc Tukey tests revealed a significant difference between the advanced Japanese group and the native controls in the non-specific de re context (p<0.05).

7.4.   Discussion

The results show that the Japanese speakers have difficulty with definites in encyclopaedic and larger situation plural and mass contexts. The Spanish speakers, on the other hand, mainly have difficulty with larger situation contexts. One explanation for the difficulty with definite encyclopaedic plural is that the Japanese groups, not the Spanish groups, are treating the items as proper nouns e.g. *Houses of Parliament*, *Twin Towers in New York*, and *Pyramids*. However, no such explanation can be offered for any of the other items in the task (see Appendix C). For the definite larger situation use there was a significant difference found within the intermediate Japanese group of substitution of *a* for *the* in the singular condition. Substitution of *a* for *the* was also found in the advanced Japanese group but no significant difference was found within the group across the three types of definite in the singular condition. One reason for substituting *a* for *the* in the definite larger situation use could be attributable to whether the context is interpreted as [+specific] or [-specific] by the Japanese L2 learner (see Ionin *et al* section 7.1.3).[9] I argue that if the context has no intent to refer to a referent which has a noteworthy

---

"For mass indefinites, the lack of RC-modification, or any other indication of specificity, makes the contexts non-specific……. you would need mass indefinite contexts such as "She baked (some) bread that was really tasty!" – some special characteristic attached to the bread to make the specific reading come out" (Ionin 2005). Therefore, as a result I only discuss the mass noun contexts in this chapter in relation to the NMP.

[9] Another possibilty for substitution of *a* for *the* in the larger situation contexts may be due to a lack of cultural / factual knowledge by Japanese L2 learners.

property, e.g. OK, then, I will contact *the branch manager* for you, the Japanese L2 learner interprets the context as [-specific] and uses the indefinite article. If the example taken from (8c) had a noteworthy property (in italics) i.e. the branch manager *of our Colchester bank* for you, it may be clearer that the dialogue is [+specific]. Greater accuracy in the definite anaphoric singular condition of the use of *the* is predicted as the context is obligatorily [+specific] according to Ionin *et al* (in press). Further discussion of definiteness and specificity relating to the Article Choice Parameter takes place in chapter 9.

Overall, the results reveal similar patterns of use across types of definites in the studies by Wakabayashi (1997, 1998), Liu & Gleason and Ionin *et al* (in press). The Japanese groups are less accurate in the use of all definite article types in the plural and mass contexts, as Wakabayashi (1998) found in his study of Japanese speakers. The hypothesis and research questions for this experiment are discussed below.

H^2 Japanese L2 learners can reset the NMP but there may be a difference in the suppliance of definites in singular, plural and mass noun contexts due to the different pragmatic uses of the definite article.

The results from the forced choice elicitation task support hypothesis (2). Both of the Japanese groups continue to omit definites in plural and mass context. It could be argued on the basis of the results from chapter 6 that Japanese speakers are aware of conceptual differences. They seem to know that solid discrete objects are mapped onto count nouns and non-solid substances are mapped onto mass nouns. The problem may be a linguistic one 1.) continuing problems with certain uses of the definite article 2.) mass nouns as sometimes they appear to be countable e.g. a coffee. The results revealed that the type of definite context does affect suppliance as the Japanese and Spanish groups (intermediate and advanced) had more difficulty with the larger

situation use in singular and plural conditions. Generally, across the conditions, the Japanese groups and the intermediate Spanish groups had difficulty with the mass conditions.

Bautista (2004) found that lower intermediate Spanish L2 learners had difficulty with definite mass nouns and suggested that this may be the effect of L1 transfer. An alternative to L1 transfer could be that the intermediate L2 Spanish learners do reset the NMP and as a result overgeneralize the English setting [+arg, +pred] to all mass nouns. English and Spanish both have uninterpretable number features on D and N. These need to be valued and deleted when the noun is countable. This supports Wakabayashi's (1997) claim that the definite is associated with [number]. The intermediate L2 Spanish learners and the Japanese L2 learners may have difficulty with definite mass contexts because the definite article has no uninterpretable number feature. It is selected on the basis of satisfying discourse requirements. Further evidence to support this claim comes from indefinite mass contexts where there is substitution of *the* for *Ø* in specific contexts.

i.)   If there is substitution of *the*/*a* for *Ø* (= no article) in indefinite mass contexts could this be a result of L1 transfer from Spanish to English?

It is possible that the substitution of *a* for *Ø* and *the* for *Ø* is due to L1 transfer, but it seems unlikely as the Japanese groups are also substituting *a* for *Ø* and *the* for *Ø* (see Appendix D). This is unexpected as Japanese has a different L1 NMP setting to Spanish. The substitution of *the* for *Ø* is mainly in the specific mass context. Part of the explanation for substitution of *the* for *Ø* in specific contexts could be due to *the* being associated with specificity not definiteness. This is discussed further in chapter 9. Therefore, I believe the Spanish speakers reset the NMP and alternative explanations can be offered for indefinite mass nouns. One reason for substitution errors may be due to the fact that some nouns in English can be count or mass,

depending on context (see Hiki 1991, Yoon 1993). Another plausible explanation is that nouns such as *bread*, *wine*, *tea* and *beer*, which were items used in the forced choice elicitation task, may be shortened measure phrases. Japanese and Spanish L2 learners of English, as well as some native speakers of English, shorten measure phrases, so *(a loaf/a type of) bread*, *(a bottle of) wine*, *(a cup of) tea* and *(a pint of) beer* appear as countable nouns:- *a bread*, *a wine*, *a tea* and *a beer*.[10]

    ii.)   If the L2 groups continue producing substitution and omission errors could this be the result of a conceptual difficulty relating to the ontological properties of nouns in context?

Research question two is offered as an alternative to the NMP. If, as I argued in chapter 5, Japanese and Spanish have count syntax and L2 learners have full access to UG, the difficulty for L2 learners of English may be the result of a complex interaction between the noun type and context, as Hiki (1991, 1993), Yoon (1993), Young (1996) and Trenkic (2002b) found in their studies.[11] The mixed input which the learners receive in English may also play a role in the acquisition of countable and uncountable Ns. There is no need to posit the resetting of a parameter value. The difficulty may lie in acquiring articles because Japanese is an article-less language whilst Spanish is a language with articles. The count – mass distinction remains confusing as there are a number of possibilities in English where a count noun (e.g. I saw *a dog*, I like *dogs*) can appear as mass in context (e.g. I ate *dog* last night) or a mass noun (e.g. To produce great art you require *skill* with a brush) can appear as count in context (e.g. He needs to learn *a skill* to gain employment, He has many *skills* relevant for the job) (see Hiki 1993 for

---

[10] Bautista (2004) conducted a similar study with Spanish speakers at lower intermediate and upper intermediate levels of proficiency in English. He found similar substitution errors with the same items.

[11] The difficulty with acquiring articles and the count – mass distinction in English has mainly focused on L2 learners from article-less languages.

more examples). In order to determine whether Japanese speakers have difficulty with definite and indefinite articles and nouns in production as well as comprehension, two tasks were administered. Chapter 8 discusses the results of the oral and written production tasks.

7.5.   Summary of chapter 7

The results are consistent with hypothesis (2). The Japanese speakers continue to produce omission errors in obligatory definite plural and mass contexts. All groups tended to substitute *a* for *Ø* in indefinite mass contexts. The explanation given for substitution errors was that it could be due to the type of indefinite mass noun used in the task. It was argued that the Spanish speakers do reset the NMP. The Japanese speakers may also reset the NMP based on the results from chapter 6, but continue to have difficulty with articles due to pragmatic factors or a failure to acquire uninterpretable features within the DP (see chapter 2). Finally, an alternative to the NMP was proposed as to why L2 learners continue to have difficulty with definites and uncountable Ns.

The two experiments in chapter 8 test the L2 groups' use of articles and plural *–s* in oral and written production tasks.

Chapter 8

Experiments 3 and 4: story re-call production task: oral and written versions

8.0   Introduction

This chapter presents the third and fourth experiments of five in the L2 acquisition of the nominal domain in English by Spanish and Japanese speakers. The experiments test L2 learners' ability to supply articles and plural –*s* marking in obligatory contexts.

So far, it has been assumed that the Japanese and Spanish speakers can reset the NMP to the English setting [+arg, +pred]. However, the Japanese speakers continued to omit the definite article in plural and mass contexts in experiment two (see chapter 7). Experiments three and four are designed to further test whether L2 learners can correctly supply articles and plural –*s* in obligatory contexts. Omission errors may be the result of a failure to acquire formal features within the DP (Hawkins *et al* in progress) as the L2 learners' syntax is selectively impaired, lacking parameterized formal features not present in the L1 which are no longer accessible following a critical period for acquisition (see chapter 4, section 4.2). Conversely, Prévost & White (2000) and McCarthy (2004) claim that L2 learners who have variability in their interlanguage grammars in using inflectional morphology is a result of a 'mapping or remapping problem'. According to Lardiere (1998, 2005) this mapping problem arises between the morphological or PF component and the syntax (see chapter 4, section 4.4 and 4.5). Persistent low suppliance of functional morphology (the/a) by the Japanese L2 learners does not seem to be the result of unavailable prosodic structures from the L1 (see chapter 4, section 4.6

and chapter 5, section 5.1.5 for discussion).[1] Substitution errors may be the result of fluctuation between the two parameter settings of the ACP, which is discussed in chapter 9.

8.1.   Experiment 3: Story re-call (oral version)

8.1.1.   Hypotheses and predictions

Hypotheses (1) and (2) have already been tested in chapters 6 and 7. The continuing set of hypotheses was formulated in order to test the MUH and PTH:

H[3]   Japanese intermediate and advanced L2 learners should produce more underspecification errors than feature clash errors (prediction of the MUH). The intermediate and advanced Spanish L2 learners are predicted not to produce underspecification errors.

Hypothesis (3) is a prediction of the Morphological Underspecification Hypothesis as it predicts that L2 learners will produce far fewer feature clash errors i.e. substitution errors of *the* in an indefinite context and *a* in a definite context are perhaps due to fluctuation between definiteness and specificity (see chapter 9). I predict that Japanese L2 learners are more likely to produce underspecification errors i.e. omission of *the*, *a* and plural *–s* in obligatory contexts. As Spanish is a language with articles, the Spanish L2 learners are not predicted to produce underspecification errors but rather supply the overt forms.

---

[1] I limit my discussion to structures that are needed to represent articles at the left edge of the phonological phrase. The Prosodic Transfer Hypothesis may be able to account for omissions of plural *–s*.

H[4]   There will be no difference in suppliance of articles in Art+N contexts and Art+Adj+N contexts if Japanese L2 learners can prosodically represent articles in their ILGs. The Spanish L2 learners are predicted to supply articles as the prosodic representation for articles is the same as English.

Hypothesis (4) predicts that the Japanese L2 learners will be accurate in supplying articles as there are prosodic structures available in their ILG. No difference is expected if there are L1 structures available for Art+N and Art+Adj+N constructions.

8.1.2. Method

8.1.2.1   The participants

All participants are currently postgraduate students at the University of Essex. Even though all the participants have taken TOEFL and have scores equivalent of 575 or above, they were asked to take the OQPT in order to obtain their current proficiency level. All participants were then placed into levels according to their scores on the OQPT.

Table 8.1. The participants in the oral production task

	L1 Japanese	L1 Spanish	L1 Japanese	L1 Spanish
Proficiency level	Intermediate	Intermediate	Advanced	Advanced
Number of participants	15	15	15	15
Age range	21 – 37 (mean = 27)	21 – 40 (mean = 27)	22 – 42 (mean = 30)	21 – 43 (mean = 30)
Age range of first exposure	6 – 13 (mean = 12)	3 – 34 (mean = 14)	3 – 13 (mean = 11)	3 – 29 (mean = 11)
Length of stay in English speaking countries (months)	6 – 60 (mean = 16.5)	1 – 48 (mean = 13)	4 – 96 (mean = 29.5)	0 – 84 (mean = 24.5)

8.1.2.2. The story re-call task: oral version

The task was an oral production task which consisted of a total of 113 items. Generics were

used as distracter items. The task was designed by Hawkins *et al* (in progress) to test Japanese

and Greek L2 learners of English. Items used in the task were similar to the items used in the

forced choice elicitation task (see chapter 7). A pilot study was conducted involving three

Japanese and three Spanish L2 learners of English and two native controls. All participants

completed the task successfully.[2] The task required the participants to listen to thirteen short

stories. Each story was presented twice and prompts were given to the participants via

Microsoft PowerPoint slides to assist them in the re-call of the story. Once they had listened

twice to one story they were then asked to re-call the story immediately, using the prompts in

the order they appeared on the slide. They were instructed to re-call the story as if it was the

first time they had heard it and to ignore the researcher present in the room. The idea was to

avoid any overuse of definites as the participant may overuse definites if they believe that the

---

[2] For discussion of preliminary results see Snape (2005b, 2005c, in press).

speaker and hearer have shared knowledge of a particular subject or situation. If the participant was not confident in re-calling a particular story the researcher moved onto the next story and came back to the skipped story at the end. Each story re-call was recorded digitally using PolderbitS Sound Recorder and Editor. The task was not timed. An example of a story used in the task is in (1):

(1)   At Colchester North station, <u>an elderly woman</u>'s daughter watched <u>a young man</u> run quickly down platform three to catch the next train to London. <u>The daughter</u> of the elderly woman caught <u>the same train</u>, but took her time, strolling down the platform. `I thought the train was leaving' <u>the young man</u> said. `They can't find <u>a driver</u>,' <u>the elderly woman</u>'s daughter replied.

Prompts: station, elderly woman, daughter, young man, train to London, driver

(see Appendix B for all of the stories)

8.1.2.3. Coding procedure

Following Ionin's (2003a) coding procedure for written production data a similar coding system was used for the oral and written data presented in this chapter. Coding the results of each story is as follows. Once each story had been transcribed using Express Scribe software, I compared the original stories to the transcribed versions and scored them on their correct and incorrect usage of articles. As a native speaker of English, I firstly coded the results with my own intuitions of correct and incorrect uses of articles. The data were then organised into two sets: a set of transcriptions of the stories told by the Japanese L2 learners and a set of transcriptions of the stories told by the Spanish L2 learners with the articles removed, leaving a blank space

before each NP. A sample of these versions without articles (5 intermediate Japanese, 5 advanced Japanese, 5 intermediate Spanish and 5 advanced Spanish) was given to a group of 12 native speakers of English who were asked to add the appropriate articles (hereafter referred to as story *editors*). The editors were not informed of the L2 learners' nationality or level of English. Each editor was given five subjects' transcriptions to code. The same five subjects' transcriptions were given to two other editors to insure inter-editor reliability. In other words, there were four groups of editors with three editors in each group. Each group corrected the same set of data, though it was randomized for each editor. The five subjects for each editor group were a mix of L1 group (Spanish and Japanese) and proficiency level. The editors were told that they were looking at transcriptions of stories re-called by non-native speakers of English and were asked to insert an article which they thought was most appropriate within the context of each story. They were asked to choose from four possible options for article insertion: the possible options were *the*/*a*/*an*/*Ø* (*Ø* = no article). The reason for having editors was because some contexts could be either definite or indefinite, so it was important to see whether native speakers would interpret contexts the same way or differently to L2 speakers. I needed the editors to score each story as if it was *unambiguously* definite or indefinite. An unambiguous definite context is one where all the editors within the group choose *the* and an unambiguous indefinite context is one where the editors choose *a* for singular indefinites and *Ø* for plural and mass indefinites. In the stories there are contexts where both the definite and indefinite article are felicitous. For example, from (1) (repeated below) 'a driver' has a non-specific reading;

> (2)   "I thought the train was leaving" the young man said. "They can't find
>
>   a driver," the elderly woman's daughter replied.

When re-calling the story, some of the participants would say 'the driver' in this context. This is not correctly re-called, but it is still grammatically correct to use a definite here. The use of a definite changes the meaning of the sentence. 'They can't find *a* driver' means that they can't find any driver for the train (no specific driver exists), whereas 'They can't find *the* driver' means there is a presupposed driver for a specific train. It's an associated use of *the*, as defined by J. Hawkins (1978). Therefore, if a definite or indefinite was inserted in the blank space by the editors it would be scored as correct.[3] If a definite was inserted it would be coded as associative use and if an indefinite was inserted it would be coded as non-specific singular use.[4] Omissions of articles were coded as ungrammatical usage. However, there are uses of definites where the coders never disagreed i.e. anaphoric or encyclopaedic uses of the definite article (see chapter 7). For example, in story (1) 'an elderly woman' is introduced into the discourse and then is referred to again later on within the story (see (2) above) as 'the elderly woman'. The editors never inserted an indefinite article *a* in these contexts. Likewise, an indefinite article was always inserted by the editors when there was first mention of someone or something in the discourse. For example, 'an elderly woman' and 'a young man' from story (1) appear at the beginning of the story and the use of a definite article would be infelicitous here for the editors. As the main objective of coding was to see whether or not L2 learners could produce articles in oral production, uses of definites in the story re-call which could be counted as associative or larger situational uses were coded as felicitous.

---

[3] One of the difficulties with coding is that though the use of a definite in 'They can't find *the* driver' is acceptable for native speakers it is not possible to tell whether the L2 learner is using *the* correctly (i.e. associative use) or is substituting *the* for *a* because there is a specific driver for the train. Ionin (2003a) did not include ambiguous uses in her results. See chapter 9 for discussion of fluctuation between definiteness and specificity.

[4] Substitution of *a* for *the* was found in the larger situational contexts in the forced choice elicitation task discussed in chapter 7. This may be because the definite and indefinite articles (*the* and *a*) are being treated as markers of specificity. See chapter 9 for discussion.

8.2.   Results of experiment 3

An item analysis was conducted before analysing the results. The following items were not included in the final analysis (see Appendix C for item list). Items 41 and 110 were dropped as they are argued to be unanalysable chunks (Thomas 1989: 351, White 2003):

41 – *man* - 'there is a …..' construction
110 – *girl* - 'a little ……' construction[5]

So called, conjunction constructions – items 24 – *red cap*, 69 – *half empty barrel* and 103 – *sea* were not included. Dirdal (2005) suggests omissions such as in example (3) could be a syntactic constraint on determiner omission. Determiners may be omitted in conjunction constructions when they appear after the conjunction as this seems to be acceptable for native speakers of English;

(3)   John is wearing *a* white shirt and Ø red cap

Other items that were not included were those which produced a high number of omissions by the Japanese groups. The omission of articles for items 21 – *strawberries* and 46 – *gym* could be due to possible L1 transfer. In Japanese, there are many words which have been borrowed from other languages and are used regularly by the Japanese. Even though Japanese has a word for *strawberry* (ichigo) the English translation is also used. There is no word in Japanese for *gym*. Therefore, it seems these two words are treated as argumental Ns without the need to predicate them with an article. Items 34 and 39 – *umbrella* were not included as there seem to be pronunciation and/or perceptual difficulties for the Japanese speakers. In the re-call task it may be difficult for the Japanese speakers to perceive that there is 'an' before *umbrella* due to

---

[5] It seems that 'a little ....' has wider distribution as a measure phrase for example than 'the little ....'.

linking between 'an_umbrella'. As the two nasals /n/ and /m/ are only separated by a reduced vowel /ə/ it may be difficult for the Japanese speakers to perceive 'an' and instead they only perceive *umbrella*. When re-calling the story it may be difficult to pronounce two nasals in such close approximation so 'an' is dropped. Items 54 – *West End* and 101 – *South of France* were not included because it seems that the Japanese groups were treating these items as article-less proper nouns. The capitalized prompts given to the participants may also have led them to believe that these are proper nouns. Finally, item 87 – *week* was not included in the analysis as both Japanese proficiency groups had difficulty with this particular item. It was excluded on the basis of being a problematic item for most Japanese participants.

The results were arranged into types of definites and types of indefinites (see Appendix D) and then collapsed into the following tables:

Table 8.2. Suppliance of articles in definite count singular contexts in the oral task

Groups	definite singular		
	the	*a/an	*Ø
Intermediate Japanese L2 English (*n*=15)	250/320 (78.1%)	10/320 (3.1%)	**60/320 (18.8%)**
Advanced Japanese L2 English (*n*=15)	311/372 (83.6%)	10/372 (2.7%)	**51/372 (13.7%)**
Intermediate Spanish L2 English (*n*=15)	318/325 (97.8%)	0/325 (0%)	7/325 (2.2%)
Advanced Spanish L2 English (*n*=15)	340/348 (97.7%)	2/348 (0.6%)	6/348 (1.7%)
Native controls (*n*=15)	388/390 (99.5%)	2/390 (0.5%)	0/390 (0%)

Table 8.3. Suppliance of articles in definite count plural contexts in the oral task

Groups	definite plural			
	the	*a/an	*Ø	-s
Intermediate Japanese L2 English (*n*=15)	24/39 (61.5%)	2/39 (5.1%)	**13/39 (33.4%)**	**22/39 (56.4%)**
Advanced Japanese L2 English (*n*=15)	37/47 (78.7%)	3/47 (6.4%)	**7/47 (14.9%)**	**30/47 (63.8%)**
Intermediate Spanish L2 English (*n*=15)	61/63 (96.8%)	0/63 (0%)	2/63 (3.2%)	50/63 (79.4%)
Advanced Spanish L2 English (*n*=15)	87/91 (95.6%)	0/91 (0%)	4/91 (4.4%)	81/91 (89%)
Native controls (*n*=15)	80/81 (98.8%)	0/81 (0%)	1/81 (1.2%)	79/81 (97.5%)

Table 8.4. Suppliance of articles in definite mass contexts in the oral task

Groups	definite mass		
	the	*a/an	*Ø
Intermediate Japanese L2 English (*n*=15)	39/73 (53.4%)	4/73 (5.5%)	**30/73 (41.1%)**
Advanced Japanese L2 English (*n*=15)	63/78 (80.8%)	4/78 (5.1%)	**11/78 (14.1%)**
Intermediate Spanish L2 English (*n*=15)	73/74 (98.6%)	0/74 (0%)	1/74 (1.4%)
Advanced Spanish L2 English (*n*=15)	86/88 (97.7%)	1/88 (1.1%)	1/88 (1.1%)
Native controls (*n*=15)	94/94 (100%)	0/94 (0%)	0/94 (0%)

Table 8.5. Suppliance of articles in indefinite count singular contexts in the oral task

Groups	indefinite singular		
	*the	a/an	*Ø
Intermediate Japanese L2 English (*n*=15)	**41/350 (11.7%)**	216/350 (61.7%)	**93/350 (26.6%)**
Advanced Japanese L2 English (*n*=15)	**32/382 (8.4%)**	310/382 (81.2%)	**40/382 (10.5%)**
Intermediate Spanish L2 English (*n*=15)	**23/328 (7.0%)**	296/328 (90.2%)	9/328 (2.7%)
Advanced Spanish L2 English (*n*=15)	3/354 (0.8%)	346/354 (97.7%)	5/354 (1.4%)
Native controls (*n*=15)	3/382 (0.8%)	379/382 (99.2%)	0/382 (0%)

Table 8.6. Suppliance of articles in indefinite count plural contexts in the oral task

Groups	indefinite plural			
	*the	*a/an	Ø	-s
Intermediate Japanese L2 English (*n*=15)	2/104 (1.9%)	4/104 (3.9%)	98/104 (94.2%)	**67/104 (64.4%)**
Advanced Japanese L2 English (*n*=15)	**10/107 (9.3%)**	5/107 (4.7%)	92/107 (86%)	**74/107 (69.1%)**
Intermediate Spanish L2 English (*n*=15)	**12/83 (14.5%)**	5/83 (6%)	66/83 (79.5%)	77/83 (92.8%)
Advanced Spanish L2 English (*n*=15)	2/160 (1.3%)	4/160 (2.5%)	154/160 (96.3%)	149/160 (93.1%)
Native controls (*n*=15)	0/149 (0%)	1/149 (0.7%)	148/149 (99.3%)	147/149 (98.7%)

Table 8.7. Suppliance of articles in indefinite mass contexts in the oral task

Groups	indefinite mass		
	*the	*a/an	Ø
Intermediate Japanese L2 English (*n*=15)	**10/161 (6.2%)**	**13/161 (8.1%)**	138/161 (85.7%)
Advanced Japanese L2 English (*n*=15)	7/162 (4.3%)	**18/162 (11.1%)**	137/162 (84.6%)
Intermediate Spanish L2 English (*n*=15)	**14/135 (10.4%)**	**15/135 (11.1%)**	106/135 (78.5%)
Advanced Spanish L2 English (*n*=15)	7/165 (4.2%)	5/165 (3%)	153/165 (92.7%)
Native controls (*n*=15)	1/157 (0.6%)	1/157 (0.6%)	155/157 (98.7%)

8.2.1. Definite and indefinite contexts

The first set of results addresses hypothesis (3) above.

8.2.1.1. Comparison between intermediate groups

Comparisons were made between the intermediate groups and the native controls to see whether the L2 Japanese and Spanish performed differently to the native controls in suppliance of articles and plural –*s*.

Since the data were not normally distributed, a Kruskal-Wallis non-parametric test was performed on the three L1 language groups. There was a significant effect of group (χ^2 of 30.554 df=2, p<0.05 for definite singular, χ^2 of 23.782 df=2, p<0.05 for definite plural and χ^2 of 35.915 df=2, p<0.05 for definite mass). As expected, the Japanese group supplied the least number of definites in singular, plural and mass contexts. The Japanese group supplied the least number of indefinites in singular contexts, and indefinite plural and mass contexts proved difficult for both groups (χ^2 of 34.170 df=2, p<0.05 for indefinite singular, χ^2 of 15.656 df=2, p<0.05 for indefinite plural and χ^2 of 16.736 df=2, p<0.05 for indefinite mass). The Japanese

group supplied the least number of plurals in definite and indefinite plural contexts (χ^2 of

23.868 df=2, p<0.05 for definite plural –*s* and χ^2 of 22.850 df=2, p<0.05 for indefinite plural –*s*).

In order to compare each L2 group with the native controls, Mann-Whitney non-parametric

tests were conducted. The results are presented in tables 8.8-8.13.

Table 8.8. Oral task: results of intermediate Japanese L2 learners' use of definites

	use of *the*	
definite singular	U = 0.0	z = -4.868***
definite plural	U = 16.5	z = -4.031***
definite mass	U = 7.5	z = -4.732***

*p < .05   **p < .01   ***p < .001

Table 8.9. Oral task: results of intermediate Japanese L2 learners' use of indefinites

	use of *a*		use of Ø	
indefinite singular	U = 0.0	z = -4.823***		
indefinite plural			U = 67.5	z = -2.672**
indefinite mass			U = 37	z = -3.463**

*p < .05   **p < .01   ***p < .001

Table 8.10. Oral task: results of intermediate Japanese L2 learners' use of plurals

	use of –*s*	
definite plural	U = 1.0	z = -4.686***
indefinite plural	U = 14	z = -4.367***

*p < .05   **p < .01   ***p < .001

Table 8.11. Oral task: results of intermediate Spanish L2 learners' use of definites

	use of *the*	
definite singular	U = 80.5	z = -1.706
definite plural	U = 104.5	z = -.637
definite mass	U = 105	z = -1.000

*p < .05   **p < .01   ***p < .001

Table 8.12. Oral task: results of intermediate Spanish L2 learners' use of indefinites

	use of *a*		use of *Ø*	
indefinite singular	U = 21	z = -4.004***		
indefinite plural			U = 37.5	z = -3.708***
indefinite mass			U = 29	z = -3.762***

*p < .05   **p < .01   ***p < .001

Table 8.13. Oral task: results of intermediate Spanish L2 learners' use of plurals

	use of *–s*	
definite plural	U = 51.5	z = -3.018**
indefinite plural	U = 88.5	z = -1.534

*p < .05   **p < .01   ***p < .001

The results of the Mann-Whitney tests reveal that the Japanese L2 learners differ significantly from the native controls in all contexts, whereas the Spanish L2 learners differ from the native controls in all indefinite contexts. Suppliance of plural *–s* by the Japanese speakers was significantly different from the native controls. The Spanish speakers performed like the native controls in suppliance of plural *–s*.

8.2.1.2. Comparisons within intermediate groups

The Wilcoxon Signed-Ranks test was used to perform within-group comparisons. The intermediate Japanese speakers' suppliance of definites was significantly different between the definite singular and definite mass (z =-2.215, p<0.05). No significant differences were found between the definite singular and definite plural (z =-1.334, p>0.05) or the definite plural and definite mass (z =-.178, p>0.05). Significant differences were found in the Japanese group between indefinite singular, plural and mass contexts in substituting *the* for *a* and *the* for *Ø*. A significant difference was found between indefinite singular and indefinite plural (z =-3.233, p<0.05) and indefinite plural and indefinite mass (z =-1.992, p<0.05). No difference was found between indefinite singular and indefinite mass (z =-1.161, p>0.05). Substitution of *the* was high in both the indefinite singular and indefinite mass contexts. The number of omissions was compared between definite singular and indefinite singular contexts. A significant difference was found (z =-2.215, p<0.05) indicating that the omissions made in the indefinite singular contexts were significantly more than the definite singular context. Finally, the suppliance of plural *–s* in definite and indefinite plural contexts was compared. No significant difference was found (z =-1.571, p>0.05). This suggests that the intermediate Japanese speakers are treating definite plural and mass nouns differently as there is more omission of *the* with mass nouns. They also treat indefinite plural and mass nouns differently as substitution of *the* for *Ø* or *a* for *Ø* occurs more in indefinite mass contexts. The Spanish intermediate group showed no significant differences in the use of definites in singular, plural and mass contexts. No significant differences were found between the indefinite singular, plural and mass contexts as substitution of *the* for *a* and *the* for *Ø* was minimal across the three contexts. There was no difference between definite singular and indefinite singular contexts as there were hardly any omissions made in either context. Finally, the suppliance of plural *–s* in definite and indefinite plural contexts was compared. No significant difference was found (z =-1.554, p>0.05).

8.2.1.3. Comparison between advanced groups

The Kruskal-Wallis test was performed and the results revealed significant differences between the groups in all conditions (χ^2 of 23.257, df=2, p<0.05 for definite singular, χ^2 of 6.894, df=2, p<0.05 for definite plural and χ^2 of 27.054, df=2, p<0.05 for definite mass). The Japanese continued to omit definite articles, indefinite articles (χ^2 of 25.029, df=2, p<0.05 for indefinite singular, χ^2 of 11.718, df=2, p<0.05 for indefinite plural and χ^2 of 13.573, df=2, p<0.05 for indefinite mass) and plural –*s* (χ^2 of 16.456, df=2, p<0.05 for definite plurals and χ^2 of 22.534, df=2, p<0.05 for indefinite plurals) in obligatory contexts. Tables 8.14-8.19 show the results of Mann-Whitney tests comparing the advanced L2 speakers with the native controls.

Table 8.14. Oral task: results of advanced Japanese L2 learners' use of definites

	use of *the*	
definite singular	U = 19	z = -4.145***
definite plural	U = 65.5	z = -2.505*
definite mass	U = 22.5	z = -4.224***

*p < .05   **p < .01   ***p < .001

Table 8.15. Oral task: results of advanced Japanese L2 learners' use of indefinites

	use of *a*		use of *Ø*	
indefinite singular	U = 12	z = -4.349***		
indefinite plural			U = 52.5	z = -3.199**
indefinite mass			U = 38	z = -3.417**

*p < .05   **p < .01   ***p < .001

Table 8.16. Oral task: results of advanced Japanese L2 learners' use of plurals

	use of -*s*	
definite plural	U = 33.5	z = -3.707***
indefinite plural	U = 18	z = -4.257***

*p < .05   **p < .01   ***p < .001

Table 8.17. Oral task: results of advanced Spanish L2 learners' use of definites

	use of *the*	
definite singular	U = 86.5	z = -1.455
definite plural	U = 89.5	z = -1.470
definite mass	U = 97.5	z = -1.439

*p < .05   **p < .01   ***p < .001

Table 8.18. Oral task: results of advanced Spanish L2 learners' use of indefinites

	use of *a*		use of *Ø*	
indefinite singular	U = 76	z = -1.806		
indefinite plural			U = 75	z = -2.396*
indefinite mass			U = 51	z = -2.886**

*p < .05   **p < .01   ***p < .001

Table 8.19. Oral task: results of advanced Spanish L2 learners' use of plurals

	use of -*s*	
definite plural	U = 82.5	z = -1.781
indefinite plural	U = 55	z = -2.846**

*p < .05   **p < .01   ***p < .001

The advanced Japanese L2 learners continue to perform significantly differently to the native controls in all definite and indefinite contexts, whereas the Spanish L2 learners are only significantly different in indefinite plural and mass contexts.

8.2.1.4. Comparison within advanced groups

The Wilcoxon Signed-Ranks test was used to perform within-group comparisons. There were no significant differences found in the advanced Japanese group in the suppliance of definites in singular, plural and mass contexts. No significant differences were found in substitution of *the* for *a* and *the* for *Ø* in the indefinite contexts (indefinite singular x indefinite plural z =-.502, p>0.05, indefinite singular x indefinite mass z =-1.712, p>0.05 and indefinite plural x indefinite mass z =-.895, p>0.05). There was no significant difference found between the number of omissions made in definite singular and indefinite singular contexts (z =-1.647, p>0.05). Finally, no significant differences were found in suppliance of plural *–s* for definite and indefinite contexts. For the advanced Spanish group there were no significant differences found in the suppliance of definites in singular, plural and mass contexts. Substitution of *the* for *Ø* in the indefinite mass contexts was found to be significant compared with substitution of *the* for *Ø* in indefinite plural and *the* for *a* in indefinite singular contexts (indefinite singular x indefinite mass z =-2.380, p<0.05 and indefinite plural x indefinite mass z =-2.207, p<0.05). There was no significant difference found between the number of omissions made in definite singular and indefinite singular contexts (z =-0.255, p>0.05). Finally, no significant differences were found in suppliance of plural *–s* for definite and indefinite contexts.

8.2.2. Art+N and Art+Adj+N contexts

The second set of results is related to hypothesis (4). The results from the oral and written production tasks were compared for suppliance of *the* and *a* in Art+N and Art+Adj+N constructions (see Appendix D for tables of results). Even if the Japanese L2 learners produce substitution errors the article is still counted as suppliance as the prediction is that they can prosodically represent articles in their ILGs. Substitution errors may be the result of fluctuation between the two settings of the ACP - definiteness and specificity, not due to prosody. The results from the oral task appear in figures 8.1-8.4 below:

Figure 8.1. Intermediate groups' suppliance of *the* in Art+N and Art+Adj+N contexts in the oral task

	Japanese	Spanish	Native
■ the + N	77%	97%	100%
□ the + Adj + N	75%	100%	98%
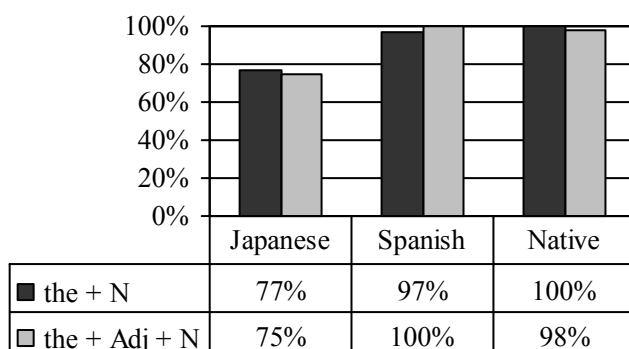
Figure 8.2. Intermediate groups' suppliance of *a* in Art+N and Art+Adj+N contexts in the oral task

	Japanese	Spanish	Native
□ a + N	69%	93%	99%
■ a + Adj + N	41%	88%	100%
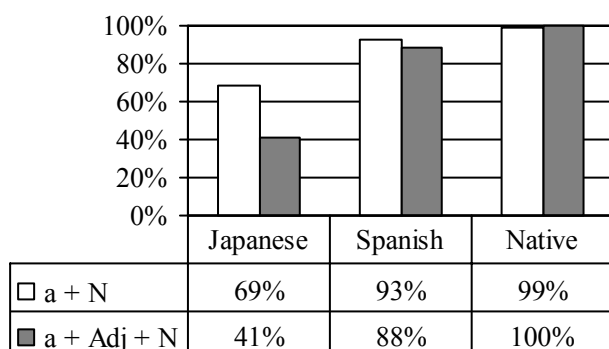
Figure 8.3. Advanced groups' suppliance of *the* in Art+N and Art+Adj+N contexts in the oral task

	Japanese	Spanish	Native
■ the + N	81%	98%	100%
□ the + Adj + N	85%	100%	98%
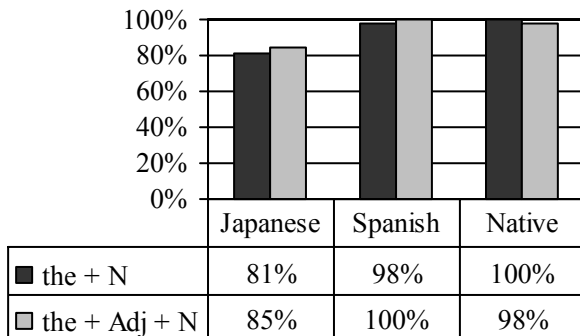
Figure 8.4. Advanced groups' suppliance of *a* in Art+N and Art+Adj+N contexts in the oral task

	Japanese	Spanish	Native
□ a + N	84%	99%	99%
■ a + Adj + N	71%	97%	100%
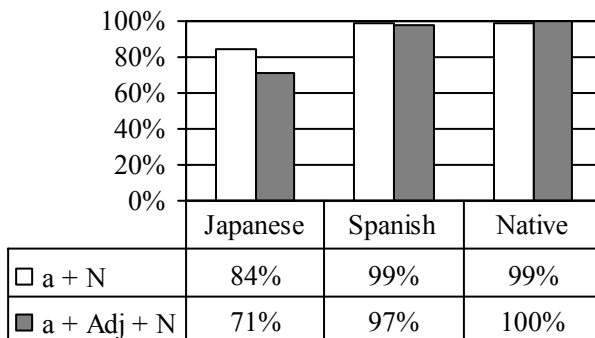
8.2.2.1. Comparison between Japanese groups and native controls

As the Japanese groups continued to omit articles in count singular contexts, between and within-groups comparisons were performed.

Table 8.20. Oral task: results of intermediate Japanese L2 learners' suppliance of articles

	suppliance of definites		suppliance of indefinites	
Art+N	U = 16	z = -4.345***	U = 2	z = -4.782***
Art+Adj+N	U = 63	z = -2.116*	U = 0.0	z = -4.990***

*p < .05   **p < .01   ***p < .001

Table 8.21. Oral task: results of advanced Japanese L2 learners' suppliance of articles

	suppliance of definites		suppliance of indefinites	
Art+N	U = 24	z = -4.058***	U = 21	z = -4.057***
Art+Adj+N	U = 78	z = -1.378	U = 7.5	z = -4.729***

*p < .05   **p < .01   ***p < .001

The results from Mann-Whitney tests reveal that the Japanese L2 learners from both proficiency groups perform significantly differently to the native controls in Art+N and Art+Adj+N contexts. The advanced Japanese group are better at supplying definites in Art+Adj+N contexts.

8.2.2.2. Comparison within Japanese groups

Table 8.22. Oral task: results of intermediate Japanese L2 learners within-group comparisons

	suppliance of definites	suppliance of indefinites
Art+N x Art+Adj+N	z = -1.274	z = -3.010**
	Art+N	Art+Adj+N
definite x indefinite	z = -1.022	z = -2.433*

*p < .05   **p < .01   ***p < .001

Table 8.23. Oral task: results of advanced Japanese L2 learners within-group comparisons

	suppliance of definites	suppliance of indefinites
Art+N x Art+Adj+N	z = -1.726	z = -1.915
	Art+N	Art+Adj+N
definite x indefinite	z = -1.875	z = -1.728

*p < .05   **p < .01   ***p < .001

The results from the Wilcoxon Signed-Ranks tests reveal that the intermediate Japanese group continue to omit indefinites in Art+Adj+N contexts, but the advanced Japanese group do not.

8.2.3.   Summary of results from experiment 3

The results presented in section 8.2.1 were from all the definite and indefinite contexts in the story re-call task. Overall, there were more omission errors than substitution errors produced by the Japanese speakers in both intermediate and advanced proficiency groups. The substitution errors that occurred in the indefinite singular context were mainly produced by two participants in the advanced Japanese group (see Appendix E). Omission of definites in singular, plural and mass contexts decreased at advanced levels of English, but omission of plural –*s* in definite contexts continued. Omission of indefinite *a* also decreased at advanced proficiency levels, but omission of plural –*s* in indefinite plural contexts persisted.

The results presented in section 8.2.2 were from Art+N and Art+Adj+N contexts. Hypothesis (4) predicted that there would be no asymmetry as it was argued in chapter 5, section 5.1.5 that the Japanese L2 learners have L1 prosodic structures available in order to accommodate articles in Art+N and Art+Adj+N contexts.

8.3.   Experiment 4: Story re-call (written version)

8.3.1. Hypothesis

Hypothesis (3) outlined in section 8.1.1 was also tested in a story re-call task where subjects were asked to write their responses. For convenience it is repeated below:

H[3]   Japanese intermediate and advanced L2 learners should produce more underspecification errors than feature clash errors (prediction of the MUH). The intermediate and advanced Spanish L2 learners are predicted not to produce underspecification errors.

8.3.2. Method

8.3.2.1. The participants

All participants are currently postgraduate students at the University of Essex. Most of the participants who took part in the written story re-call had participated in the oral version several months earlier (see Appendix A for profiles of the L2 learners).

Table 8.24. The participants in the written production task

	L1 Japanese	L1 Spanish	L1 Japanese	L1 Spanish
Proficiency level	Intermediate	Intermediate	Advanced	Advanced
Number of participants	7	6	5	7
Age range	21 – 34 (mean = 25.5)	24 – 29 (mean = 26)	30 – 33 (mean = 31)	22 – 40 (mean = 29)
Age range of first exposure	5 – 13 (mean = 11.5)	7 – 18 (mean = 12)	11 – 12 (mean = 11.5)	4 – 12 (mean = 9)
Length of stay in English speaking countries (months)	4 – 21 (mean = 12)	2 – 60 (mean = 15)	2 – 84 (mean = 43)	9 – 36 (mean = 19)

8.3.2.2. The story re-call task: written version

The task was a written production task. The same thirteen stories as used in the oral production task were used for this task. The participants were asked to read the thirteen short stories. Each story was presented twice and prompts were given to the participants to assist them in the re-call of the story. Once they had read one story twice they were then asked to re-call the story in writing, using the prompts in the order they appeared on the PowerPoint slide. The task was not timed.

8.3.2.3. Coding procedure

The same coding procedure was used as in the oral production task (see section 8.1.2.3 above).

8.4.   Results of experiment 4

8.4.1. Definite and indefinite contexts

Table 8.25. Suppliance of articles in definite count singular contexts in the written task

Groups	definite singular		
	the	*a/an	*Ø
Intermediate Japanese L2 English (*n*=7)	114/142 (80.3%)	10/142 (7%)	**18/142 (12.7%)**
Advanced Japanese L2 English (*n*=5)	96/109 (88.1%)	3109/ (2.8%)	**10/109 (9.2%)**
Intermediate Spanish L2 English (*n*=6)	136/138 (98.6%)	0/138 (0%)	2/138 (1.4%)
Advanced Spanish L2 English (*n*=7)	159/160 (99.4%)	0/160 (0%)	1/160 (6%)
Native controls (*n*=5)	126/127 (99.2%)	0/127 (0%)	1/127 (0.8%)

Table 8.26. Suppliance of articles in definite count plural contexts in the written task

Groups	definite plural			
	the	*a/an	*Ø	-s
Intermediate Japanese L2 English (*n*=7)	29/32 (90.6%)	0/32 (0%)	**3/32 (9.4%)**	27/32 (84.3%)
Advanced Japanese L2 English (*n*=5)	21/24 (87.5%)	0/24 (0%)	**3/24 (12.5%)**	20/24 (83.3%)
Intermediate Spanish L2 English (*n*=6)	31/32 (96.9%)	0/32 (0%)	1/32 (3.1%)	26/32 (81.2%)
Advanced Spanish L2 English (*n*=7)	43/43 (100%)	0/43 (0%)	0/43 (0%)	37/43 (86%)
Native controls (*n*=5)	29/31 (93.5%)	0/31 (0%)	2/31 (6.5%)	29/31 (93.5%)

Table 8.27. Suppliance of articles in definite mass contexts in the written task

Groups	definite mass		
	the	*a/an	*Ø
Intermediate Japanese L2 English (*n*=7)	35/39 (89.7%)	0/39 (0%)	**4/39 (10.3%)**
Advanced Japanese L2 English (*n*=5)	24/27 (88.9%)	0/27 (0%)	**3/27 (11.1%)**
Intermediate Spanish L2 English (*n*=6)	28/28 (100%)	0/28 (0%)	0/28 (0%)
Advanced Spanish L2 English (*n*=7)	38/38 (100%)	0/38 (0%)	0/38 (0%)
Native controls (*n*=5)	25/25 (100%)	0/25 (0%)	0/25 (0%)

Table 8.28. Suppliance of articles in indefinite count singular contexts in the written task

Groups	indefinite singular		
	*the	a/an	*Ø
Intermediate Japanese L2 English (*n*=7)	2/184 (1.1%)	154/184 (83.7%)	**28/184 (15.2%)**
Advanced Japanese L2 English (*n*=5)	2/148 (1.4%)	139/148 (93.9%)	**7/148 (4.7%)**
Intermediate Spanish L2 English (*n*=6)	2/141 (1.4%)	135/141 (95.7%)	4/141 (2.8%)
Advanced Spanish L2 English (*n*=7)	0/171 (0%)	170/171 (99.4%)	1/171 (6%)
Native controls (*n*=5)	0/118 (0%)	118/118 (100%)	0/118 (0%)

Table 8.29. Suppliance of articles in indefinite count plural contexts in the written task

Groups	indefinite plural			
	*the	*a/an	Ø	-s
Intermediate Japanese L2 English (*n*=7)	4/69 (5.8%)	5/69 (7.2%)	**60/69 (87%)**	55/69 (79.7%)
Advanced Japanese L2 English (*n*=5)	1/49 (2%)	1/49 (2%)	47/49 (96%)	44/49 (89.8%)
Intermediate Spanish L2 English (*n*=6)	3/50 (6%)	2/50 (4%)	45/50 (90%)	44/50 (88%)
Advanced Spanish L2 English (*n*=7)	1/70 (1.4%)	0/70 (0%)	69/70 (98.6%)	67/70 (95.7%)
Native controls (*n*=5)	1/52 (1.9%)	0/52 (0%)	51/52 (98.1%)	51/52 (98%)

Table 8.30. Suppliance of articles in indefinite mass contexts in the written task

Groups	indefinite mass		
	*the	*a/an	Ø
Intermediate Japanese L2 English (*n*=7)	1/76 (1.3%)	0/76 (0%)	75/76 (98.7%)
Advanced Japanese L2 English (*n*=5)	0/55 (0%)	1/55 (1.8%)	54/55 (98.2%)
Intermediate Spanish L2 English (*n*=6)	5/64 (7.8%)	2/64 (3.1%)	**57/64 (89.1%)**
Advanced Spanish L2 English (*n*=7)	4/80 (5%)	0/80 (0%)	76/80 (95%)
Native controls (*n*=5)	0/53 (0%)	0/53 (0%)	53/53 (100%)

8.4.1.1. Comparison between intermediate groups

Once again comparisons were made between the L2 Japanese and Spanish groups and the native controls. It was predicted in hypothesis (3) that the Japanese would produce more underspecification errors than the Spanish. Since sample size was small, and the data were not normally distributed, a Kruskal-Wallis non-parametric test was performed. A significant difference was found between the three groups in suppliance of definites in the definite singular context (χ^2 of 7.606, df=2, p<0.05), but no significant differences were found in the definite plural and definite mass contexts. Significant differences were found across the three groups in suppliance of indefinites in indefinite singular contexts (χ^2 of 8.172, df=2, p<0.05) and in indefinite mass contexts (χ^2 of 9.626, df=2, p<0.05), but no significant difference was found in the indefinite plural context. No significant differences were found in suppliance of plural –*s* in definite and indefinite contexts. In order to compare each L2 group with the native controls Mann-Whitney non-parametric tests were conducted.

Table 8.31. Written task: results of intermediate Japanese L2 learners use of definites

	use of *the*	
definite singular	U = 3.0	z = -2.442*

*p < .05   **p < .01   ***p < .001

Table 8.32. Written task: results of intermediate Japanese L2 learners use of indefinites

	use of *a*		use of Ø	
indefinite singular	U = 0.0	z = -2.947**		
indefinite mass			U = 15	z = -.845

*p < .05   **p < .01   ***p < .001

Table 8.33. Written task: results of intermediate Spanish L2 learners use of definites

	use of *the*	
definite singular	U = 7	z = -1.593

*p < .05   **p < .01   ***p < .001

Table 8.34. Written task: results of intermediate Spanish L2 learners use of indefinites

	use of *a*		use of Ø	
indefinite singular	U = 5.0	z = -2.115*		
indefinite mass			U = 2.5	z = -2.489*

*p < .05   **p < .01   ***p < .001

The results from the Wilcoxon Signed-Ranks tests reveal that there are significant differences for both groups compared to the native controls. The Japanese group performed better in indefinite mass contexts and the Spanish performed better in the definite singular contexts. Both groups have difficulty with indefinite singular contexts.

8.4.1.2. Comparison within intermediate groups

The Wilcoxon Signed-Ranks test was used to perform within-group comparisons. There was no significant difference in suppliance of definites across the three contexts singular, plural and mass for either L2 group. No significant difference was found within either group for substitution of *the* for *a* or *the* for *Ø*. Both groups performed equally across all indefinite contexts. No significant differences were found in either group in suppliance of definites and indefinites in obligatory singular contexts. Finally, no significant differences were found in either group in suppliance of plural *–s* in definite and indefinite plural contexts.

8.4.1.3. Comparison between advanced groups

Since sample size was small, and the data were not normally distributed, a Kruskal-Wallis non-parametric test was performed. A significant difference was found between the three groups in suppliance of definites in the definite mass contexts (χ^2 of 8.137, df=2, p<0.05 for definite mass), but no significant difference was found in definite singular or plural contexts. No significant differences were found in the indefinite contexts in suppliance of indefinites or between suppliance of plural *–s* in definite and indefinite plural contexts. In order to compare each L2 group with the native controls Mann-Whitney tests were conducted.

Table 8.35. Written task: results of advanced Japanese L2 learners use of definites

	use of *the*	
definite mass	U = 5	z = -1.928

*p < .05   **p < .01   ***p < .001

Table 8.36. Written task: results of advanced Spanish L2 learners use of definites

	use of *the*	
definite mass	U = 17.5	z = 0.0

*p < .05   **p < .01   ***p < .001

The results from the Mann-Whitney tests reveal that both groups are not significantly different to the native controls, as the comparison between the Japanese group and the native controls was just above significance (p= 0.054).

8.4.1.4. Comparison within advanced groups

The Wilcoxon Signed-Ranks test was used to perform within-group comparisons. No significant differences were found within either group for suppliance of definites in obligatory contexts or substitution of definites in indefinite contexts. No significant differences were found within either group in suppliance of definite *the* and indefinite *a* in singular contexts. Finally, no significant differences were found within either group in suppliance of plural –*s* in definite and indefinite plural contexts.

8.4.2. Summary of results from experiment 4

Overall, the Japanese groups' suppliance of articles and plural –*s* in obligatory contexts was high in the written story re-call task. In the definite and indefinite contexts omission of articles still persists with the Japanese intermediate group performing significantly differently to the native control group. However, around half the omission errors produced by the intermediate Japanese group in indefinite singular contexts are attributable to one participant (see Appendix

E). In all other contexts the intermediate Japanese group performed like the native control group.

8.5.   Discussion

The results from the oral and written story re-call tasks support the claim that the Japanese L2 learners can reset the NMP to the English setting. The difficulty for the Japanese speakers is not the count – mass distinction but the suppliance of inflectional morphology in obligatory contexts. The Japanese groups produced more omissions than the Spanish groups. Substitution errors do occur but generally there are far fewer than omission errors. These findings are consistent with findings from other L2 studies involving production tasks (see chapter 4; Robertson 2000, White 2003, Lardiere 2005, Athanasopoulos 2005, Hawkins *et al* in progress). The omission errors found in the oral production task are not attributable to prosodic transfer (Goad & White 2004), as Japanese has prosodic structures available to accommodate articles.

The first hypothesis in this chapter to be tested was (3), repeated below:

H[3]   Japanese L2 learners should produce more underspecification errors than feature clash errors (prediction of the MUH). The Spanish L2 learners are predicted not to produce underspecification errors.

Hypothesis (3) is supported as the Japanese L2 learners' performance on the oral task revealed that omission errors rather than substitution errors were more likely to occur. Feature clash stops the wrong form from being inserted. For example, since [+definite] clashes with [-definite], an indefinite article specified for the feature [-definite] will never be selected for insertion into a terminal node with the feature [+definite]. The difference between native

speakers and the Japanese L2 learners is that in the process of inserting lexical items into syntactic nodes something 'blocks' the Japanese speakers' ability to access the most specified form compatible with the syntactic node, and leads to them producing Ø in obligatory definite or indefinite singular and definite plural contexts like *He bought *book* (singular), *He bought the *book* (plural). As expected, the Japanese L2 learners infrequently inserted *the* in [-definite] contexts;[6] *a* is rarely inserted in [+definite] or [-singular] contexts; Ø is only inserted as a default form (the *elsewhere* form) as it is underspecified for [α definite, α number].

An asymmetry was found between definite and indefinite singular contexts as omission errors tended to be higher in indefinite singular contexts. One possible account for greater accuracy in supplying definites is that "in order to produce a definite article……….learners need to monitor for the identifiability status of the referent only" (Trenkic in press: 37). Suppliance of plural −*s* continued to be a problem for both Japanese proficiency groups. Substitution errors in indefinite mass contexts of *a* for Ø do not support hypothesis (3) as it is not expected that Japanese speakers will treat mass nouns as shortened measure phrases and supply an indefinite article.

The Japanese groups tended to perform better overall in suppliance of articles in the written production task (see Appendix E for results). One reason for higher suppliance of articles in written production may be due to the distinction between 'acquired' and 'learnt' knowledge. Krashen & Terrell (1983) proposed the Acquisition-Learning Hypothesis which claims that adults can develop competence in second languages either by 'language acquisition' which they term as using language for real communication whereas 'language learning' is explicit knowledge of rules and being able to apply those rules. The written task allows the Japanese L2 learners to take more care by monitoring their own performance.

---

[6] Substitution errors of *the* for *a* could be the result of fluctuation between definiteness and specificity rather than feature clash errors. Ionin's (2003a) Fluctuation Hypothesis is discussed in chapter 9.

H[4]   There will be no difference in suppliance of articles in Art+N contexts and Art+Adj+N contexts if Japanese L2 learners can prosodically represent articles in their ILGs. The Spanish L2 learners are predicted to supply articles as the prosodic representation for articles is the same as English.

Hypothesis (4) was not supported as there is an asymmetry in the suppliance of articles. The intermediate Japanese group were better in supplying definites in both Art+N and Art+Adj+N contexts but a significant difference was found in suppliance of indefinites in Art+N and Art+Adj+N contexts (see section 8.2.2.2). Japanese is a language without articles but there are noun prefixes (Poser 1990) and demonstratives in Japanese. This allows L2 learners of English to use target or non-target like structures from the L1 to accommodate the L2 prosodic structure. Though there is less omission in the written production task, it does occur. If it is not prosodic transfer, why is there omission? I suggest that for all contexts the difficulty lies in 're-mapping' of semantic functions available in the L1 to forms in the L2 (Lardiere 2005). If the Japanese L2 learners cannot access the correct form (the/a) then the default form Ø will be inserted. This occurs more often in spoken production rather than written production possibly due to processing constraints. The indefinite article may be problematic for L2 learners from article-less languages because controlling for the definiteness status of the referent, the L2 learner would also need to control for the noun i.e. whether it is a countable or uncountable noun.[7] The Art+Adj+N contexts remain problematic for a 're-mapping' account as there was more omission in these contexts. This may be due to the pre-modifying adjective. As the adjective modifies the noun, the Japanese L2 learner may be confused, as to the status of the noun.

---

[7] Trenkic (in press) suggests that omissions of the indefinite article are more likely to be a result of considerations such as countability and number.

8.6.   Summary of chapter 8

The results support hypotheses (3) and but do not support (4). The Japanese speakers produced substitution errors but there were far more omission errors. It was argued that the Prosodic Transfer Hypothesis does not apply to Japanese as the L2 learners have prosodic structures available from the L1 which can accommodate articles. However, part of the omission in Art+Adj+N constructions may be related to prosodic transfer as it is not clear what structure is available to the L2 learners (see chapter 5 for discussion). Omissions of articles in the written task are not likely to be the result of prosody. I argued that though the Japanese groups continued to omit articles and plural –*s*, the L2 learners had reset the NMP. Omissions could be the result of a mapping problem or a representational deficit i.e. unable to acquire uninterpretable noun features.

The experiment in chapter 9 tests the L2 learners' use of articles in forced choice elicitation tasks to find out whether substitution errors of *the* for *a* and *a* for *the* are the result of failing to set the Article Choice Parameter, which leads to fluctuation between the two settings definiteness and specificity.

Chapter 9

Experiment 5: - forced choice elicitation tasks: definiteness and specificity

9.0 Introduction

This chapter presents the final experiment of five in total. Experiment five tests whether L2 learners fluctuate between the two settings (definiteness and specificity) of the Article Choice Parameter. Ionin *et al* (2004) have claimed that languages with a two-article system (like English *the/a*) either use articles to mark definiteness (English) or to mark specificity (Samoan) and that this is a function of a UG-determined 'article choice parameter' (see chapter 4, section 4.7). Ionin *et al* predict that L2 learners from article-less languages fluctuate between definiteness and specificity when they are learning an L2 that has articles. Though fluctuation is predicted the claim is that L2 learners have full access to semantic features of Universal Grammar. When they encounter evidence from an L2 that activates a binary parameter for articles, they will fluctuate between the two values because variation is in the nature of L2 acquisition. Positive evidence from the L2 might lead them to identify definiteness as the right value of the ACP, but there should be no scenario under which they would opt for the specificity value. However, it is not clear whether all L2 learners go through a temporary stage of development in article choice as Ionin *et al* claim (a developmental problem) or whether L2 learners can select the correct parameter value for English.

The experiment discussed in this chapter differs to Ionin *et al* because one group of L2 learners is Japanese (a language without an article system) and the other group of L2 learners is Spanish (a language with an article system). It is assumed that the Japanese L2 learners, like Ionin *et al*'s Russian and Korean L2 learners, may adopt a parameter setting that is not

instantiated in their L1 or the L2 i.e. Samoan owing to the absence of L1 transfer effects. It is predicted that the Spanish L2 learners will behave differently to the Japanese L2 learners because of L1 properties. The Spanish L2 learners will not fluctuate between the features [+definite] and [+specific] because Spanish, like English, has morphological markers (articles) to encode [±definite]. The prediction for the Japanese L2 learners is that errors will be found in article use reflecting feature specifications or parameter settings that are allowed by UG, but are inappropriate for English. I will argue that definiteness is grammaticalized in English and the continuing difficulty with article choice is not related to parameter setting but rather reassembling features available in the L1 to forms in the L2. There are different accounts of specificity which are given in the literature. Discourse specificity is discussed by Avrutin (1999) and von Heusinger (2001) who claim that specificity is defined as a referential anchor thus allowing an NP to be specific if its index can refer back to an already established index within the current sentence of discourse. However, I will continue to work with Ionin *et al*'s (2004) definition of specificity as outlined in chapter 2, section 2.4.1 of 'speaker intent to refer to a referent that is considered by the speaker as having some noteworthy property' as the forced choice elicitation task was designed to test Ionin *et al*'s (2004) definition.

9.1.   Experiment 5

9.1.1. Hypotheses and predictions

Hypotheses (1) to (4) were tested in the previous three chapters. The following hypotheses (5) and (6) were formulated in order to test the Fluctuation Hypothesis:

H[5]   Japanese L2 learners will tend to fluctuate between definiteness and specificity

and use *a* and *Ø* in definite non-specific singular and plural contexts respectively

and *the* in indefinite specific singular and plural contexts as they fail to set the

Article Choice Parameter and associate *a* and *Ø* as [-specific] markers and *the* as

a [+specific] marker.

H[6]   Spanish L2 learners will not fluctuate between definiteness and specificity in the

use of articles because Spanish has definiteness-marking articles.

It is predicted that Japanese L2 learners will overuse *the* in all indefinite specific singular and

plural contexts, overuse *a* in definite non-specific singular contexts and overuse *Ø* (= no article)

in definite non-specific plural contexts, whereas the Spanish L2 learners will not. The

prediction that the Japanese L2 learners fluctuate between the settings definiteness and

specificity is illustrated in tables 9.1 and 9.2:

Table 9.1. Predictions for article choice in Japanese L2 English: singular contexts

	[+definite] target 'the'	[-definite] target 'a'
[+specific]	correct use of *the*	**overuse of *the***
[-specific]	**overuse of *a***	correct use of *a*

Table 9.2. Predictions for article choice in Japanese L2 English: plural contexts

	[+definite] target 'the'	[-definite] target 'Ø'
[+specific]	correct use of *the*	**overuse of *the***
[-specific]	**overuse of *Ø***	correct use of *Ø*

(adapted from Ionin *et al* 2004)

9.1.2. Method

9.1.2.1   The participants

All participants were placed into intermediate or advanced groups according to their scores on the OQPT (see Appendix A). Most of the participants had also taken part in experiment (1) the count – mass grammaticality judgement task.

Table 9.3. Participants in the forced choice elicitation task: (1)

	L1 Japanese	L1 Spanish	L1 Japanese	L1 Spanish
Proficiency level	Intermediate	Intermediate	Advanced	Advanced
Number of participants	15	15	15	15
Age range	21 – 34 (mean = 27)	21 – 40 (mean = 27)	22 – 44 (mean = 30)	22 – 40 (mean = 29)
Age range of first exposure	5 – 13 (mean = 12)	3 – 34 (mean = 12)	3 – 13 (mean = 11)	4 – 16 (mean = 10)
Length of stay in English speaking countries (months)	0 – 21 (mean = 6)	2 – 60 (mean = 16)	0 – 96 (mean = 31)	0 – 36 (mean = 16)

9.1.2.2. The forced choice elicitation task: (1)

The [+definite, +specific], [-definite, +specific] and [-definite, -specific] contexts used in the task were based on Ionin & Wexler's (2003) definite anaphoric, referential and non-referential contexts. RC-modification was employed to force a [-definite, +specific] reading for singular

and plural contexts.[1] The [+definite, -specific] readings were based on the larger situational use of the definite article because the speaker does not have intent to refer to some noteworthy property; therefore the contexts can be interpreted as [-specific], as in (3) and (4) below whereas in (1) and (2) below the anaphoric use is obligatorily [+specific] as either the speaker has a referent in mind which has a noteworthy property and/or the speaker refers to what was previously mentioned within the discourse (a specific object or person). The aim was to test article choice in various definite and indefinite singular and plural contexts, looking specifically at definiteness and specificity. In total, there were eight items for each context. Four items for each singular context and four items for each plural context appeared randomly throughout the forced choice elicitation task (see chapter 7). Examples of the types of contexts are below with the correct article choice underlined:

(1)   [+definite, +specific] singular

A: Could I have some water, please?
B: Sure, I'll bring you another glass.
A: Just use _____ glass I had wine in.

Ø   *an*   *a*   <u>*the*</u>

(2)   [+definite, +specific] plural

A: Hi, Jimmy! How was school?
B: We had two chemistry tests.
A: Did you find _____ tests difficult?

an   Ø   <u>*the*</u>   *a*

---

[1] Ionin & Wexler (2003) used RC-modification for singular contexts in their elicitation study based on Fodor & Sag's (1982) analysis of indefinites.

(3)   [+definite, -specific] singular[2]

A: Are you interested in our internship programme?
B: Yes, I would like to work in your Colchester bank.
A: OK, then, I will contact ____ branch manager for you.

the   *Ø*   *an*   *a*

(4)   [+definite, -specific] plural[3]

A: I like studying in my university library.
B: Is their collection good?
A: Yes, I found ____ psychology books very useful.

Ø   *an*   *a*   *the*

(5)   [-definite, +specific] singular

A: Kylie went to Tim's party.
B: Did she have fun?
A: She met ____ man who I knew at school.

an   *Ø*   *the*   *a*

(6)   [-definite, +specific] plural

A: I'm not going to Tom's party.
B: Why not?
A: He always invites ____ people who I don't like.

an   *the*   *Ø*   *a*

(7)   [-definite, -specific] singular

A: Rose is happy.
B: Why?
A: She got ____ car for her birthday. I wonder what it looks like?

an   *a*   *the*   *Ø*

---

[2] I have marked the referent in (3) as [-specific] as there is no previous mention or noteworthy property i.e. speaker A has not mentioned the branch manager before or a noteworthy property (see discussion in chapter 7, section 7.4).
[3] A suggestion by Danijela Trenkic is that the dialogue in (4) could be classified as [+specific] as there is the noteworthy property of the books being 'very useful'. As discussed later in this chapter the problem with supplying the article 'the' may be related to the pragmatic use of the article and not one of fluctuation between definiteness and specificity.

(8)   [-definite, -specific] plural

A: Julian has been buying things again.
B: What did he get this time?
A: Apparently he bought _____ skis for his skiing holiday, but I haven't seen them yet.

Ø   *an*   *a*   *the*

(see Appendix B for all the forced choice elicitation task dialogues)

9.1.2.3. Procedure

The task was administered directly after the count – mass grammaticality judgement task (see chapter 7, section 7.2.2.3). Written instructions for completion of the task were given and once each participant had read the instructions the researcher then asked each of them if they had clearly understood what they were being asked to do.

9.2.   Results of experiment 5

An item analysis was conducted before coding the data. One item from [-definite, +specific] singular contexts proved to be problematic for the Japanese speakers;

(9)   [-definite, +specific] singular

A: Excuse me.
B: How can I help?
A: I would like to buy ____ CD that I have been trying to find for ages.

an   *Ø*   *the*   *a̲*

Ionin (2005) suggests that "mutual knowledge is unlikely, but still marginally possible: e.g., the speaker could say "I would like to buy *the* CD that I've been trying to find for ages" - and use

'the' felicitously, assuming the hearer's ability to accommodate mutual knowledge". Some overuse of *the* for the dialogue in (9) was found in the native control group and the Spanish groups, but very little. This item was not excluded from the final analysis as it seems only a few of the Japanese participants had problems with this item.

Two items in (10) and (11) orginally classified as [-specific] do not appear to be [-specific] but rather [+definite, +specific]:

(10) [+definite, +specific] singular

A. He has been nominated as best director for his recent film.
B. Does he deserve it?
A. Yes, movie critics rated _____ script very highly.

an   *Ø*   *the*   *a*

(11) [+definite, +specific] plural

A. I went to watch our local football team last week.
B. It was disappointing, wasn't it?
A. Yes, bad weather affected _____ players.

Ø   *an*   *a*   *the*

Though (10) and (11) were included in the analysis of results, one possible explanation for the high accuracy rate in suppliance of *the* is because the context is not the larger situational use of the definite article, but rather the associative anaphoric (requires general or specific knowledge) use (see chapter 7 for discussion). It seems more likely that in (10) there is a specific script related to the previously mentioned movie and in (11) there is a specific group of players to form a local football team.

The final item which seemed to be problematic only for the Japanese speakers is the following in (12):

(12)   [+definite, +specific] singular

A: Come on! We've been in this shop for hours.
B: I can't make up my mind. Which shirt do you like best?
C: I prefer ____ shirt with stripes.

the   Ø   *an*   *a*

Some of the Japanese participants selected *a* instead of *the*. It seems as though both options are

felicitous, but the Spanish speakers and native controls only selected the definite article. Item

(12) was included in the final analysis of results as only a few participants selected the

indefinite article.

The results of the forced choice elicitation task are presented in tables 9.4 to 9.7 below.

Table 9.4. Intermediate groups' *the* and *a* responses in definite and indefinite singular contexts

Intermediate Japanese L2 learners (*n*=15)	[+definite, +singular]			[-definite, +singular]		
	the	*a	*Ø	*the	a	*Ø
[+specific]	55/60 91.7%	4/60 6.7%	1/60 1.6%	**21/60 35%**	38/60 63.3%	1/60 1.7%
[-specific]	43/60 71.7%	**14/60 23.3%**	3/60 5%	3/60 5%	57/60 95%	0/60 0%
Intermediate Spanish L2 learners (*n*=15)						
[+specific]	56/60 93.3%	3/60 5%	1/60 1.7%	5/60 8.3%	54/60 90%	1/60 1.7%
[-specific]	53/60 88.3%	4/60 6.7%	3/60 5%	2/60 3.3%	58/60 96.7%	0/60 0%
Native controls (*n*=15)						
[+specific]	60/60 100%	0/60 0%	0/60 0%	3/60 5%	57/60 95%	0/60 0%
[-specific]	59/60 98.3%	0/60 0%	1/60 1.7%	1/60 1.7%	59/60 98.3%	0/60 0%

Table 9.5. Intermediate groups' *the* and Ø responses in definite and indefinite plural contexts

Intermediate Japanese L2 learners (*n*=15)	[+definite, +plural]			[-definite, +plural]		
	the	*a	*Ø	*the	*a	Ø
[+specific]	53/60 88.3%	1/60 1.7%	6/60 10%	**19/60 31.7%**	0/60 0%	41/60 68.3%
[-specific]	36/60 60%	1/60 1.7%	**23/60 38.3%**	6/60 10%	1/60 1.7%	53/60 88.3%
Intermediate Spanish L2 learners (*n*=15)						
[+specific]	54/60 90%	0/60 0%	6/60 10%	6/60 10%	0/60 0%	54/60 90%
[-specific]	41/60 68.3%	6/60 10%	**13/60 21.7%**	11/60 18.3%	0/60 0%	49/60 81.7%
Native controls (*n*=15)						
[+specific]	58/60 96.7%	0/60 0%	2/60 3.3%	3/60 5%	0/60 0%	57/60 95%
[-specific]	59/60 98.3%	0/60 0%	1/60 1.7%	6/60 10%	0/60 0%	54/60 90%

Table 9.6. Advanced groups' *the* and *a* responses in definite and indefinite singular contexts

Advanced Japanese L2 learners (*n*=15)	[+definite, +singular]			[-definite, +singular]		
	the	*a	*Ø	*the	a	*Ø
[+specific]	54/60 90%	5/60 8.3%	1/60 1.7%	**12/60 20%**	47/60 78.3%	1/60 1.7%
[-specific]	53/60 88.3%	**6/60 10%**	1/60 1.7%	1/60 1.7%	59/60 98.3%	0/60 0%
Advanced Spanish L2 learners (*n*=15)						
[+specific]	58/60 96.7%	2/60 3.3%	0/60 0%	3/60 5%	57/60 95%	0/60 0%
[-specific]	60/60 100%	0/60 0%	0/60 0%	0/60 0%	59/60 98.3%	1/60 1.7%
Native controls (*n*=15)						
[+specific]	60/60 100%	0/60 0%	0/60 0%	3/60 5%	57/60 95%	0/60 0%
[-specific]	59/60 98.3%	0/60 0%	1/60 1.7%	1/60 1.7%	59/60 98.3%	0/60 0%

Table 9.7. Advanced groups' *the* and Ø responses in definite and indefinite plural contexts

Advanced Japanese L2 learners (*n*=15)	[+definite, +plural]			[-definite, +plural]		
	the	*a	*Ø	*the	*a	Ø
[+specific]	59/60 98.3%	0/60 0%	1/60 1.7%	**21/60 35%**	0/60 0%	39/60 65%
[-specific]	39/60 65%	1/60 1.7%	**20/60 33.3%**	1/60 1.7%	0/60 0%	59/60 98.3%
Advanced Spanish L2 learners (*n*=15)						
[+specific]	58/60 96.7%	0/60 0%	2/60 3.3%	6/60 10%	0/60 0%	54/60 90%
[-specific]	47/60 78.4%	5/60 8.3%	**8/60 13.3%**	3/60 5%	0/60 0%	57/60 95%
Native controls (*n*=15)						
[+specific]	58/60 96.7%	0/60 0%	2/60 3.3%	3/60 5%	0/60 0%	57/60 95%
[-specific]	59/60 98.3%	0/60 0%	1/60 1.7%	6/60 10%	0/60 0%	54/60 90%

The results in tables 9.4-9.7 show as predicted that the intermediate and advanced Japanese L2 learners are fluctuating between definiteness and specificity in singular and plural contexts whereas the intermediate and advanced Spanish L2 learners are not. The intermediate Spanish group seem to have difficulty with [+definite, -specific] plural contexts and overuse Ø (21.7%), but at advanced levels they improve and overuse Ø less (13.3%) than the advanced Japanese group (33.3%).[4]

9.2.1. Effects of definiteness and specificity

The prediction is that the Japanese groups will differ to the native controls and the Spanish groups in article choice. To find out whether hypotheses (5) and (6) are supported a series of

---

[4] See Appendix E for a comparison of individual results.

tests were conducted. To examine the overall pattern, 2 (Language) x 2 (Definiteness and Specificity) repeated measures ANOVAs[5] were performed (with Language as a between-subjects factor and Definiteness and Specificity as a within-subjects factors) on the use of *the* and *a* by category.

9.2.1.1. Comparison between intermediate groups

The results are summarized in tables 9.8 – 9.9.

Table 9.8. Effects of definiteness and specificity in singular contexts for intermediate groups

	Use of *the*	Use of *a*
Intermediate Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 448.9***$	$F_{(1, 28)} = 592.6***$
Specificity	$\mathbf{F_{(1, 28)} = 15.8***}$	$\mathbf{F_{(1, 28)} = 14.313***}$
Definiteness x Specificity	$F_{(1, 28)} = 1.075$	$F_{(1, 28)} = 2.732$
Intermediate Spanish L2 learners		
Definiteness	$F_{(1, 28)} = 1584.7***$	$F_{(1, 28)} = 2177.6***$
Specificity	$F_{(1, 28)} = 2.362$	$F_{(1, 28)} = 2.399$
Definiteness x Specificity	$F_{(1, 28)} = 0.085$	$F_{(1, 28)} = 2.869$

*p <.05 **p <.01 ***p <.001

---

[5] Two separate repeated measures ANOVAS were conducted, one for each L2 group. The two languages as the between-subjects factor were the native controls and the Japanese group and the native controls and the Spanish group.

Table 9.9. Effects of definiteness and specificity in plural contexts for intermediate groups

	Use of *the*	Use of Ø
Intermediate Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 348.05$***	$F_{(1, 28)} = 341.70$***
Specificity	$\mathbf{F_{(1, 28)} = 12.894}$***	$\mathbf{F_{(1, 28)} = 12.187}$**
Definiteness x Specificity	$F_{(1, 28)} = 1.029$	$F_{(1, 28)} = 1.472$
Intermediate Spanish L2 learners		
Definiteness	$F_{(1, 28)} = 549.143$***	$F_{(1, 28)} = 688.13$***
Specificity	$F_{(1, 28)} = 0.457$	$F_{(1, 28)} = 0.114$
Definiteness x Specificity	$\mathbf{F_{(1, 28)} = 11.618}$**	$\mathbf{F_{(1, 28)} = 4.558}$*

*p <.05 **p <.01 ***p <.001

The results in tables 9.8 and 9.9 show that definiteness and specificity had significant effects on article use for the intermediate Japanese L2 learners. There is a significant effect of definiteness for both L2 groups since most learners are able to distinguish definites from indefinites (i.e *the* appears in [+definite, +specific] contexts and *a* appears in [-definite, -specific] contexts). However, there is an interaction between definiteness and specificity for the Spanish L2 learners in the plural contexts and this is mainly attributable to the use of Ø in [+definite, -specific] contexts, not *the* in [-definite, +specific] contexts. Independent samples t-tests between the native controls and the L2 groups revealed where the significant differences lie for each L2 group. For the intermediate Japanese group, significant differences were found in the singular contexts in the use of *the* (for the [+definite, -specific] condition t =3.786, p<0.05, and the [-definite, +specific] condition t =-3.286, p<0.05). In the use of *a* significant differences were found in the [+definite, -specific] condition (t =-3.108, p<0.05), the [-definite, +specific] condition (t =3.591, p<0.05) and the [+definite, +specific] condition (t =-2.256, p<0.05).[6] For the intermediate Spanish group a significant difference was found in the use of *the* (t =2.245,

---

[6] Differences found between the native controls and the L2 groups in the use of *the*/*a* are not expected to be found in the [+definite, +specific] and [-definite, -specific] conditions according to the Fluctuation Hypothesis (Ionin *et al* 2004).

p<0.05) and in the use of *a* (t =-2.256, p<0.05) only in the [+definite, -specific] condition. In the plural contexts significant differences were found in the intermediate Japanese group in the use of *the* (for the [+definite, -specific] condition t =5.829, p<0.05 and the [-definite, +specific] condition t =-2.854, p<0.05). In the use of Ø significant differences were found for the [+definite, -specific] condition (t =-5.972, p<0.05) and the [-definite, +specific] condition (t =2.854, p<0.05). For the intermediate Spanish group a significant difference was found in the use of *the* (t =6.200, p<0.05) and in the use of Ø (t =-3.398, p<0.05) only in the [+definite, -specific] condition.

9.2.1.2. Comparison within intermediate groups

Paired-samples t-tests for within-group comparisons were performed to see whether there were differences in accuracy with articles in [+definite, -specific] versus [+definite, +specific] contexts and [-definite, +specific] versus [-definite, -specific] contexts. The results are in tables 9.10 – 9.11:

Table 9.10. Within intermediate group effects of definiteness and specificity in singular contexts

	Use of *the*	Use of *a*
Intermediate Japanese L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)}$ = **-2.703***	$t_{(14)}$ = **2.197***
[-definite, +specific] vs [-definite, -specific]	$t_{(14)}$ = **-3.154****	$t_{(14)}$ = **3.413****
Intermediate Spanish L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)}$ = -0.823	$t_{(14)}$ = 0.435
[-definite, +specific] vs [-definite, -specific]	$t_{(14)}$ = -1.382	$t_{(14)}$ = 1.740

*p <.05 **p <.01 ***p <.001

Table 9.11. Within intermediate group effects of definiteness and specificity in plural contexts

	Use of *the*	Use of *Ø*
Intermediate Japanese L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)} = -4.432$***	$t_{(14)} = 4.795$***
[-definite, +specific] vs [-definite, -specific]	$t_{(14)} = -2.827$**	$t_{(14)} = 2.567$*
Intermediate Spanish L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)} = -4.026$***	$t_{(14)} = 1.825$
[-definite, +specific] vs [-definite, -specific]	$t_{(14)} = 1.234$	$t_{(14)} = -1.234$

*p <.05 **p <.01 ***p <.001

The t-tests reveal that there is a difference for the Japanese group in the use of *the* when the singular context is [-specific] and equally a difference in the use of *a* when the singular context is [+specific]. A similar result was found in the plural contexts. The Spanish group supplied *the* significantly less often in the [+definite, -specific] plural contexts.

9.2.1.3. Comparison between advanced groups

Table 9.12. Effects of definiteness and specificity in singular contexts for advanced groups

	Use of *the*	Use of *a*
Advanced Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 964.565$***	$F_{(1, 28)} = 1212.634$***
Specificity	$F_{(1, 28)} = 7.836$**	$F_{(1, 28)} = 9.783$**
Definiteness x Specificity	$F_{(1, 28)} = 7.916$**	$F_{(1, 28)} = 9.464$*
Advanced Spanish L2 learners		
Definiteness	$F_{(1, 28)} = 4628.750$***	$F_{(1, 28)} = 5785.938$***
Specificity	$F_{(1, 28)} = 1.600$	$F_{(1, 28)} = 0.483$
Definiteness x Specificity	$F_{(1, 28)} = 4.065$	$F_{(1, 28)} = 3.150$

*p <.05 **p <.01 ***p <.001

Table 9.13. Effects of definiteness and specificity in plural contexts for advanced groups

	Use of *the*	Use of *Ø*
Advanced Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 571.065^{***}$	$F_{(1, 28)} = 531.208^{***}$
Specificity	$\mathbf{F_{(1, 28)} = 28.618^{***}}$	$\mathbf{F_{(1, 28)} = 24.570^{***}}$
Definiteness x Specificity	$F_{(1, 28)} = 0.126$	$F_{(1, 28)} = 0.033$
Advanced Spanish L2 learners		
Definiteness	$F_{(1, 28)} = 1294.720^{***}$	$F_{(1, 28)} = 1095.025^{***}$
Specificity	$F_{(1, 28)} = 2.602$	$F_{(1, 28)} = 0.639$
Definiteness x Specificity	$F_{(1, 28)} = 3.665$	$F_{(1, 28)} = 1.054$

$^*p < .05$ $^{**}p < .01$ $^{***}p < .001$

The results in tables 9.12 and 9.13 show that definiteness and specificity had significant effects on article use for the advanced Japanese L2 learners. No interaction between definiteness and specificity was found for the advanced Spanish L2 learners. Independent samples t-tests reveal that there is an interaction between definiteness and specificity for the Japanese L2 learners. For the advanced Japanese group in singular contexts significant differences were found in the [-definite, +specific] condition (t =-2.931, p<0.05) and the [+definite, +specific] condition (t =2.449, p<0.05) in the use of *the*. Significant differences were found in the same conditions for the use of *a* (in the [-definite, +specific] condition t =3.035, p<0.05 and the [+definite, +specific] condition t =-2.646, p<0.05). No significant differences were found in the advanced Spanish group. In the plural contexts significant differences were revealed between the advanced Japanese group and the native controls for the use of *the* in the [+definite, -specific] and [-definite, +specific] conditions (t =5.458, p<0.05 and t =-3.888, p<0.05). For the use of *Ø* significant differences were found in the same conditions (t =-4.860, p<0.05 and t =3.888, p<0.05). For the advanced Spanish group a significant difference was found in the use of *the* and *Ø* in the [+definite, -specific] condition (t =4.490, p<0.05 for *the* and t =-2.619, p<0.05 for *Ø*).

9.2.1.4. Comparison within advanced groups

Table 9.14. Within advanced group effects of definiteness and specificity in singular contexts

	Use of *the*	Use of *a*
Advanced Japanese L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)}$ = -0. 323	$t_{(14)}$ = 0.323
[-definite, +specific] vs [-definite, -specific]	**$t_{(14)}$ = -4.036*****	**$t_{(14)}$ = 4.583*****
Advanced Spanish L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)}$ = 1.468	$t_{(14)}$ = -1.468
[-definite, +specific] vs [-definite, -specific]	$t_{(14)}$ = -1.871	$t_{(14)}$ = 1.000

*p <.05 **p <.01 ***p <.001

Table 9.15. Within advanced group effects of definiteness and specificity in plural contexts

	Use of *the*	Use of *Ø*
Advanced Japanese L2 learners		
[+definite, -specific] vs [+definite, +specific]	**$t_{(14)}$ = -5.739*****	**$t_{(14)}$ = 5.104*****
[-definite, +specific] vs [-definite, -specific]	**$t_{(14)}$ = -4.641*****	**$t_{(14)}$ = 4.641*****
Advanced Spanish L2 learners		
[+definite, -specific] vs [+definite, +specific]	$t_{(14)}$ = -3.214**	$t_{(14)}$ = 1.871
[-definite, +specific] vs [-definite, -specific]	$t_{(14)}$ = -0.823	$t_{(14)}$ = 0.823

*p <.05 **p <.01 ***p <.001

The results in tables 9.14 and 9.15 show that the advanced Japanese L2 learners do not fluctuate between *the*/*a* in the [+definite, -specific] singular contexts, but do in the [-definite, +specific] singular contexts. In other words, they still overuse *the* in [-definite, +specific] contexts, but do not overuse *a* in [+definite, -specific] contexts. They continue to fluctuate between definiteness and specificity in the plural contexts with overuse of *the* in [-definite, +specific] contexts and overuse of *Ø* in [+definite, -specific] contexts. The intermediate and advanced Spanish L2 learners only seem to have difficulty with [+definite, -specific] plural contexts.

9.2.1.5. Comparison between proficiency levels

For a comparison between proficiency levels 2 (Proficiency) x 2 (Definiteness and Specificity) repeated measures ANOVAs were performed (with Proficiency as a between-subjects factor and Definiteness and Specificity as a within-subjects factors) on the use of *the* and *a* by category.

Table 9.16. Effects of definiteness, specificity and proficiency level in singular contexts for the Japanese groups

	Use of *the*	Use of *a*
Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 248.826$***	$F_{(1, 28)} = 317.133$***
Definiteness x Level	$F_{(1, 28)} = 3.526$	$F_{(1, 28)} = 3.473$
Specificity	$\mathbf{F_{(1, 28)} = 21}$***	$\mathbf{F_{(1, 28)} = 21.475}$***
Specificity x Level	$F_{(1, 28)} = 3.857$	$F_{(1, 28)} = 3.117$
Definiteness x Specificity	$\mathbf{F_{(1, 28)} = 4.691}$*	$\mathbf{F_{(1, 28)} = 7.388}$*
Definiteness x Specificity x Level	$F_{(1, 28)} = 0.293$	$F_{(1, 28)} = 0.074$

*p <.05 **p <.01 ***p <.001

Table 9.17. Effects of definiteness, specificity and proficiency level in singular contexts for the Spanish groups

	Use of *the*	Use of *a*
Spanish L2 learners		
Definiteness	$F_{(1, 28)} = 1584.726$***	$F_{(1, 28)} = 1896.763$***
Definiteness x Level	$\mathbf{F_{(1, 28)} = 5.688}$*	$F_{(1, 28)} = 3.203$
Specificity	$F_{(1, 28)} = 1.603$	$F_{(1, 28)} = 1.207$
Specificity x Level	$F_{(1, 28)} = 0.818$	$F_{(1, 28)} = 1.207$
Definiteness x Specificity	$F_{(1, 28)} = 1.750$	$F_{(1, 28)} = 4.035$
Definiteness x Specificity x Level	$F_{(1, 28)} = 1.750$	$F_{(1, 28)} = 0.082$

*p <.05 **p <.01 ***p <.001

Table 9.18. Effects of definiteness, specificity and proficiency level in plural contexts for the Japanese groups

	Use of *the*	Use of *Ø*
Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 203.561$***	$F_{(1, 28)} = 193.885$***
Definiteness x Level	$F_{(1, 28)} = 1.496$	$F_{(1, 28)} = 1.385$
Specificity	$\mathbf{F_{(1, 28)} = 59.138}$***	$\mathbf{F_{(1, 28)} = 53.589}$***
Specificity x Level	$F_{(1, 28)} = 1.207$	$F_{(1, 28)} = 1.159$
Definiteness x Specificity	$F_{(1, 28)} = 0.318$	$F_{(1, 28)} = 0.337$
Definiteness x Specificity x Level	$F_{(1, 28)} = 0.318$	$F_{(1, 28)} = 0.759$

*p <.05 **p <.01 ***p <.001

Table 9.19. Effects of definiteness, specificity and proficiency level in plural contexts for the Spanish groups

	Use of *the*	Use of *Ø*
Spanish L2 learners		
Definiteness	$F_{(1, 28)} = 642.218$***	$F_{(1, 28)} = 751.019$***
Definiteness x Level	$\mathbf{F_{(1, 28)} = 6.873}$*	$\mathbf{F_{(1, 28)} = 6.342}$*
Specificity	$\mathbf{F_{(1, 28)} = 8.263}$**	$F_{(1, 28)} = 2.041$
Specificity x Level	$F_{(1, 28)} = 0.615$	$F_{(1, 28)} = 0.827$
Definiteness x Specificity	$\mathbf{F_{(1, 28)} = 14.975}$***	$\mathbf{F_{(1, 28)} = 4.487}$*
Definiteness x Specificity x Level	$F_{(1, 28)} = 2.215$	$F_{(1, 28)} = 1.615$

*p <.05 **p <.01 ***p <.001

The results in tables 9-16-9.19 show that there are significant differences between the intermediate and advanced Japanese groups. In the singular contexts the advanced Japanese group performed better in the [+definite, -specific] context, but continued to fluctuate between definiteness and specificity in the [-definite, +specific] context. In the plural contexts the advanced Japanese group is performing no differently to the intermediate Japanese group in both [+definite, -specific] and [-definite, +specific] contexts. There are no significant differences between the intermediate and advanced Spanish groups in the singular condition. However, in the plural condition there is an interaction between definiteness and specificity

between the Spanish intermediate and advanced groups. The main difference found was in the use of *the*. The intermediate Spanish group had greater difficulty with supplying *the* in obligatory [+definite, -specific] plural contexts.

9.2.2. Summary of results from forced choice elicitation task: (1)

The results presented in section 9.2.1 were all uses of the definite and indefinite articles in contexts which are either [+specific] or [-specific]. The results revealed that the Japanese L2 learners in both proficiency groups fluctuate between definiteness and specificity in singular contexts, as predicted by the Fluctuation Hypothesis. Furthermore, fluctuation takes place in plural contexts. The Spanish L2 learners, unexpectedly, also had problems with one of the contexts: [+definite, -specific] plural contexts. Given that this was unexpected, and that it was restricted to one of the tested contexts - [+definite, -specific] – one possibility is that this is not the result of learners fluctuating between the two values of the Article Choice Parameter, but the effect of a specific pragmatic context for the Spanish speakers, the 'larger situational use' described by J. Hawkins (1978):

(13)   Larger situational use = general, without any specific presupposed knowledge (see chapter 7).

The Spanish L2 learners may not be familiar with the larger situational use of the definite article in plural contexts. If this were the case, then a possible alternative interpretation of the Japanese results might also be possible: that the Japanese L2 learners have difficulty with the 'larger situational use' context in both singular and plural contexts. It is possible that either the Japanese do not know the pragmatic larger situational use of the definite article or their overuse

of *a* in singular contexts is the result of the context(s) being interpreted as [-specific]. To test the latter possibility, a follow-up task was given to Japanese groups (intermediate and advanced) using [+definite, +specific] and [+definite, -specific] singular contexts based on Ionin *et al*'s (2004) task. The aim of the follow-up task was to see whether the Japanese groups would fluctuate between definiteness and specificity in contexts discussed in section 9.3.2.2.

9.3.   The follow-up forced choice elicitation task: (2)

9.3.1. Predictions

The follow-up task was designed to test the [+definite, -specific] singular context to see whether Japanese speakers will overuse indefinite *a*. The [+definite, -specific] context is not based on the larger situational use of the definite article but on [+definite, -specific] contexts from Lyons (1999) as used by Ionin *et al* (2004). Though the pragmatic role of the definite article in larger situational uses in singular contexts may cause difficulty for Japanese L2 learners it is believed that definites occurring in non-specific contexts is the underlying problem. I will assume Ionin *et al*'s (2004) original definition of specificity as having a referent in mind with the intention to refer to it and the speaker must consider the referent (i.e. individual or object) as having some noteworthy property. It is expected that Japanese L2 learners will perform as they did in the first forced choice elicitation task and fluctuate between definiteness and specificity.

9.3.2. Method

9.3.2.1. The participants

There were 30 participants in total. Some of the participants currently reside in the UK and others reside in Japan (see Appendix A). All the participants are known to the researcher as either previous colleagues or previous postgraduate students at the University of Essex, UK. 15 native speakers of English also took part in the follow-up task (see Appendix D for tables of results).

Table 9.20. Japanese participants in the follow-up forced choice elicitation task: (2)

	L1 Japanese	L1 Japanese
Proficiency level	Intermediate	Advanced
Number of participants	15	15
Age range	19 – 45 (mean = 28)	18 – 57 (mean = 36)
Age range of first exposure	5 – 13 (mean = 12)	4 – 13 (mean = 11)
Length of stay in English speaking countries (months)	0 – 60 (mean = 12)	0 – 132 (mean = 40)

9.3.2.2. The forced choice elicitation task: (2)

The [+definite, +specific] and [+definite, -specific] singular contexts were based on Ionin *et al*'s task (see chapter 4, section 4.7 and Appendix B). The same [-definite, +specific] and [-definite, -specific] singular contexts were used as in the first forced choice elicitation task (see section 9.1.2.2). Examples of the new contexts are below:

(14)   [+definite, +specific]

A: Do you have time for lunch?
B: No, I'm very busy. I am meeting with ____ president of our university – Dr. McKinley; it's an important meeting.

the   *Ø*   *an*   *a*

(15)   [+definite, -specific]

A: Let's go out to dinner with your brother Samuel tonight.
B: No, he is busy. He is having dinner with ____ manager of his office – I don't know who that is, but I'm sure that Samuel can't cancel this dinner.

an   *the*   *Ø*   *a*

It is predicted that like the definite anaphoric contexts [+definite, +specific] and the definite larger situational contexts [+definite, -specific] in the previous forced choice elicitation task, Japanese L2 learners will fluctuate between definiteness and specificity only in the [+definite, -specific] contexts. Scope was not included as a factor in article choice as Reid *et al* (2006) found that scope did not affect article choice for Japanese L2 learners. Ionin *et al* found similar results in their study with scope not interacting with article choice.

9.3.2.3. Procedure

The OQPT and the task were administered via e-mail to the participants. The same procedure was followed as for the first forced choice elicitation task. The participants were instructed to complete the OQPT and the task without asking for any help from outside sources. Once they had completed the OQPT and the task they were asked to return them via e-mail to the researcher.

9.4.   Results of the follow-up task

Table 9.21. Intermediate and advanced groups' *the* and *a* responses in definite and indefinite singular contexts

Intermediate Japanese L2 learners (*n*=15)	[+definite]			[-definite]		
	the	*a	*Ø	*the	a	*Ø
[+specific]	107/120 89.1%	**8/120 6.7%**	5/120 4.2%	**21/60 35%**	39/60 65%	0/60 0%
[-specific]	95/120 79.2%	**18/120 15%**	7/120 5.8%	1/60 1.7%	57/60 95%	2/60 3.3%
Advanced Japanese L2 learners (*n*=15)						
[+specific]	103/120 85.8%	**11/120 9.2%**	6/120 5%	**11/60 18.3%**	49/60 81.7%	0/60 0%
[-specific]	100/120 83.3%	**19/120 15.8%**	1/120 0.8%	0/60 0%	59/60 98.3%	1/60 1.7%
Native controls (*n*=15)						
[+specific]	118/120 98.4%	1/120 0.8%	1/120 0.8%	**2/60 3.3%**	58/60 96.7%	0/60 0%
[-specific]	120/120 100%	0/120 0%	0/120 0%	0/60 0%	60/60 100%	0/60 0%

The results from table 9.21 show that the Japanese intermediate and advanced groups fluctuate in the new [+definite, -specific] contexts as *a* is overused. However, *a* was also overused in [+definite, +specific] contexts. Both groups also overuse *the* in [-definite, +specific] contexts.

9.4.1. Effects of definiteness and specificity

To address hypotheses (5) and (6) repeated measures ANOVAs were performed (with Language as a between-subjects factor and Definiteness and Specificity as a within-subjects factors) on the use of *the* and *a* by category.

9.4.1.1. Comparison between intermediate and advanced Japanese groups

Table 9.22. Effects of definiteness and specificity in singular contexts: follow-up task

	Use of *the*	Use of *a*
Intermediate Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 1642.211$***	$F_{(1, 28)} = 1559.012$***
Specificity	$\mathbf{F_{(1, 28)} = 19.238}$***	$\mathbf{F_{(1, 28)} = 11.836}$**
Definiteness x Specificity	$\mathbf{F_{(1, 28)} = 7.323}$*	$\mathbf{F_{(1, 28)} = 6.394}$*
Advanced Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 697.267$***	$F_{(1, 28)} = 799.412$***
Specificity	$\mathbf{F_{(1, 28)} = 10.145}$**	$\mathbf{F_{(1, 28)} = 12.789}$***
Definiteness x Specificity	$\mathbf{F_{(1, 28)} = 7.068}$**	$\mathbf{F_{(1, 28)} = 4.840}$*

*$p < .05$ **$p < .01$ ***$p < .001$

The results in table 9.22 reveal that for the intermediate group there is an interaction between definiteness and specificity for both proficiency groups. Independent samples t-tests revealed that for the intermediate group there were significant differences between the native controls in the use of *the* in the [+definite, +specific] (t =2.409, p<0.05), [+definite, -specific] (t =3.757, p<0.05) and the [-definite, +specific] (t =-3.800, p<0.05) conditions. Significant differences were found in the use of *a* in the [+definite, -specific] (t =-2.882, p<0.05) and [-definite, +specific] (t =3.800, p<0.05) conditions. For the advanced group there were significant differences in the use of *the* in the [+definite, -specific] (t =3.251, p<0.05) and [-definite, +specific] (t =-2.270, p<0.05) conditions. Significant differences were found in the use of *a* in the [+definite, -specific] (t =-3.300, p<0.05) and [-definite, +specific] (t =2.270, p<0.05) conditions.

9.4.1.2. Comparison within intermediate and advanced Japanese groups

Table 9.23. Within group effects of definiteness and specificity in singular contexts: follow-up task

	Use of *the*	Use of *a*
Intermediate Japanese L2 learners		
[+definite, -specific] vs [+definite, +specific]	t $_{(14)}$ = -1.977	t $_{(14)}$ = 1.468
[-definite, +specific] vs [-definite, -specific]	**t $_{(14)}$ = -3.839****	**t $_{(14)}$ = 3.263****
Advanced Japanese L2 learners		
[+definite, -specific] vs [+definite, +specific]	t $_{(14)}$ = -0.764	t $_{(14)}$ = 1.835
[-definite, +specific] vs [-definite, -specific]	**t $_{(14)}$ = -2.955****	**t $_{(14)}$ = 3.162****

*p <.05 **p <.01 ***p <.001

The results in table 9.23 reveal that even though overuse of *a* was found in [+definite, -specific] contexts there was no difference between [+definite, -specific] and [+definite, +specific] contexts. Overuse of *a* in [+definite, +specific] contexts was also found in both Japanese intermediate and advanced groups. Only overuse of *the* in [-definite, +specific] contexts was found to be significant for both proficiency groups.

9.4.1.3. Comparison between proficiency levels

For a comparison between proficiency levels 2 (Proficiency) x 2 (Definiteness and Specificity) repeated measures ANOVAs were performed (with Proficiency as a between-subjects factor and Definiteness and Specificity as a within-subjects factors) on the use of *the* and *a* by category.

Table 9.24. Effects of definiteness, specificity and proficiency level in singular contexts: follow-up task

	Use of *the*	Use of *a*
Japanese L2 learners		
Definiteness	$F_{(1, 28)} = 354.382$***	$F_{(1, 28)} = 400.799$***
Definiteness x Level	$F_{(1, 28)} = 1.631$	$F_{(1, 28)} = 1.294$
Specificity	**$F_{(1, 28)} = 29.269$*****	**$F_{(1, 28)} = 21.062$*****
Specificity x Level	$F_{(1, 28)} = 3.599$	$F_{(1, 28)} = 1.246$
Definiteness x Specificity	**$F_{(1, 28)} = 9.604$****	**$F_{(1, 28)} = 7.432$***
Definiteness x Specificity x Level	$F_{(1, 28)} = 0.352$	$F_{(1, 28)} = 1.009$

*p <.05 **p <.01 ***p <.001

The results in table 9.24 show that there are significant differences between the intermediate and advanced Japanese groups, but only in the [-definite, +specific] condition. Both proficiency groups perform similarly in the [+definite, -specific] condition.

9.4.2. Summary of results from the follow-up forced choice elicitation task: (2)

The results presented in section 9.4.1 were all uses of the definite and indefinite articles in contexts which are either [+specific] or [-specific]. The results confirmed that the Japanese L2 learners do have difficulty with [+definite, -specific] contexts as overuse of indefinite *a* was found.

9.5.   Discussion

The results, so far, are consistent with the results of Ionin *et al* (2004).

The results support hypothesis (5):

H[5]   Japanese L2 learners will tend to fluctuate between definiteness and specificity

and use *a* and *Ø* in definite non-specific singular and plural contexts respectively

and *the* in indefinite specific singular and plural contexts as they fail to set the

Article Choice Parameter and associate *a* and *Ø* as [-specific] markers and *the* as

a [+specific] marker.

The Japanese L2 learners did overuse *a* in [+definite, -specific] singular contexts, *Ø* in [+definite, -specific] plural contexts and *the* in [-definite, +specific] singular[7] and plural contexts.

H[6]   Spanish L2 learners will not fluctuate between definiteness and specificity in the

use of articles because Spanish has definiteness-marking articles.

Hypothesis (6) is supported as the Spanish L2 learners are not fluctuating. There is no fluctuation in singular contexts. However, there is overuse of *Ø* in [+definite, -specific] plural contexts but no overuse of *the* in [-definite, +specific] plural contexts. I argued that the [+definite, -specific] plural contexts may be problematic for other reasons for the Japanese and Spanish L2 learners such as the pragmatic use of the definite article in larger situational uses.

The results do not show any pattern of development for the Japanese L2 learners. In Ionin *et al*'s own findings they found similar types of fluctuation between the use of the features [±definite] and [±specific] by the Russian and Korean L2 learners into advanced stages of

---

[7] Butler (2002) found that in a forced choice elicitation task advanced Japanese L2 learners of English tended to overuse *the* as a marker of specificity in [+SR] [-HK] contexts.

acquisition. Ionin *et al* grouped all their participants into five different patterns of fluctuation, as shown in table 9.25:

Table 9.25. Russian and Korean L2 learners: individual patterns of use

Response type	No. of individuals	%
(a) Definiteness pattern	21/65	32
(b) Fluctuation pattern	20/65	31
(c) Specificity pattern	2/65	3
(d) Partial fluctuation pattern	9/65	14
(e) Miscellaneous patterns	13/65	20

(adapted from Ionin *et al* 2004, p.39)

The (a) Definiteness pattern and (b) Fluctuation pattern are predicted under the Fluctuation Hypothesis, but the (c) Specificity pattern, (d) Partial fluctuation pattern and (e) Miscellaneous pattern are difficult to account for under the FH.[8] [9] The results of the Japanese L2 learners from two separate forced choice elicitation tasks show similar patterns of use to Ionin *et al*'s L2 learners in singular and plural contexts.

Table 9.26. Intermediate and advanced Japanese groups: individual patterns of use in singular contexts

Response type	No. of individuals	%
(a) Definiteness pattern	16/30	53
(b) Fluctuation pattern	5/30	17
(c) Specificity pattern	0/30	0
(d) Partial fluctuation pattern	6/30	20
(e) Miscellaneous patterns	3/30	10

---

[8] None of the Japanese L2 learners completely mis-set the parameter to the specificity setting. It would be unexpected if they did as input should lead them to select the definiteness setting only.
[9] Ionin *et al* (2004) argue that the Miscellaneous patterns are far from random and not problematic for the Fluctuation Hypothesis. Yet, the Partial fluctuation pattern remains a puzzle.

Table 9.27. Intermediate and advanced Japanese groups: individual patterns of use in plural contexts

Response type	No. of individuals	%
(a) Definiteness pattern	7/30	23
(b) Fluctuation pattern	12/30	40
(c) Specificity pattern	0/30	0
(d) Partial fluctuation pattern	9/30	30
(e) Miscellaneous patterns	2/30	7

The results in tables 9.26 and 9.27 conceal further differences as some Japanese L2 learners have (a) Definiteness pattern for singular contexts, but (d) Partial fluctuation pattern for plural contexts.

Numerous recent studies, based on Ionin *et al*'s study, have investigated fluctuation in L2 article choice. Ting (2005) and Coll (2005) both examined article use by Mandarin Chinese speakers (no article language) and Spanish speakers. Ting (2005) used the same forced choice elicitation task as Ionin *et al* (2004) and found that the upper intermediate and advanced Chinese and Spanish L2 learners were not fluctuating between definiteness and specificity. The Chinese group tended to omit articles in obligatory contexts rather than overuse *a* for [-specific] or *the* as [+specific].[10] Coll (2005) used the same forced choice elicitation task as Hawkins *et al* (2006) and found that the intermediate Chinese L2 learners fluctuated between definiteness and specificity as predicted and overused *the* in [-definite, +specific] in singular (27.5%) and plural (47.5%) contexts. But overuse of *the* was also found in [-definite, -specific] plural contexts (27.5%), but not in [-definite, -specific] singular contexts.[11] This is not predicted to happen under the Fluctuation Hypothesis as *the* is only predicted to be overused in [+specific] singular and plural contexts. Karafistan (2005) administered the same forced choice elicitation task to Turkish speakers (no article language) and found with upper intermediate L2 learners that they

---

[10] Snape *et al* (2006) claim that the Chinese L2 learners performed better than the Japanese L2 learners on the forced choice elicitation task because Chinese is a language that has lexical items with the features [+definite] and [+specific]. See discussion in chapter 10.
[11] Fluctuation within the Chinese L2 group was mainly limited to four participants.

fluctuated between the features [+definite] and [+specific] and overused *the* in [-definite, +specific] singular and plural contexts. Gürel (2005) also examined article use by end-state Turkish L2 learners and found very little fluctuation in a similar forced choice elicitation task. Hawkins *et al* (2006) found no fluctuation within the Greek L2 learners of English (as expected)[12] but did find individual fluctuation patterns amongst the Japanese L2 learners of English. They argue that:

> "the group pattern conceals some important individual variation, for which an account in terms of the Fluctuation Hypothesis offers only a rough approximation of what is going on. Furthermore, the Article Choice Parameter is stipulative and required only for the case of articles" (Hawkins *et al* 2006: 24).

Hawkins *et al* (2006) offer a different account of the individual differences found among the Japanese speakers. The account differs to Ionin *et al* because it does not require the postulation of a binary article choice parameter or that article choice is the result of individual ILGs fluctuating between parameter settings. Rather, the difficulty lies between matching the features of vocabulary items (the phonological exponents) and the terminal nodes (see chapter 2, section 2.5 for discussion). Ionin *et al* (in press) and Ionin (in press) similarly do not discuss an article choice parameter. Rather, they discuss the role of features in the L2 learners' ILGs:

> "Suppose that L2-English learners have access to the semantic concepts of definiteness and specificity; given their cross-linguistic nature, these concepts may be part of a universal semantic inventory available to all learners. However, it will not, at least initially, be obvious to the learners which of these features is encoded by English articles" (Ionin in press, p.57).

---

[12] Greek is a language with articles that encode definiteness like English and Spanish. See chapter 4, section 4.3 for discussion of Greek.

To account for the role of features in grammars I follow McCarthy (2004) and Hawkins *et al* (2006). I assume that English is a four-article language as opposed to the claim by Ionin *et al* (2004) that it is a two-article language.[13] This is illustrated in (16):

(16) [D, +definite]   the   [+definite]
      [D, -definite, +singular] a   [-definite]
      [D, +specific]   this$_{ref}$ [+specific]
      [D, -definite, -singular] Ø   underspecified

It is important to note that referential *this* is an article with the feature [+specific]. As the forced choice elicitation tasks tested for suppliance of *the*, *a* and *Ø* I will not include *this* in the following discussion.

Articles are exponents of category D and Num and the terminal nodes for D and Num for native speakers of English are illustrated in (17):

(17) [D, +definite, +singular]   (= 'the')
      [D, +definite, -singular]   (= 'the')
      [D, -definite, +singular]   (= 'a')
      [D, -definite, -singular]   (= 'Ø')

Phonological exponents of the vocabulary items (*the/a*) with their context of insertion are represented in (18):

(18) a   ↔   [-definite] [+singular]
      the ↔   [+definite]
      Ø   ↔   [D]

---

[13] I thank Andrew Radford and Danjela Trenkic for making the point that *these* equally fits in the article system as the plural specificity marker in English.

The features for each exponent are unique in the sense that *a* only occurs with indefinite count singular Ns, *the* occurs with definite count singular or plural Ns and the phonologically null variant of Num is the elsewhere condition. It is selected when the terminal node requiring an article to be inserted is indefinite and plural. The articles then can be inserted in the context of a DP or NumP which has either a specific or non-specific reading:

(19) a   ↔   [-definite] [+singular] where NumP $_{specific/non\text{-}specific}$
      the   ↔   [+definite] where DP $_{specific/non\text{-}specific}$
      Ø   ↔   [D] where NumP $_{specific/non\text{-}specific}$

English is a language with grammaticalized definiteness. The phonological exponents of the vocabulary items [±definite] match the syntactic terminal nodes. English does not select the features [±specific] for articles in English, but does select [+specific] for referential *this*. Otherwise, pragmatic specificity is an expression that is referentially anchored to another object or person in the discourse (see chapter 2, section 2.4).

The features [±definite] and [±specific] are part of the UG inventory and article use and misuse reflect full access to the features in L2 acquisition. To demonstrate how the Japanese L2 learners' ILGs are organised to identify the features relevant for article insertion the results of individuals from the first forced choice elicitation task were analysed. The definite larger situational use in plural contexts was not included as both the Japanese and Spanish groups had difficulty with these pragmatic uses of the definite article.

The following tables of results are of individual performances on the forced choice elicitation task (1). The distribution of articles chosen by J2 is summarized in table 9.28 below:

Table 9.28. Article distribution for J2 (upper-intermediate)

Context	Count singular			Count plural		
	the	a	Ø	the	a	Ø
+def, +spec k = 8	4	-	-	4	-	-
+def, -spec k = 8	4	-	-			
-def, +spec k = 8	-	4	-	-	-	4
-def, -spec k = 8	-	4	-	-	-	4

J2's ILG is consistent with the grammar of native speakers as it produces target-like terminal

nodes:

(20) [D, +definite, +singular]   (= 'the')
[D, +definite, -singular]   (= 'the')
[D, -definite, +singular]   (= 'a')
[D, -definite, -singular]   (= 'Ø')

J2 has an ILG with the correct feature specifications for the vocabulary entries *the* and *a* as

there is no fluctuation between definiteness and specificity, as illustrated in (21):

(21) a   ↔ [-definite] [+singular] where NumP specific/non-specific
the   ↔ [+definite] where DP specific/non-specific
Ø   ↔ [D] where NumP specific/non-specific

J2 does not make any substitution errors and has correctly selected the feature [+definite] for

English articles. Compare J2 to the following participant J3 below.

Table 9.29. Article distribution for J3 (upper-intermediate)

Context	Count singular			Count plural		
	the	a	Ø	the	a	Ø
+def, +spec k = 8	3	1	-	3	1	-
+def, -spec k = 8	-	4	-			
-def, +spec k = 8	2	2	-	2	-	2
-def, -spec k = 8	-	4	-	1	-	3

J3 has an ILG consistent with the following terminal nodes, shown in (22):

(22)   [D, +specific, +singular]   (= 'the')
       [D, +specific, -singular]   (= 'the')
       [D, -specific, +singular]   (= 'a')
       [D, -definite, -singular]   (= 'Ø')

The features selected for articles at the current stage of development in the L2 are in (23):

(23)   a   ↔   [-specific] [+singular]
       the   ↔   [+specific]
       Ø   ↔   [ ]

Given these entries,

- *a* should not occur in specific singular contexts because it is specified [-specific] (true in 8/12 cases)

- *the* should not appear in singular and plural contexts which are [-specific] (true)

- *the* should appear in plural indefinite specific contexts because although *Ø* could be inserted here, *the* pre-empts it by having a feature (true in 5/8 cases)

- *the* should appear in specific contexts, both singular and plural (true in 10/16 cases)

- *Ø* should appear in plural non-specific contexts, because *a* and *the* clash in one feature in these environments (true in 3/4 cases)

J3 behaves differently to J2 in the selection of features made available from UG. The choice of the feature [+specific] is selected for the lexical entry *the* and the feature [-specific] is selected for *a*.

The next participant J4 behaves differently to J2 and J3.

Table 9.30. Article distribution for J4 (upper-intermediate)

Context	Count singular			Count plural		
	the	a	Ø	the	a	Ø
+def, +spec k = 8	4	-	-	4	-	-
+def, -spec k = 8	3	1	-			
-def, +spec k = 8	4	-	-	2	-	2
-def, -spec k = 8	-	4	-	1	1	2

This is consistent with J4 having an ILG which produces the following terminal nodes:

(24)   [D, +definite, +specific, +singular]   (= 'the')
        [D, +definite, +specific, -singular]   (= 'the')
        [D, -definite, +singular]   (= 'a')
        [D, -definite, -singular]   (= 'Ø')

with the following Vocabulary entries:

(25)   a   ↔   [-definite] [+singular] where NumP$_{specific/non-specific}$
        the   ↔   [+definite] [+specific]
        Ø   ↔   [ ]

Given these entries:

- *the* should appear in any definite or specific context, whether singular or plural (true in 18/20 cases)

- *a* should appear in indefinite non-specific singular contexts (true)

- *Ø* should appear in indefinite plural contexts (true in 4/8 cases)

J4 differs to the two previous participants as the features [+definite] and [+specific] have been selected in the entry for *the*. The indefinite has the same lexical entry as native grammars.

The performance of the other Japanese L2 learners in forced choice elicitation task (1) and (2) can be captured in similar ways whereby the grammar produces a set of terminal nodes and the phonological exponents are inserted through a process of feature-matching.

Under the feature-based account there is no need to claim that there is a construction-specific Article Choice Parameter as L2 learners have full access to UG. As definiteness is grammaticalized in English we expect that by definition, specificity is grammaticalized in Samoan. The Fluctuation Hypothesis assumes that L2 learners will fluctuate between definiteness and specificity until the input leads them to the correct ACP setting for English. Assuming that lexical items are underspecified for features, *the* and *a* will not have any semantic features assigned to them. Definiteness is grammaticalized and the semantic feature [-specific] is not selected for articles (referential *this* has the feature [+specific]). Spanish and Greek L2 learners of English transfer the definiteness property of articles from their L1s. Ionin (2003a) claims that there is no L1 transfer from Russian to English and from Korean to English because both Russian and Korean lack an article system.[14] However, if definiteness and specificity are universal semantic concepts we expect them to surface cross-linguistically but maybe not in the form of articles as in English. For example, in Russian (Avrutin 1999, Avrutin & Brun 2001, Ionin 2003a, Brun 2004) the concepts of definiteness and specificity are expressed through word order and morphemes such as *odin* (indefiniteness). Avrutin & Brun (2001: 79) argue that Russian children from an early age "know the mapping between a structural position and a particular interpretational property of a nominal" (e.g. (in) definiteness or specificity). They propose that this mapping is part of innate knowledge (or early acquired knowledge from input) of the syntax-pragmatic interface. Japanese is another language which has the concepts of definiteness and specificity which are expressed through word order and

---

[14] Jin (2003) argues that in Korean there is definiteness and specificity expressed by the use of *han* (indefinite) and *ku* (definite). Further examples can be found in Lee (1989) and Ionin (2003).

case markers such as *wa*, *ga* and *o* (see chapter 5).[15] L2 learners from article-less languages do not fluctuate between the parameter settings definiteness and specificity of the ACP, but rather following Lardiere (2005), the problem is reassembling the features available in the L1 and mapping them onto the syntactic forms *the* and *a* in L2 English. If L2 learners have full access to the features [+definite] and [+specific] we may sometimes expect *the* to be inserted in [-definite, +specific] contexts; *a* to be inserted in [+definite, -specific, +singular] contexts; Ø to be inserted in [-specific, -singular] contexts. This is exactly what we find with L2 learners from article-less languages.

Ionin *et al* (2004) argue that triggers in the discourse eventually lead L2 learners of English to set the ACP for definiteness;

"To determine whether *the* is [+definite] or [+specific], the L2 learner needs to evaluate the discourse situation and decide whether *the* is marking the presupposition of uniqueness (from the hearer's perspective) or the existence of a noteworthy property (from the speaker's perspective)" (2004: 51).

As restructuring of the ILG continues, very advanced L2 learners realize that both *the* and *a* are not specificity markers as specificity is not grammaticalized in English. If discourse specificity continues to be a problem for L2 learners we can expect continuing fluctuation under the feature-based account. Ionin *et al*'s (2004) account claims that enough input will lead learners to set the ACP correctly to definiteness. But the question is how much input is enough? Most of the L2 learners in their study and my study include participants who have been living in an English speaking environment for many years. They use English in their everyday lives for work or study and at home. Therefore, it seems that input alone cannot be the problem.

---

[15] A similar claim has been made for other languages such as Turkish, Czech, Slovak, Serbian, Chinese and Bengalese (see Enç 1991, Young 1996, Trenkic 2000, Robertson 2000, Dirdal 2005).

Children learning L1 English (see chapter 3) have similar difficulties with articles because of "a deficit of their processing capacity required for making inferences about other speakers' representation of the discourse" (Avrutin 1999: 53). Early L2 studies based on Bickerton's (1981) bioprogram for language acquisition (see chapter 1) found a similar pattern to L1 English children (see chapter 3) of overuse of definites. Overuse of definites in indefinite contexts is related to speaker knowledge. The speaker has a referent in mind so it is specific to the speaker and may have a noteworthy property, but the hearer does not share this knowledge making *the* infelicitous. Children overuse definites because it is claimed that they have not yet developed theory of mind. The Japanese L2 learners overuse *the* in specific contexts, not because they lack a theory of mind, but because they have continuing difficulty with mapping definiteness to articles in English. It was found in experiment 2, chapter 7 that certain uses of the definite article such as larger situational use, encyclopaedic use and cultural use remain problematic for the Japanese L2 learners. This may be part of the remapping problem or because they lack knowledge of so-called *accommodation by bridging*.[16]

"bridging is an operation that requires some inferences, and these inferences are based on our world knowledge that we share with other speakers" (Avrutin 1999: 45).

For example, in (26), L2 learners do not know the use of the definite article because there has been no previous mention of a bride and they lack the cultural knowledge use.

(26)   I attended a wedding recently. *The bride* was wearing a white dress.

---

[16] Avrutin's (1999) definition of specificity is based on Heim's (1982, 1983) File Change semantics. See also von Heusinger's (2002) account of specificity.

L2 learners have to be exposed to a number of situations whereby it is possible to use bridging.[17] The problem, as Ionin *et al* (2004) suggest, seems to be the discourse-based input triggers.

One proposal is that L2 learners have not yet fully acquired the syntax-pragmatic interface rules in the L2. Studies indicate that syntax and pragmatics develop independently in acquisition (Hopp 2004, Margaza & Bel 2006, Pacheco & Flynn 2006) and errors made by L2 learners are the result of lack of knowledge about the syntax-pragmatic interface rather than a syntactic deficit.[18]

"L2 learners may have to learn new rules mapping already acquired pragmatic notions onto syntactic positions" (Bos *et al* 2004: 104).

The question still remains as to why some advanced L2 learners fail at the syntax-pragmatic interface.

9.6.   Summary of chapter 9

The results were found to support hypotheses (5) and (6). The Japanese L2 learners did fluctuate between definiteness and specificity as predicted under the Fluctuation Hypothesis. The Spanish did not fluctuate due to direct L1 transfer. They behaved as the native controls in

---

[17] Brown & Yule (1983) argue that bridging may work for some situations, but the example in i.) is not so clear:

i.)   a. Mary got some picnic supplies out of the car.
           b. The beer was warm.

For some native speakers of English (e.g. students) bridging may automatically take place as *beer* is always associated with *picnics*, but for others there is no bridging between *picnics* and *beer*. Given this type of situation some L2 learners may not use the definite article simply because they do not associate *beer* with *picnics* or because they have not experienced this use of bridging in the L2 input.

[18] Žegarac (2004) gives an account of L2 article use based on Relevance Theory. He suggests that the semantics (or pragmatics) of *the* is complex as it "involves the notion of mental representation, particular reference and availability in context" (2004: 205). The same can be argued for *a* with the added complexity of number.

article choice. It was argued that the reason for fluctuation amongst the Japanese groups was because they select and assign the wrong features to English articles rather than a failure to set a binary Article Choice Parameter. Continuing fluctuation into advanced stages of acquisition is possibly the result of a mapping problem at the syntax-pragmatics interface.

In chapter 10, the findings of chapters 6, 7, 8 and 9 are discussed in terms of the hypotheses formulated in chapter 1 regarding the following: the Nominal Mapping Parameter, the Article Choice Parameter, the Prosodic Transfer Hypothesis, the Full Transfer/Partial Access hypothesis and the Full Transfer/Full Access hypothesis.

Chapter 10

Discussion and Conclusions

10.0. Introduction

The aim of this final chapter is as follows. To summarize the findings from chapters 6-9 in section 10.1 and discuss how they relate to current SLA hypotheses. Section 10.2 will discuss current theories such as the **Nominal Mapping Parameter** and the **Article Choice Parameter** and how they relate to language acquisition. Section 10.3 will be a discussion about shortcomings of the current investigation and section 10.4 will discuss directions for future research. Finally, in section 10.5 conclusions will be drawn from the findings of the current investigation into the nominal domain of English.

10.1. Summary of findings

The first of five experiments in chapter 6 was designed to test the L2 learners' knowledge of the count – mass distinction in English using a count – mass grammaticality judgement task. Chierchia (1998) claims that a language like Japanese is a language without a count – mass distinction and provides arguments for such languages having the [+arg, -pred] setting of the NMP. Both mass Ns and count plural Ns are [+arg] under the NMP and since Japanese does not have a singular/plural distinction, all Ns would be assumed to be 'kinds' or mass nouns. Japanese L2 learners of English would have to learn that English Ns divide into count or mass, as well as learning that some Ns are predicative while others are argumental. Spanish is a language with articles and count nouns and has the [-arg, +pred] setting. The results from a count – mass grammaticality judgement task showed that the Spanish and Japanese speakers

performed well overall but both L1 groups accepted ungrammatical mass plural contexts. The Japanese speakers incorrectly rejected grammatical mass contexts more than the Spanish groups. This was an unexpected result because both L1 groups have different NMP settings. The Japanese groups were expected to perform worse in the count singular and count plural contexts as there is no singular/plural distinction in Japanese. The Spanish groups performed more as expected allowing mass nouns to be countable. This suggests L1 transfer. The Japanese L2 learners overall performed well on the task as they were aware of the conceptual differences of what is countable versus what is uncountable in the L2. This suggests that L2 learners from different L1 backgrounds can establish a count – mass distinction in an L2, even where this appears not to be instantiated in the L1, and this is one of the components of knowledge required to reset the NMP.

The findings from experiment 2 in chapter 7 also support the claim that the Japanese and Spanish L2 learners can reset the NMP. The forced choice elicitation task: types of (in)definite tested the L2 learners' linguistic knowledge of the count – mass distinction. Both L1 groups at intermediate and advanced stages of L2 English supplied definite articles in singular contexts over 90% of the time. The difference between the Japanese and the Spanish groups was in suppliance of definite articles in plural and mass contexts. Even though the Japanese groups (intermediate and advanced proficiency) were producing more omission and substitution errors than the Spanish speakers it was argued that the problem may be a linguistic one. If the problem that gives rise to the omission of articles (and plural –s) is primarily a linguistic one (not conceptual) then a number of existing L2 hypotheses have the potential to explain it: (1) omission may be the effect of a syntactic deficit (Hawkins 2005); (2) omission may be an effect of missing surface inflection (Prévost & White 2000, Lardiere 2005); (3) omission may be an effect of morphological underspecification (McCarthy 2004); or (4) omission may be accounted for by prosodic transfer (Goad & White 2004).

The aim of the third and fourth experiments in chapter 8 was to test some of the existing L2 hypotheses by administering oral and written production tasks to the L2 learners. The findings from the oral production task revealed that the Japanese groups continued to omit articles and plural –s in obligatory contexts whereas the Spanish groups did not. In chapter 8 an asymmetry between definite singular and indefinite singular contexts was found. The Japanese groups performed better in Art+N contexts than Art+Adj+N contexts in suppliance of articles. It was argued that the results are not consistent with the Prosodic Transfer Hypothesis. As Japanese is a language that has morphemes that either adjoin to the PWd or are free clitics, L2 learners of English can accommodate the L2 prosodic structure for articles.

The final chapter to report findings from an experiment was chapter 9. The fifth experiment was designed to test article choice in L2 English. Forced choice elicitation tasks were designed to test the Fluctuation Hypothesis to see whether Japanese L2 learners would fluctuate between the two settings 1.) definiteness and 2.) specificity of the Article Choice Parameter as proposed by Ionin (2003a). It was expected that the Spanish L2 learners would not fluctuate as Spanish is a language with articles that mark definiteness and not specificity, like English. The findings revealed that the Japanese did fluctuate between the two settings as predicted and the Spanish did not. The Spanish did not fluctuate as there is full transfer from the L1. The Spanish L2 learners do not need to access UG for the features [±definite] and [±specific] as definiteness is grammaticalized in Spanish as in English. The Japanese fluctuated between definiteness and specificity because there is no L1 transfer of lexical features. I argued that as Japanese is an article-less language fluctuation was the result of the Japanese L2 learners having full access to UG's feature inventory and selecting the wrong features for articles in English. Under a feature-based account there is no need to assume that there is a construction-specific article choice parameter. The problem for L2 learners of English from L1 article-less

languages, is the use of articles in discourse. The result is a deficit at the syntax-pragmatic interface.

10.2.   Discussion of findings: current theories of language acquisition

Throughout the thesis I have adopted the position that there is a Nominal Mapping Parameter and an Article Choice Parameter which need to be reset in the case of the NMP and set in the case of the ACP by L2 learners of English. The NMP requires resetting by both the Japanese and the Spanish L2 learners, but the ACP needs to be set only by the Japanese L2 groups. Spanish already has the same setting as English for articles (definiteness) so no setting of the ACP is required. Yet, it is not clear whether we need to invoke such parameters. Alternatives to the NMP and the ACP are considered and discussed below.

10.2.1. The Nominal Mapping Parameter

The NMP provides a three-way distinction that divides languages (see chapter 2). I originally set out to test the NMP in L2 acquisition. However, there are a number of criticisms targeting empirical and theoretical issues when the NMP is applied to various languages such as Brazilian Portuguese (Schmitt & Munn 1999), Chinese (Li 1998, Cheng & Sybesma 1999, Sio 2006), Japanese (Tomioka 2003, Muromatsu 2003 and Kurafuji 2004), Korean (Choi 2005), Turkish (Ozturk 2005), Greek (Tsoulas 2005), Spanish (Ticio 2001) and Hebrew and Asian languages (Borer 2005). The division of languages into three groups using +/-argument and +/-predicate features does not make the right predictions for many languages. This extends to English, as Chierchia argues that there is no null determiner. But, in chapter 2 it was argued that English must have a null determiner as it was shown to have semantic properties giving a

generic or partitive reading to NPs. In the forced choice elicitation task discussed in chapters 7

and 9 the null determiner can receive a specific or non-specific interpretation in indefinite plural

and indefinite mass contexts just as the articles *the* and *a* can in singular contexts.[1] Following

the DP hypothesis (see chapter 2 for discussion) there is a syntactic position available for the

null determiner. The syntactic position is the spec NumP, as discussed in chapter 9. English is

not a problem for Chierchia's account if one assumes that bare NPs receive a default indefinite

interpretation because a definite NP always co-occurs with *the*. However, if one argues against

Chierchia's (1998a) account of covert type-shifters, the null determiner is always present in

English. Sometimes it does not have any phonological content so the NMP could still be right

but English is misclassified as a [+arg, +pred] when it should be like Spanish as a [-arg, +pred]

type language. There are no bare NPs in English as in Japanese. Furthermore, it was argued that

there is a count – mass distinction in Japanese as some classifiers have abstract number. It was

argued in chapter 2, section 2.3.1, that the independent projections NumP and ClP serve a

similar function in languages and come under the umbrella term CountP, so perhaps Japanese

and Chinese are [+arg, +pred] type languages not [+arg, -pred] type languages. An alternative is

to suggest that the NMP is too strict semantically and syntactically in its attempt to classify

languages.

It was argued in chapter 3 that in L1 acquisition every child starts off with a nominal

system resembling Chinese. On the basis of input an Italian child will have to reset the NMP

and gradually project DP for argumenthood. However, an English child will have to work out

on an item-by-item basis what is count and what is mass. Questions that arise from Chierchia's

claim for L1 acquisition is why do all L1 learners start with the Chinese setting of the NMP?

What does resetting a parameter in L1 mean? How does one acquire language on an item-by-

---

[1] I argue that indefinite plural and indefinite mass contexts have specific and non-specific interpretations because
the Japanese L2 learners incorrectly overused *the* in the specific contexts only. This supports the claim that for
some of the learners' ILGs, *the* marks specificity.

item basis and then set a parameter value? Input alone should insure that the setting for English

and the setting for Italian is triggered, not the setting for Chinese.

An alternative account of the count – mass distinction in English is offered by

psychologists Barner & Bale (2002) and Barner & Snedeker (2005) based on Distributed

Morphology. They suggest lexical underspecification and the use of one syntactic feature

+*individual*, which contributes to the semantic interpretation.

"the +*individual* feature amounts to a grammatical element whose primary semantic function is
to license the use of a principle of individuation. As a result, the feature should only be licit
when used with a lexical root that supplies a principle of individuation" (2005: 19).

They claim that mass syntax would be a default category without a feature, so terms that are

specified lexically at the root as +*individual* (e.g. *furniture*) will individuate in mass syntax.

Furniture is a special case as it is an object mass noun but quantifies over individuals (i.e.

chairs, tables etc). A concept like DOG is specified at the lexical root with a +*individual* feature

which allows for more than one dog to be identified as separate individuals rather than one

mass interpretation of DOG-STUFF. This then gives you the count noun of DOG as in '*the*

dog(s) is/are hungry' but in a mass noun phrase as in '*there is dog on the menu*' the lexical item

DOG receives a default interpretation in the mass syntax so DOG quantifies non-numerically.

One of the advantages of assuming lexical underspecification of nouns is that it allows for

the possibility that all languages can conceptualize the difference between countable versus

uncountable in their L1s. In other words, the count – mass distinction is universal but for L2

learners of English determining what is countable versus uncountable in discourse remains

difficult (see chapters 6 and 7). A similar difficulty with discourse applies to articles, which is

discussed in section 10.2.2.

10.2.2. The Article Choice Parameter

The results from my study are difficult to interpret under the Fluctuation Hypothesis as there are patterns of use of articles in singular and plural contexts that bring into question whether there is a binary article choice parameter. If the role of the ACP is unclear in L2 acquisition, is it any clearer in L1 acquisition? If the ACP is set by discourse-based input triggers then it seems that L1 English children may pass through the same stage as L2 learners. Studies, discussed in chapter 3, show that children overuse *the* in indefinite contexts where adults do not, but this type of overuse was argued to be psychological/pragmatic rather than linguistic. If we were to present young L1 learners of English with a similar forced choice elicitation task as used by Ionin *et al* (2004) would we obtain similar results to the L2 learners from article-less languages? Would the children fluctuate between definiteness and specificity? The answer is unobtainable because young children would not have the capacity to read and comprehend the dialogues in the task. Though, it does seem likely that if they could complete the task they would behave like the Russian, Korean and Japanese L2 learners of English. Ionin *et al* (2004) suggest the following:

"It is possible that child L1 learners, like adult L2 learners, take some time to set the Article Choice Parameter and undergo fluctuation between the two settings of the parameter. However, the fluctuation might not be as pronounced or may end fairly quickly, as children have been argued to be quite good at parameter-setting" (2004: 56).

As language learners, the L1 children would not have received enough input to work out that English is a language that grammaticalizes definiteness. This looks like a strange parameter because unlike the Head Parameter or the Null Subject Parameter (Chomsky 1981), the ACP is not set from the earliest stages of acquisition (i.e. at around 18 months of age).

10.3.   Shortcomings of the current research

The forced choice elicitation tasks were originally designed to replicate studies by Ionin *et al*. We included specific and non-specific singular contexts in the task but we also added specific and non-specific plural and mass contexts. The aim was to see whether Japanese L2 learners would fluctuate between *the* and *Ø* in specific plural and mass contexts. The learners performed as expected in the specific plural contexts but not in the specific mass contexts. This was unexpected as we thought there would be overuse of *the* in the specific mass contexts but instead there was overuse of *a* (see chapter 7 for discussion). Perhaps if we had used substance not object mass nouns which are not used with measure phrases (e.g. mud, rain) we may have obtained a similar result to the specific singular and plural contexts.

As with all research there are a number of variables which need to be controlled for but sometimes this is not possible. The research reported in the thesis tried to control for variables such as age, residency in an English speaking environment and proficiency level, but sometimes it is not possible to control these variables. For example, the subjects that were available may have been a little older or have had less exposure to spoken English because they had not lived in an English speaking environment very long. For the spoken production task reported in chapter 8 there may be large differences between those subjects who had less exposure to spoken English versus those who have had a lot more exposure. I believe that this is important because early and increased exposure to spoken English may have a direct effect on how competent the speaker is in English. Though nothing is said about perception under the Prosodic Transfer Hypothesis it is possible that perceptual difficulties with articles and plural *–s* may play a large role in aural and oral production.

10.4.   Direction for future research

Snape *et al* (2006) compared the forced choice elicitation task results from Japanese L2 learners with Mandarin Chinese L2 learners. The Mandarin Chinese performed better than the Japanese and did not fluctuate between the two settings of the ACP. The reason for no fluctuation is because there is full transfer from Chinese to English. Mandarin Chinese has lexical markers with the features [+definite] and [+specific] according to Li & Thompson (1981) and Partee (in press). Furthermore, Robertson (2000) and Snape *et al* (2006) claim that Mandarin Chinese is following a similar pattern to English in terms of diachronic development of the definite and indefinite articles (see Lyons 1999, J. Hawkins 2004). The differences between languages like English, Spanish, Japanese and Mandarin Chinese are illustrated in table 10.1 below:

Table 10.1. Correlation between linguistic form and highest required status

	In focus	Activated	Familiar	Uniquely identifiable	Referential	Type identifiable
Mandarin Chinese	Ø *tā* (s/he, it)	*TA* *zhé* (this)		*nèi* N (that N)		*yi* N (a N) Ø N
English	*it*	*HE*, *this*, *that*, *this* N	*that* N	the N	indefinite *this* N	*a* N
Japanese	Ø	*kare* (he) *kore* (this) *sore* (that – medial) *are* (that – distal) *kono* N (this N) *sono* N (that N – medial)	*ano* N (that N – distal)	Ø N (possible emergence of the definite article *ZA*, according to Reinelt 1999)		
Russian	Ø *on* (he)	*ON* *èto* (this) *to* (that)	*èto* N (this N) *to* N (that N)	Ø N		
Spanish	Ø *él* (he)	*ÉL* *éste* (this) *ése* (that – medial) *aquél* (that – distal) *este* N	*ése* N (that N – medial) *aquél* N (that N – distal)	*el* N (the N)	Ø N *un* N (a N)	

(taken from Gundel J. K *et al* 1993, p. 284)

A further study based on results obtained by Ting (2005) will involve larger numbers of Chinese and Japanese participants. Furthermore, if, contra Chierchia (1998a), Japanese and Mandarin Chinese have a count – mass distinction (see Muromatsu 2003 and Cheng & Sybesma 1999) we may expect both groups to perform equally in a count – mass judgement task. However, in an oral production task suppliance of articles may differ because prosodically Chinese does not have any structure available to accommodate articles (Goad & White 2006) but Japanese can prosodically represent articles as Japanese has morphemes (prefixes) that

adjoin to the PWd. Therefore, the Chinese may perform better in a forced choice elicitation task and make fewer substitution errors, but in an oral production task they are predicted to produce more omission errors. If both groups equally omit articles then there may be an alternative explanation for continuing omission errors.

Other future research includes further testing of the Prosodic Transfer Hypothesis. If Mandarin Chinese L2 learners of English cannot prosodically represent articles in their ILGs, would they perform similarly in L2 acquisition of Spanish? If Chinese participants already have acquired L2 English would their performance in L3 Spanish be better compared to a group whose L2 is Spanish? It is not clear whether Chinese L2/L3 learners of Spanish would perform better in an oral production task since Spanish has agreement or concord between articles, adjectives and nouns. They may produce gender errors, N-raising errors and number errors, but are they able to equally supply articles in Art+N and Art+Adj+N obligatory contexts.

10.5.   Conclusions

In summary, the thesis makes several contributions to the field of SLA. I argued that the findings are consistent with the Full Transfer/Partial Access and Full Transfer/Full Access hypotheses. Substitution and omission errors such as those found in the written production data and the article choice data are either due to a syntactic deficit in the Japanese speakers ILGs or the result of lack of knowledge about the syntax-pragmatic interface. I argued that errors continue into advanced stages of acquisition for Japanese L2 learners due to not having yet fully acquired the syntax-pragmatic interface rules in the L2.

References

Avrutin, S. (1999). *Development of the syntax-discourse interface.* Dordrecht; Boston: Kluwer Academic Publishers.

Abney, S. P. (1987). *The English noun phrase in its sentential aspect.* Ph.D. thesis, MIT.

Adger, D. (2003). *Core Syntax.* Oxford: Oxford University Press.

Agathopoulou, E. (2003). *On Functional Features in Second Language Acquisition of Nominal Compounds: Evidence from the Greek-English Interlanguage*. In Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002). In J. M. Liceras, H. Zobl and H. Goodluck (eds.), Somerville, MA. (pp. 1-8). Cascadilla Proceedings Project.

Aikhenvald, A. Y. (2003). *Classifiers: A Typology of Noun Categorization Devices* New York: Oxford University Press.

Allan, K. (1980). Nouns and countability. *Language,* 56, (3), 541-67.

Aoun, J. and Y.-H. A. Li (2003). *Essays on the representational and derivational nature of grammar.* Cambridge, MA: MIT Press.

Athanasopoulos, P. (2005). *The effects of L2 acquisition on cognition: the case of number*. Ph.D. thesis, University of Essex, UK.

Avrutin, S. and D. Brun (2001). *The expression of specificity in a language without determiners: Evidence from child Russian.* In Proceedings of the 25th annual Boston University Conference on Language Development. In A. H.-J Do, L. Domínguez and A. Johansen (eds.), Somerville, MA. (pp. 70-81). Cascadilla Press.

Barner, D. and A. Bale (2002). No nouns, no verbs: Psycholinguistic arguments in favor of lexical underspecification. *Lingua,* 112, 771-91.

Barner, D. and J. Snedeker (2004). Mapping individuation to mass-count syntax in language acquisition. *Paper presented at the 26th Annual Meeting of the Cognitive Science Society.*

Barner, D. and J. Snedeker (2005). Quantity judgments and individuation: Evidence that mass nouns count. *Cognition,* 97, 41-66.

Barner, D. and J. Snedeker (in press). Children's early understanding of mass-count syntax: individuation, lexical content, and the number asymmetry hypothesis. *Language Learning and Development*.

Barner, D., L. Wagner and J. Snedeker (under revision). Events and the ontology of individuals: verbs as a source of individuating nouns.

Bautista, S. (2004). *The acquisition of definite and indefinite articles in L2 English by Adult Spanish Speakers.* Unpublished MA dissertation, University of Essex.

Beard, R. (1987). Morpheme order in a lexeme/morpheme-based morphology. *Lingua,* 72, 1-44.

Bernstein, J. B. (1993). *Topics in the Syntax of Nominal Structure across Romance*. Ph.D. thesis, University of New York, NY.

Bernstein, J. B. (2001). The DP Hypothesis: Identifying Clausal Properties in the Nominal Domain. In M. Baltin and C. Collins (eds.), *The Handbook of Contemporary Syntactic Theory*, (pp. 536-61). Malden, Mass: Blackwell Publishers.

Bickerton, D. (1981). *Roots of Language.* Ann Arbor: Karoma Press.

Bley-Vroman, R. (1989). What is the logical problem of foreign language learning? In S. M. Gass and J. Schachter (eds.), *Linguistic perspectives on second language acquisition*, Cambridge, UK: Cambridge University Press.

Bloom, L. (1970). *Language Development: Form and Function in Emerging Grammars.* Cambridge, MA: MIT Press.

Bloom, P. (1994). Syntax-semantics mappings as an explanation for some transitions in language development. In Y. Levy (ed.), *Other Children, Other Languages: Issues in the Theory of Language Acquisition*, (pp. 41-75). Hillsdale, NJ: Erlbaum.

Bohnacker, U. (1997). Determiner phrases and the debate on functional categories in early child language. *Language Acquisition,* 6, (1), 49-90.

Borer, H. (2005). *In Name Only. Structuring Sense, Volume I.* Oxford: Oxford University Press.

Borer, H. and B. Rohrbacher (2002). Minding the Absent: Arguments for the Full Competence Hypothesis. *Language Acquisition,* 10, (2), 123-75.

Bos, P., Hollebrandse, B. and Sleeman, P. (2004). The pragmatics–syntax and the semantics–syntax interface in acquisition. *IRAL,* 42, 101-10.

Brown, R. (1973). *A First Language. The Early Stages.* Cambridge, MA: Harvard University Press.

Brown, G. and G. Yule (1983). *Discourse Analysis.* Cambridge: Cambridge University Press.

Bruhn de Garavito, J. and L. White (2002). L2 acquisition of Spanish DPs: the status of grammatical features. In A. T. Pérez-Leroux and J. Liceras (eds.), *The acquisition of Spanish morphosyntax: the L1/L2 connection*, (pp. 153-78). Netherlands: Kluwer.

Brun, D. (2004). *What children definitely know about definiteness: Evidence from Russian.* Paper presented at Formal Approaches to Slavic Linguistics 13, South Carolina, US.

Burns, T. and N. Soja (1997). *The Role of the Determiner in the Semantic Interpretation of NP-Type Nouns*. In Proceedings of the 21st Boston University Conference on Language Development. In E. Hughes, M. Hughes and A.Greenhill (eds.), Somerville, MA. Cascadilla Press.

Butler, Y. G. (2002). Second language learners' theories on the use of English articles: An analysis of the metalinguistic knowledge used by Japanese students in acquiring the English article system. *Studies in Second Language Acquisition,* 24, (3), 451-81.

Carstens, V. M. (2000). Concord in minimalist theory. *Linguistic Inquiry,* 31, 319-55.

Casillas-Navarro, G. (2004). The Contextual Complexity Hypothesis: An Alternative Account of the L2 Development of Tense and Agreement Morphology. *Essex Graduate Student Papers in Language and Linguistics,* 6.

Chafe, W. L. (1976). Givenness, Contrastiveness, Definiteness, Subjects, Topics and Points of View. In C. N. Li (ed.), *Subject and Topic*, London: Academic Press.

Chaudron, C. and K. Parker (1990). Discourse markedness and structural markedness: the acquisition of English noun phrases. *Studies in Second Language Acquisition,* 12, 43-64.

Cheng, L. and R. Sybesma (1999). Bare and not-so-bare nouns and the structure of NP. *Linguistic Inquiry,* 30, (4), 509-42.

Chierchia, G. (1998a). Reference to kinds across languages. *Natural Language Semantics,* 6, 339-405.

Chierchia, G. (1998b). Plurality of mass nouns and the notion of 'semantic parameter'. In Rothstein, S. (ed.), *Events and Grammar*, 70, (pp. 53-103). UK: Kluwer Academic Publishers.

Chierchia, G. (2005). *Substance, object and number*. Presentation at Harvard University 18/02/05, Boston, US.

Choi, I. (2005). The Internal Structure of the Korean DP: Evidence from prenominal and postnominal classifiers. *Oxford University Working Papers in Linguistics, Philology & Phonetics,* (10), 21-40.

Chomsky, N. (1965). *Aspects of the Theory of Syntax.* Cambridge Mass.: MIT Press.

Chomsky, N. (1981). *Lectures on Government and Binding.* Foris: Dordrecht.

Chomsky, N. (1995). *The Minimalist Program.* Cambridge, Mass: London: MIT Press.

Chomsky, N. (2005). Three factors in language design, *Linguistic Inquiry* 36: 1-22.

Cinque, G. (1994). Evidence for partial N-movement in the Romance DP. In G. Cinque, J. Koster, J.-Y, Pollock, L. Rizzi, and R. Zanuttini (eds.), *Path Towards Universal Grammar: Studies in Honor of Richard Kayne*, (pp. 85-110). Washington DC: Georgetown University Press.

Clahsen, H. and P. Muysken (1986). The availability of universal grammar to adult and child learners - a study of the acquisition of German word order. *Second Language Research,* 2, (2), 93-119.

Clahsen, H. and P. Muysken (1989). The UG paradox in L2 acquisition. *Second Language Research,* 5, 1-29.

Clahsen, H., S. Eisenbeiss and A. Vainikka (1994). The Seeds of Structure. A Syntactic Analysis of the Acquisition of Case Marking. In T. Hoekstra and B. D. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar*, (pp. 85-118). Philadelphia, Amsterdam: John Benjamins.

Clahsen, H. and P. Muysken (1996). How adult second language learning differs from child first language development. *Behavioural and Brain Sciences,* 19, (4), 721-3.

Coll, J. (2005). *The L2 acquisition of English definite and indefinite articles in L1 Spanish and L1 Chinese adults*. Unpublished MA dissertation, University of Essex, UK.

Colunga, E. and M. Gasser (2002). *Attention to Different Cues in Noun Learning: The Effect of English vs. Spanish Mass/Count Syntax*. In Proceedings of the 26th annual Boston University Conference on Language Development. In B. Skarabela, S. Fish and A. H.-J. Do (eds.), Somerville, MA. (pp. 107-17). Cascadilla Press.

Crisma, P. and E. Tomasutti (2000). *Phonological Effects on Article Omission in the Acquisition of Italian.* In Proceedings of the 24th Annual Boston University Conference on Language Development. In S. Catherine Howell, S. A. Fish and T. K.-Lucas (eds.), Somerville, MA. (pp. 220-31). Cascadilla Press.

Dayal, V. (2004). Number Marking and (In)definiteness in Kind Terms. *Linguistics and Philosophy* 4, (27), 393-450

Demuth, K. (1994). On the 'underspecification' of functional categories in early grammars. In B. Lust, et al. (eds.), *Syntactic Theory and First Language Acquisition: Cross-Linguistic Perspectives*, 1, (pp. 119-34). Hillsdale, N.J: Lawrence Erlbaum Associates.

Demuth, K. (2001a). Prosodic constraints and morphological development. In J. Weissenborn and B. Höhle (eds.), *Approaches to Bootstrapping: Phonological, Syntactic and Neurophysiological Aspects of Early Language Acquisition.*, Amsterdam: Philadelphia: Benjamins.

Demuth, K. (2001b). A prosodic approach to filler syllables. *Journal of Child Language,* 28, 246-9.

Denny, J. P. (1979). Semantic analysis of selected Japanese numeral classifiers for units. *Linguistics,* 17, 317-35.

Deprez, V. and A. Pierce (1994). Crosslinguistic Evidence for Functional Projections in Early Child Grammar. In Hoekstra, T. and B. D. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar*, Philadelphia, Amsterdam: John Benjamins.

Diesing, M. (1992). *Indefinites.* Cambridge, MA: MIT Press.

Dirdal, H. (2005). *Second language acquisition of articles and plural marking by Bengali learners of English*. Ph.D. thesis, University of Cambridge, Cambridge, UK.

Doetjes, J. (1997). *Quantifiers and selection: On the distribution of quantifying expressions in French, Dutch and English*. Ph.D. thesis, Leiden University.

Donnellan, K. (1966). Reference and definite descriptions. In Reprinted in D. Steinberg and L. Jakobovits (eds.), *The Philosophical Review, 75, 281-304. Semantics: An Interdisciplinary Reader in Philosophy, Linguistics, and Psychology*, (pp. 100-14). Cambridge: Cambridge University Press.

Du Plessis, J., D. Solin, L. Travis and L. White (1987). UG or not UG, that is the question: a reply to Clahsen and Muysken. *Second Language Research,* 3, 56-75.

Eisenbeiss, S. (2000). The Acquisition of the DP in German child language. In L. Rizzi and M.-A. Friedemann (eds.), *The Acquisition of Syntax. Studies in Comparative Developmental Linguistics*, (pp. 26-62).

Emslie, H. C. and R. I. Stevenson (1981). Pre-school children's use of the articles in definite and indefinite referring expressions. *Journal of Child Language,* 8, 313-28.

Enç, M. (1991). The Semantics of Specificity. *Linguistic Inquiry,* 22, 1-25.

Epstein, S. D., S. Flynn and G. Martohardjono (1996). Second language acquisition: theoretical and experimental issues in contemporary research. *Behavioural and Brain Sciences,* 19, 677-714.

Epstein, S. D., S. Flynn and G. Martohardjono (1998). The strong continuity hypothesis: some evidence concerning functional categories in adult L2 acquisition. In S. Flynn, G. Martohardjono, W. O'Neil (eds.), *The Generative study of second language acquisition*, (pp. 61-77). Hillsdale, NJ: Erlbaum.

Fodor, J. and I. Sag (1982). Referential and quantificational indefinites. *Linguistics and Philosophy*, 5, 355-98.

Flynn, S. (1996). A parameter-setting approach to second language acquisition. In W. Ritchie and T. Bhatia (eds.), *Handbook of second language acquisition*, San Diego: Academic Press.

Franceschina, F. (2001). Morphological or syntactic deficits in near-native speakers? An assessment of some current proposals. *Second Language Research,* 17, (3), 213-47.

Franceschina, F. (2002). Case and phi-feature agreement in advanced L2 Spanish grammars. In S. Foster-Cohen (ed.), *EUROSLA Yearbook*, 2, (pp. 71-86). Amsterdam: John Benjamins.

Fukui, N. (1995). *Theory of projection in Syntax.* Tokyo: CSLI publications. Kurosio publishers.

Fukui, N. and Y. Takano (2000). Nominal structure: An extension of the symmetry principle. In P. Svenonius (ed.), *The Derivation of VO and OV*, Linguistics Today 31, (pp. 219-55). Amsterdam: John Benjamins.

Garton, A. F. (1983). An approach to the study of determiners in early language development. *Journal of Psycholinguistic Research,* 12, 513-25.

Gennari, S. and K. Demuth. (1997). *Syllable omission in Spanish.* In Proceedings of the 21st Annual Boston University Conference on Language Development. In E. M. Hughes and A. Green (eds.), Somerville, MA. (pp. 182-93). Cascadilla Press.

Gil, D. (1987). Definiteness, noun phrase, configurationality and count-mass distinction. In Reuland, E. J. and A. G. B. ter Meulen (eds.), *The Representation of (In)definiteness*, (pp. 254-69.). Mass: MIT Press.

Giusti, G. and R. Gozzi (2005). *The acquisition of determiners: Evidence of the Full Competence Hypothesis.* Poster presented at Generative Approaches to Language Acqusition 2005, Siena, Italy.

Goad, H. and L. White (2004). Ultimate attainment of L2 inflections: Effects of L1 prosodic structure. In S. Foster-Cohen, Ota, M., M.A. Sharwood Smith, and A. Sorace, (eds.), *EUROSLA Yearbook*, 4, (pp. 119-45). Amsterdam: John Benjamins.

Goad, H. and L. White (2005). *Representational 'deficits' in L2: syntactic or phonological?* In Proceedings of the 29th annual Boston University Conference on Language Development. In A. Brugos, M. R. Clark-Cotton and S. Ha (eds.), Somerville, MA. (pp. 216-27). Cascadilla Press.

Goad, H. and L. White (2006). *Prosodic Transfer: L1 Effects on the Production of L2 Determiners.* In Proceedings of the 30th Annual Boston University Conference on Language Development. In D. Bamman, T. Magnitskaia and C. Zaller (eds.), Somerville, MA. Cascadilla Press.

Goad, H., L. White and J. Steele (2003a). Missing inflection in L2 acquisition: Defective syntax or L1-constrained prosodic representations? *Canadian Journal of Linguistics,* 48, 243-63.

Goad, H., L. White and J. Steele (2003b). *Missing surface inflection in L2 acquisition: A prosodic account.* In Proceedings of the 27th Annual Boston University Conference on Language Development. In B. Beachley, A. Brown and F. Conlin (eds.), Somerville, MA. (pp. 264-75). Cascadilla Press.

Gordon, P. (1982). *The acquisition of syntactic categories: The case of the count/mass distinction.* Ph.D. thesis, MIT.

Gordon, P. (1985). Evaluating the semantic categories hypothesis: the case of the mass/count distinction. *Cognition,* 20, 209-42.

Gualmini, A. (2000). The acquisition of ontological categories: the mass nouns issue. *University of Maryland Working Papers in Linguistics,* 9, 71-89.

Guasti, M., T., J. d. Lange., A. Gavarró and C. Caprin (2004). *Article Omission: across Child Languages and across Special Registers.* In Proceedings of the Generative Approaches to Language Acquisition 2003 Conference. In J. van Kampen and S. Baauw (eds.), Utrecht: LOT. (pp. 199-210).

Guasti, M. T. and A. Gavarró (2003). *Catalan as a test for hypothesis concerning article omission.* In Proceedings of the 27th Annual Boston University Conference on Language Development. In B. Beachley, A. Brown and F. Conlin (eds.), Somerville: MA. (pp. 288-98). Cascadilla Press.

Gundel J. K, N. Hedberg and R. Zacharski (1993). Cognitive status and the form of referring expressions in discourse. *Language,* 69, (2), 274-307.

Gürel, A. (2005). *The acquisition on new syntactic categories in the ultimate L2 state.* Paper presented at EUROSLA 15, Hotel Dubrovnik Palace, Croatia.

Halle, M. and A. Marantz (1993). Distributed Morphology and the Pieces of Inflection. In S. J. Keyser and K. Hale. (eds.), *The View from Building: Essays in Linguistics in Honor of Sylvain Bromberger*, 20, (pp. 111-76). Cambridge, MA: MIT Press.

Halle, M. and A. Marantz (1994). Some Key Features of Distributed Morphology. In A. Carnie and H. Harley (eds.), *MIT Working Papers in Linguistics 21: Papers on Phonology and Morphology*, (pp. 275-88). Cambridge, MA: MITWPL.

Harley, H. and R. Noyer (1999). State-of-the-Article: Distributed morphology. *Glot International,* 4.4, 3-9.

Harris, J. W. (1983). *Syllable structure and stress in Spanish.* Cambridge, MA: MIT Press.

Harris, J. W. (1991). The exponence of gender in Spanish. *Linguistic Inquiry,* 22, (1), 27-62.

Hawkins, J. A. (1978). *Definiteness and Indefiniteness: a study in reference and grammaticality prediction.* London: Croom Helm.

Hawkins, J. A. (2004). *Efficiency and complexity in grammars.* Oxford; New York: Oxford University Press.

Hawkins, R. (2000). Persistent selective fossilisation in second language acquisition and the optimal design of the language faculty. *Essex Research Reports in Linguistics,* 34, 75-90.

Hawkins, R. (2005). Explaining Full and Partial Success in the Acquisition of Second Language Grammatical Properties. *Second Language,* 4, 7-25.

Hawkins, R. and Y. Chan. (1997). The partial availability of UG in SLA: the failed functional features hypothesis. *Second Language Research,* 13, (3), 187-226.

Hawkins, R. and F. Franceschina (2004). Explaining the acquisition and non-acquisition of determiner-noun gender concord in French and Spanish. In J. Paradis and P. Prévost (eds.), *In the acquisition of French in different contexts*, (pp. 175-205). Amsterdam: John Benjamins.

Hawkins, R. and S. Liszka (2003). Locating the source of defective past tense marking in advanced L2 English speakers. In R. van Hout, A. Hulk, F. Kuiken and R. Towell (eds.), *In The Lexicon-Syntax Interface in Second Language Acquisition*, (pp. 21-44). Amsterdam: John Benjamins.

Hawkins, R., S. Al-Eid, I. Almahboob, P. Athanasopoulos, R. Chaengchenkit, J. Hu, M. Rezai, C. Jaensch, Y. Jeon, A. Jiang, I. Leung, K. Matsunaga, M. Ortega, G. Sarko, N. Snape and K. Velasco-Zarate. (2006). Accounting for English article interpretation by L2 speakers. In Foster-Cohen, S. H., Marta Medved Krajnovic and Jelena Mihaljević Djigunović (eds.), *EUROSLA Yearbook*, 6, (pp. 7 - 25). Amsterdam: John Benjamins.

Hawkins, R., S. Al-Eid, I. Almahboob, P. Athanasopoulos, R. Chaengchenkit, J. Hu, M. Rezai, C. Jaensch, Y. Jeon, A. Jiang, I. Leung, K. Matsunaga, M. Ortega, G. Sarko, N. Snape and K. Velasco-Zarate (in progress). Non-target-like Article Use in English: Implications for Current UG-based Theories of SLA. University of Essex, UK.

Heim, I. (1982). *The Semantics of Definite and Indefinite Noun Phrases*. Ph.D. thesis, University of Massachusetts, Amherst.

Heim, I. (1983). File Change Semantics and the Familiarity Theory of Definiteness. In Bèauerle, R., C. Schwarze and A. Von Stechow (eds.), *Meaning, use, and interpretation of language*, Berlin: de Gruyter.

Heim, I. (1991). Articles and definiteness. In Stechow, A. and D. Wunderlich (eds.), *Handbook of Semantics. an international handbook of contemporary research* (pp. 487-535). Berlin: W. de Gruyter.

von Heusinger, K. (2002). Specificity and definiteness in sentence and discourse structure. *Journal of Semantics,* 19, 245-74.

Hiki, M. (1990). The judgement of noun countability by Japanese college students: Where is the difficulty? *JACET Bulletin,* 21, 19-38.

Hiki, M. (1991). *A Study of Learners' Judgement of Noun Countability.* Ph.D. thesis, Indiana University.

Hiki, M. (1993). An exploratory study into variation in native speaker judgments of noun countability. *SFC Journal of Language and Communication,* 2, 99-126.

Hironobu, H. (2005). *-tachi plurals in Japanese: Evidence from L2 language acquisition.* Poster presented at the 5th Japan Second Language Association conference, Osaka, Japan.

Hoekstra, T., N. Hyams and M. Becker (1997). *The Underspecification of Number and the Licensing of Root Infinitives.* In Proceedings of the 21st Annual Boston University Conference on Language Development. In E. Hughes, A. Brown and F. Conlin (eds.), Somerville, MA. (pp. 293-306). Cascadilla Press.

Hopp, H. (2004). Syntactic and interface knowledge in advanced near-native interlanguage grammars. In Foster-Cohen, S, M. A. Sharwood Smith, A. Sorace, and M. Ota, (eds.), *EUROSLA Yearbook*, 4, (pp. 67 - 94). Amsterdam: John Benjamins.

Hua, D. and T. H.-t. Lee (2005). *Chinese ESL Learners' Understanding of the English Count-Mass Distinction.* In Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference (GASLA 2004). In L. Dekydtspotter, R. A. Sprouse and A. Liljestrand (ed.), Somerville, MA. (pp. 138-49). Cascadilla Proceedings Project.

Huebner, T. (1985). System and variability in interlanguage syntax. *Language Learning,* 35, 141-63.

Hyams, N. (1996). The Underspecification of Functional Categories in Early Grammar. In Clahsen, H. (ed.), *Generative Perspectives on Language Acquisition. Empirical Findings, Theoretical Considerations and Crosslinguistic Comparisons*, Amsterdam: John Benjamins.

Imai, M. and D. Gentner (1997). A cross-linguistic study on early word meaning. Universal ontology and linguistic influence. *Cognition,* 62, 169-200.

Imai, M. and R. Mazuka (2003). Reevaluating Linguistic Relativity: Language-specific categories and the role of universal ontological knowledge in the construal of individuation. In D. Gentner and S. Goldin-Meadow (eds.), *Language in Mind: Advances in the issues of language and thought*: MIT Press.

Inagaki, S. and D. Barner (2006). *Lexical and syntactic sources of individuation: Evidence from quantity judgment in Japanese and English.* Paper presented at the 8th Annual International Conference of the Japanese Society for Language Sciences (JSLS 2006), International Christian University, Tokyo (June 10-11, 2006).

Ionin, T. (2003a). *Article semantics in second language acquisition.* Ph.D. thesis, MIT, Distributed by MIT Working Papers in Linguistics.

Ionin, T. (2003b). *The interpretation of 'the': A new look at articles in L2-English.* In Proceedings of the 27th Boston University Conference on Language Development. In B. Beachley, A. Brown and F. Conlin (eds.), Somerville, MA. (pp. 346-57). Cascadilla Press.

Ionin, T. (2005). Japanese and Spanish: questions about flucutuation. Personal communication via e-mail.

Ionin, T. (in press). *This* is definitely specific: specificity and definiteness in article systems. *Natural Language Semantics (revised version: September 22, 2005).*

Ionin, T. and K. Wexler (2003). *The Certain Uses of the in L2-English.* In Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference. In J. M. Liceras, H. Zobl and H. Goodluck (eds.), Somerville, MA. (pp. 150-60.). Cascadilla Press.

Ionin, T., H. Ko and K. Wexler (2003). *Specificity as a grammatical notion: Evidence from L2-English article use.* In Proceedings of the West Coast Conference on Formal Linguistics. In G. Garding and M. Tsujimura (eds.), Somerville, MA. (pp. 245-58). Cascadilla Press.

Ionin, T., H. Ko. and K. Wexler (2004). Article semantics in L2-acquisition: the role of specificity. *Language Acquisition,* 12, (1), 3-69.

Ionin, T., H. Ko. and K. Wexler (in press). The role of semantic features in the acquisition of English articles by Russian and Korean speakers. In Liceras, J. M., et al (ed.), *The role of formal features in second language acquisition, Second language research acquisition series (Theoretical and Methodological Issues)*: Lawrence Erlbaum Associates.

Ionin, T., M. L. Zubizarreta and S. B. Maldonado (submitted). Sources of linguistic knowledge in the second language acquisition of English articles. *to appear in a special issue of Lingua. [manuscript, last revised March 2006].*

Ishii, Y. (2000). Plurality and definiteness in Japanese. In Inuoe, K. (ed.), *Grant-in-Aid for COE Research Report (4): Researching and Verifying an Advanced Theory of Human Language*, (pp. 69-86). Chiba, Japan: Kanda University of International Studies.

Jin, J. (2003). Acquisition of L2 English DP by Korean children. *Reading Working Papers in Linguistics,* 7, 77-102.

Karafistan, B. (2005). *The Acquisition of English articles by adult Cypriot Turkish Speakers*. Unpublished MA dissertation, University of Essex, UK.

Kakegawa, T. (2000). Definiteness and the structure of noun phrase in Japanese. *MIT Working Papers in Linguistics,* 38, 127-41.

Karmiloff-Smith, A. (1979). *A Functional Approach to Child Language.* Cambridge, UK: Cambridge University Press.

Kawashima, R. (1998). The structure of extended nominal phrases: The scrambling of numerals, approximate numerals and quantifiers in Japanese. *Journal of East Asian Linguistics,* 7, 1-26.

Kitahara, H. (1993). Numeral Classifier Phrases Inside DP and the Specificity Effect. In Choi, S. (ed.), *Japanese/Korean Linguistics*, 3, Stanford University: CSLI.

Ko, H., T. Ionin and K. Wexler (in press). *Adult L2-learners lack the Maximality presupposition, too!* In Proceedings of the 1st Generative Approaches to Language Acquisition in North America. Hawaii, US. MIT Working Papers in Linguistics.

Kowaluk, A. (2001). *The Development of Pronouns and Determiners in the Second Language: A Study of Polish Learners of English.* Ph.D. thesis, University of Cambridge, Cambridge, UK.

Krashen, S. and T. D. Terrell (1983). *The Natural Approach.* Pergamon.

Kupisch, T. (2006). *The acquisition of determiners in bilingual German-Italian and German-French children.* LINCOM Studies in Language Acquisition 17: Lincom GmbH.

Kurafuji, T. (2004). Plural Morphemes, Definiteness and the Notion of Semantic Parameter. *Language and Linguistics,* 5, (1), 211-42.

Kuribara, C. (1999). Resettability of a syntactic parameter: Acquisition of category D in English by adult Japanese speakers. Representation and Process. In P. Robinson (ed.), *Proceedings of the 3rd Pacific Second Language Research Forum*, 1, (pp. 13-22.). Tokyo: PacSLRF.

Kuribara, C. (2000). *Resettability of UG Parameters in SLA: Acquisition of Functional Categories by Adult Japanese Learners of English.* Ph.D. thesis, University of Reading, Reading, UK.

Lambrecht, K. (1994). *Information Structure and Sentence Form.* Cambridge, UK: Cambridge University Press.

Lardiere, D. (1998a). Case and tense in the 'fossilized' steady state. *Second Language Research,* 14, 1-26.

Lardiere, D. (1998b). Dissociating syntax from morphology in a divergent end-state grammar. *Second Language Research,* 14, 359-75.

Lardiere, D. (2000). Mapping features to forms in SLA. In J. Archibald (ed.), *Second language acquisition and linguistic theory*, (pp. 102-29). Oxford: Blackwell.

Lardiere, D. (2003). *Second Language Knowledge of [±Past] vs. [±Finite].* In Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002). In J. M. Liceras, H. Zobl and H. Goodluck (eds.), Somerville, MA. (pp. 176-89). Cascadilla Proceedings Project.

Lardiere, D. (2004). *Knowledge of definiteness despite variable article omission in second language acquisition.* In Proceedings of the 28th Boston University Conference on Language Development. In A. Brugos, L. Micciulla and C. E. Smith (eds.), Somerville, MA. Cascadilla Press.

Lardiere, D. (2005). *On Morphological Competence.* In Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference (GASLA 2004). In L. Dekydtspotter, R. A. Sprouse and A. Liljestrand (ed.), Somerville, MA. (pp. 178-92). Cascadilla Proceedings Project.

Lardiere, D. and B. D. Schwartz (1997). Feature-marking in the L2 development of deverbal compounds. *Journal of Linguistics,* 33, 325-53.

Larson, R. and G. Segal (1995). *Knowledge of meaning. An introduction to semantic theory.* Cambridge Mass: MIT Press.

Lee, C. (1989). Indefinites, case markers, classifiers and quantifiers in Korean. *Harvard Studies in Korean Linguistics,* (3).

Lenneberg, E. (1967). *Biological Foundations of Language.* New York: Wiley & Sons.

Leung, Y.-k. I. (2001). *The initial state of L3A: Full Transfer and Failed Features?* In Proceedings of the 4th Second Language Research Forum The Past, Present and Future of Second Language Research: . In X. Bonch-Bruevich, et al. (eds.), Somerville, MA. (pp. 55-75). Cascadilla Press.

Li, C. and S. Thompson (1981). *Mandarin Chinese: a functional reference grammar.* Berkeley: University of California Press.

Li, Y.-H. A. (1998). Argument determiner phrase and number phrases. *Linguistic Inquiry, 29,* 693-702.

Li, Y.-H. A. (1999). Plurality in a classifier language. *Journal of East Asian Linguistics, 8,* 75-9.

Li, P., D. Barner and B. Huang (2005). *Is there count-mass distinction in classifier languages? A case study of Mandarin Chinese.* Poster presented at the 30th Boston University Conference on Language Development, Boston, MA.

Liu, D. and J. L. Gleason (2002). Acquisition of the article *the* by non-native speakers of English: An Analysis of Four Nongeneric Uses. *Studies in Second Language Acquisition, 24,* 1-26.

Lleó, C. (2001). The Interface of Phonology and Syntax. The emergence of the article in the early acquisition of Spanish and German. In J. Weissenborn and B. Höhle (eds.), *Approaches to Bootstrapping: Phonological, Syntactic and Neurophysiological Aspects of Early Language Acquisition*, Amsterdam, Philadelphia: John Benjamins.

Lleó, C. and K. Demuth (1999). *Prosodic Constraints on the Emergence of Grammatical Morphemes: Crosslinguistic Evidence from Germanic and Romance Languages.* In Proceedings of the 23rd Boston University Conference on Language Development. In A. Greenhill, et al. (eds.), Somerville, MA. (pp. 407-18). Cascadilla Press.

Longobardi, G. (1994). Reference and proper names: a theory of N-movement in syntax and logical form. *Linguistic Inquiry, 25,* 609-66.

Longobardi, G. (2001). The structure of DPs: Some principles, parameters and problems. In M. Baltin and C. Collins (eds.), *The handbook of contemporary syntactic theory*, (pp. 562-604). Malden, MA: Blackwell.

Lumsden, J. (1992). Underspecification in grammatical and natural gender. *Linguistic Inquiry, 23,* (3), 469-86.

Lyons, C. (1999). *Definiteness.* Cambridge, UK: Cambridge University Press.

Margaza, P. and A. Bel (2006). *Null subjects at the syntax-pragmatics interface: evidence from Spanish interlanguage of Greek speakers.* Paper presented at the 8th Generative Approaches to Second Language Acquisition Conference, Banff, Canada.

Maratsos, M. P. (1974). Preschool Children's Use of Definite and Indefinite Articles. *Child Development, 45,* 446-55.

Maratsos, M. P. (1976). *The Use of Definite and Indefinite Reference in Young Children.* Cambridge, UK: Cambridge University Press.

Master, P. (1990). Teaching the English articles as a binary system. *TESOL Quarterly,* 24, (3), 461-78.

Matthewson, L., T. Bryant and T. Roeper (2001). *A Salish Stage in the Acquisition of English Determiners: Unfamiliar 'Definites'.* In Proceedings of the SULA: The semantics of under-represented languages in the Americas. University of Massachusetts Occasional Papers in Linguistics.

Matushansky, O. (2005). *Iraqi head seeks arms: Are bare nouns created equal?* A Bare Workshop. Utrecht Institute of Linguistics OTS, Utrecht; The Netherlands.

McCarthy, C. (2004). *Default morphology in second language: The Morphological Underspecification Hypothesis.* Poster presented at the 29th Boston University Conference on Language Development, Boston, MA.

McCarthy, C. (2005). *Default Morphology in Second Language Spanish: Missing Inflection or Underspecified Inflection?* Linguistic Symposium on Romance Languages (LSRL 35), Austin, Texas.

Miyakoda, H. (2005). The prosodic structure in Japanese acquisition. In M. Tzakosta, et al. (eds.), *Developmental Paths in Phonological Acquisition*, 2.1, (pp. 39-51). Leiden Papers in Linguistics.

Munn, A. and C. Schmitt (2005). Number and Indefinites. *Lingua,* 115, 821-55.

Muromatsu, K. (2003). Classifiers and the count/mass distinction. In Y. H. A. Li and A. Simpson (eds.), *Functional Structure(s), form and interpretation: perspectives from east Asian languages.,* London: Routledge, Curzon.

Murphy, S. (1997). *Knowledge and production of English articles by advanced second language learners.* Ph.D. thesis, University of Texas, Austin.

Nakanishi, K. and S. Tomioka (2004). Japanese plurals are exceptional. *Journal of East Asian Linguistics*, 13, (pp. 113-40). Printed in the Netherlands: Kluwer Academic Publishers.

Nespor, M. and I. Vogel (1986). *Prosodic Phonology.* Foris: Dordrecht.

Nicolas, D. (1997). *Count nouns, mass nouns and their acquisition.* Ph.D. thesis, McGill University.

Nicolas, D. (2004). Is there anything characteristic about the meaning of a count noun? *Revue de la Lexicologie,* N° 18-19.

Ota, M. (2005). Japanese prosodic structure. Personal communication via e-mail.

Öztürk, B. (2005). *Case, Referentiality and Phrase Structure.* Amsterdam: John Benjamins.

Pacheco, S. and S. Flynn (2006). *Syntax-pragmatics interface: Brazilian-Portuguese L2 acquisition of English.* Paper presented at the 8th Generative Approaches to Second Language Acquisition Conference, Banff, Canada.

Papafragou, A. (in press). Relations between language and thought: Individuation and the count/mass distinction. In C. Lefebvre and H. Cohen (eds.), *Handbook of Categorization in Cognitive Science*, Oxford: Elsevier Science.

Parrish, B. (1987). A new look at methodologies in the study of article acquisition for learners of ESL. *Language Learning,* 37, 361-83.

Partee, B. H. (in press). A note on Mandarin possessives, demonstratives, and definiteness. In Ward, G. and B. Birner (eds.), *Drawing the Boundaries of Meaning: Neo-Gricean Studies in Pragmatics and Semantics in Honor of Laurence R. Horn*, Amsterdam: John Benjamins.

Pérez-Leroux, A. T. and J. M. Liceras (2002). *The acquisition of Spanish morphosyntax : the L1/L2 connection.* Dordrecht: Kluwer Academic.

Pérez-Leroux, A. T., A. Munn, C. Schmitt and M. DeIrish (2003). *Learning definite determiners: Genericity and definiteness in English and Spanish.* In Proceedings of the 28th Boston University Conference on Language Development. In B. Beachley, A. Brown and F. Conlin (eds.), Somerville, MA., Cascadilla Press.

Pesetsky, D. and E. Torrego (2004). *The Syntax of Valuation and the Interpretability of Features*. MIT and UMass/Boston. Unpublished manuscript.

Poser, W. J. (1990). Word-internal phrase boundary in Japanese. In S. Inkelas and D. Zec (eds.), *The Phonology-Syntax Connection*, (pp. 279-87). Stanford University and University of Chicago Press.

Prévost, P. and L. White (2000). Missing surface inflection or impairment? Evidence from tense and agreement. *Second Language Research,* 16, (2), 103-33.

Prince, E. (1981). On the Inferencing of Indefinite-This NPs. In A. K. Joshi, B. L. Webber and I. A. Sag (eds.), *Elements Of Discourse Understanding*, (pp. 231-50). Cambridge, UK: Cambridge University Press.

Radford, A. (1990a). *Syntactic Theory and the Acquisition of English Syntax. The nature of early child grammars of English.* Oxford: Blackwell.

Radford, A. (1990b). The Syntax of Nominal Arguments in Early Child English. *Language Acquisition,* 1, 195-223.

Radford, A. (1991). *On the Syntax of Determiners in English.* In Proceedings of the 4th International Symposium on Greek-English Contrastive Linguistics.

Radford, A. (2000). Children in search of perfection: Towards a minimalist model of language acquisition. *Essex Research Reports in Linguistics,* 34, 57-74

Radford, A. (2004a). *Concord, Agreement and feature-checking.* Unpublished paper, University of Essex, UK.

Radford, A. (2004b). *A note. concord, agreement and acquisition.* Unpublished paper, University of Essex, UK.

Radford, A. (2005). *Minimalist Syntax Revisited.* http://courses.essex.ac.uk/lg/lg514.

Reid, J., P. Battaglia, M. Schuldt, E. Narita, M. Mochizuki and N. Snape (2006). *The article choice of learners of English as a second language.* Unpublished term paper, University of Essex, UK.

Reinelt, R. (1999). *How Japanese got an article.* Presented at AILA 12th World Congress of Applied Linguistics Conference.

Ritter, E. (1991). Two functional categories in Noun Phrases: Evidence from Modern Hebrew. In S. Rothstein (ed.), *Syntax and Semantics 25: Perspectives on Phrase Structure*, (pp. 37-62). New York: Academic Press.

Rivero, M. L. (1975). Referential properties of Spanish noun phrases. *Language,* 51, (1), 32-48.

Robertson, D. (2000). Variability in the use of the English article system by Chinese learners of English. *Second Language Research,* 16, (2), 135-72.

Roca, I. and W. Johnson (1999). *A course in phonology.* Oxford: Blackwell Ltd.

Roeper, T. (2003). *Watching Nounphrases Emerge; Seeking Compositionality.* Netherlands: Kluwer Academic Publishers.

Saito, M. and K. Murasugi (1990). N'- deletion in Japanese: A preliminary study. In Hoji, H. (ed.), *Japanese/Korean Linguistics*, 1, Stanford University: CSLI.

Schaeffer, J., A. Hacohen and A. Bernstein (2003). *The dissociation between grammar and pragmatics: Evidence from English SLI.* In Proceedings of the 19th Israel Association of Theoretical Linguistics. In Y. N. Falk (ed.), Ben Gurion University of the Negev.

Schaeffer, J. and L. Matthewson (2005). Grammar and Pragmatics in the Acquisition of Article Systems. *Natural Language and Linguistic Theory,* 23, 53-201.

Schafer, R. and J. deVilliers (2000). *Imagining articles: What a and the can tell us about the emergence of DP.* In Proceedings of the 24th Boston University Conference on Language Development. In S. C. Howell, et al. (eds.), Somerville, MA. Cascadilla Press.

Schmitt, C. and A. Munn (1999). Against the Nominal Mapping Parameter: Bare nouns in Brazilian Portuguese. In P. Tamanji, M. Hirotani and N. Hall (eds.), *Proceedings of NELS,* 28, Amherst, MA: GSLA.

Schwartz, B. D. (1996). Now for some facts, with a focus on development and an explicit role for the L1. *Behavioural and Brain Sciences,* 19, 739-40.

Schwartz, B. D. (1998a). On two hypotheses of 'Transfer' in L2A: Minimal Trees and Absolute Ll Influence. In S. Flynn, G. Martohardjono and W. O'Neil (eds.), *The generative study of second language acquisition*, (pp. 35-59). Mahwah, NJ: Erlbaum.

Schwartz, B. D. and R. A. Sprouse (1994). Word Order and Nominative Case in Nonnative language Acquisition: A Longitudinal Study of (L1 Turkish) German Interlanguage. In T. Hoesktra and B. D. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar*, (pp. 317-68). Amsterdam: John Benjamins.

Schwartz, B. D. and R. A. Sprouse (1996). L2 cognitive states and the Full Transfer/Full Access model. *Second Language Research,* 12, (1), 40-72.

Selkirk, E. and K. Tateishi (1988). Constraints on minor phrase formation in Japanese. In L. MacLeod, et al. (eds.), *Papers from the 24th Annual Regional Meeting of the Chicago Linguistic Society*, (pp. 316-36). Chicago: CLS.

Selkirk, E. (1996). The prosodic structure of function words. In Morgan, J. L. and K. Demuth (eds.), *Signal to Syntax: Bootstrapping from speech to grammar in early acquisition*, (pp. 187-213). Mahwah, NJ: Lawrence Erlbaum Associates.

Shaw, J. (2005). *Pitch accent production by native and non-native speakers of Japanese.* BA dissertation, University of Oregon, Oregon.

Shikano, M. (2001). Emergence of English Articles in Naturalistic Second Language Acquisition. *Aspects of Psycholinguistics, Second Language Acquisition and Language Education*, 167-84.

Shin-ichi, I. (1991). Variation in interlanguage with special reference to articles and pronouns. *ARELE,* 2, 1-10.

Shirahata, T. (1988). The learning order of English grammatical morphemes by Japanese high school students. *JACET Bulletin,* 19, 83-102.

Shirahata, T. (1995). The Japanese learner's long-term attainment in English articles. *JACET Bulletin,* 26, 113-30.

Simpson, A. and X.-Z. Z. Wu (2000). The grammaticalization of formal nouns and nominalizers in Chinese, Japanese and Korean. In T. E. McAuley (ed.), *Language Change in East Asia*, (pp. 250-83). Curzon.

Sio, J. (2006). *Modification and reference in the Chinese nominal.* Ph.D. thesis, University of Leiden, The Netherlands.

Smith, N. V. and I. M. Tsimpli (1995). *The mind of a savant: language learning and modularity.* Oxford: Blackwell.

Snape, N. (2002). *Variability in the use of the English article system by Japanese learners of English.* Unpublished MA dissertation, University of Essex, UK.

Snape, N. (2005a). The use of articles in L2 English by Japanese and Spanish learners. *Essex Graduate Student Papers in Language and Linguistics,* 7, 1-23.

Snape, N. (2005b). The certain uses of articles in L2-English by Japanese and Spanish speakers. *Durham and Newcastle Working Papers in Linguistics,* 11, 155-68.

Snape, N. (2005c). *Article use in L2 English: Missing Surface Inflection Hypothesis (MSIH) or Representational Deficit Hypothesis (RDH)?* In Proceedings of the CamLing Conference. (pp. 159-65).

Snape, N. (in press). *L2 acquisition of definiteness and specificity in English by advanced Japanese and Spanish learners.* Language Acquisition and Development. Proceedings of the Generative Approaches to Language Acquisition Conference 2005, (pp. 591-6). Cambridge, UK: Cambridge Scholars Press/CSP.

Snape, N., Leung, Y-K. I, and Ting H-C (2006). *Comparing Chinese, Japanese and Spanish in L2 English article acquisition: Evidence against the Fluctuation Hypothesis?* Paper presented at the 8th Generative Approaches to Second Language Acquisition Conference, Banff, Canada.

Soja, N. N. (1992). Inferences about the meanings of nouns: The relationship between perception and syntax. *Cognitive Development,* 7, 29-45.

Sorace, A. (1996). On gradience and optionality in non-native grammars. *Behavioural and Brain Sciences,* 19, 741-2.

Sprouse, R. (1996). Appreciating the poverty of the stimulus in second language acquisition. *Behavioural and Brain Sciences,* 19, 742-3.

Stockwell, R., J. D. Bowen and J. W. Martin (1965). *The grammatical structures of English and Spanish.* Chicago Illinois, USA: University of Chicago Press.

Syndicate, U. C. L. E. (2001). Quick Placement Test. Oxford: Oxford University Press.

Takahashi, T. (1997). Japanese learners' acquisition and use of the English article system. *Edinburgh Working Papers in Applied Linguistics,* 8, 98-110.

Tarone, E. and B. Parrish (1989). Task related variation in interlanguage: The case of articles. *Language Learning,* 38, 21-44.

Tateishi, K. (1994). *The syntax of subjects.* Stanford, Calif.: Center for the Study of Language and Information.

Tawa, K. (1993). Interpretation of definiteness: with special reference to Japanese. *Word,* 44, (3), 379-96.

Thomas, M. (1989). The acquisition of English articles by first- and second-language learners. *Applied Psycholinguistics,* 10, 335-55.

Ticio, M., E. (2001). *Definite generics in Spanish.* Paper presented at the 4th Conference on the Acquisition of Spanish & Portuese as First and Second Languages together with the Fifth Hispanic Linguistics Symposium, University of Illinois at Urbana-Champaign.

Ticio, M., E. (2003). *On the structure of DPs.* Ph.D. thesis, University of Connecticut.

Ting, H. C. (2005). *The acquisition of articles in L2 English by L1 Chinese and L1 Spanish speakers.* Unpublished MA dissertation, University of Essex, UK.

Tomioka, S. (2003). The semantics of Japanese null pronouns and its cross-linguistic implications. In Schwabe, K. and S. Winkler (eds.), *The interfaces: Deriving and interpreting omitted structures,* 61, Amsterdam: John Benjamins.

Trademan, J. E. (2002). *The acquisition of the English article system by native speakers of Spanish and Japanese: a cross-linguistic comparison.* Ph.D. thesis, University of New Mexico, Albuquerque, US.

Trenkic, D. (2000). *The acquisition of English articles by Serbian speakers.* Ph.D. thesis, University of Cambridge, Cambridge, UK.

Trenkic, D. (2002b). Form-meaning connections in the acquisition of English articles. In Foster-Cohen, S., et al. (eds.), *EUROSLA Yearbook,* 2, (pp. 115-33). Amsterdam: John Benjamins.

Trenkic, D. (in press). Variability in L2 article production - beyond the representational deficit vs. processing constraints debate. *Second Language Research.*

Tsimpli, I. M. and A. Roussou (1991). Parameter-resetting in L2? *UCL Working Papers in Linguistics,* 3, 149-70.

Tsimpli, I. M. (in press). Features in L1 and L2 acquisition: evidence from Greek clitics and determiners. In H. Hendricks (ed.), *Special Issue of AILE.*

Tsimpli, I. M. and M. Mastropavlou (in press). Clitics and Determiners in child L1, child L2 and SLI: evidence from Greek. In H. Goodluck, J. Liceras and H. Zobl (eds.), *Features and Minimalism in Language Acquisition*: Benjamins Publishing Company.

Tsoulas, G. (2005). *Greek mass nouns and the Inherent Plurality Hypothesis.* Paper presented at the University of Essex, UK.

Tsujimura, N. (1996). *An introduction to Japanese linguistics.* Cambridge, Mass; Oxford: Blackwell.

Vainikka, A. and M. Young-Scholten (1996). Partial transfer, not partial access. *Behavioural and Brain Sciences,* 19, 744-5.

Vainikka, A. and M. Young-Scholten (1998). The initial state in L2 acquisition of phrase structure. In S. Flynn, G. Martohardjono and W. O'Neil (eds.), *The generative study of second language acquisition*, (pp. 17-34). Mahwah, NJ: Erlbaum.

Valois, D. (1991). *The Internal Syntax of DP*. Ph.D. thesis, UCLA, Los Angeles.

Velasco-Zarate, K. (2005). *L2 acquisition of the Spanish article system: Evidence from L1 English and L1 Japanese (in progress)*. Paper presented at the University of Essex, UK.

Vincent, M. (in progress). *Aspects of Agreement in French: a minimalist approach.* Ph.D. thesis, University of Essex, UK.

Wakabayashi, S. (1997). *The acquisition of functional categories by learners of English.* Unpublished Ph.D. thesis, University of Cambridge, Cambridge, UK.

Wakabayashi, S. (1998). Systematicity in the Use of the Definite Article by Japanese Learners of English. *Gunma kenritsu joshi daigaku kiyo,* 19.

Warden, D. A. (1976). The influence of context on children's use of identifying expressions and references. *British Journal of Psychology,* 67, 101-12.

Watanabe, A. (2006). Functional projection of nominals in Japanese: syntax of classifiers. *Natural language and linguistic theory.,* 24, 241-306.

Wexler, K. (in press). Maximal trouble: cues don't explain learning. In Gibson, E. and N. Pearlmutter (eds.), *The Processing and Acquisition of Reference*, Cambridge, MA: MIT Press.

White, L. (1996). UG, the L1, and questions of evidence. *Behavioural and Brain Sciences,* 19, 745-6.

White, L. (2000). Second language acquisition: from initial to final state. In J. Archibald (ed.), *Second language acquisition and linguistic theory*, (pp. 130-55). Blackwell.

White, L. (2003). Fossilization in steady state L2 grammars: implications of persistent problems with inflectional morphology. *Bilingualism: Language and Cognition,* 6, (2), 129-41.

White, L., E. Valenzuela, M. K. Macgregor and Y. k. I. Leung (2004). Gender and number agreement in non-native Spanish. *Applied Psycholinguistics,* 25 (1), 105-33.

Yoon, K. K. (1993). Challenging prototype descriptions: Perception of noun countability and indefinite vs. zero article use. *International Review of Applied Linguistics,* 31, 269-89.

Young, R. (1996). Form-function relations in articles in English interlanguage. In R. Bayley and D. R. Preston (eds.), *Second language acquisition and linguistic variation*, Amsterdam: John Benjamins.

Zagona, K. T. (2002). *The syntax of Spanish.* Cambridge: Cambridge University Press.

Zamparelli, R. (2000). *Layers in the Determiner Phrase*. Ph.D. thesis, University of Rochester.

Žegarac, V. (2004). Relevance Theory and *the* in second language acquisition. *Second Language Research,* 20, (3), 193-211.

Zheler, A. M. and W. F. Brewer (1982). Sequence and principles in article system use: An examination of a, the, and null acquisition. *Child Development,* 53, 1268-74.

Zobl, H. (1982). A direction for Contrastive Analysis: The comparative study of developmental sequences. *TESOL Quarterly,* 16, (2), 169-83.