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A

A MONOSEMY APPROACH TO THE JAPANESE PARTICLE *NO*:

FUNCTIONAL CATEGORIES AS LINKERS

AND

ANTISYMMETRY IN NATURAL LANGUAGE

by

SATOSHI KOIKE

A dissertation submitted to the Graduate Faculty in Linguistics
in partial fulfillment of the requirements for the degree of Doctor of Philosophy,
The City University of New York

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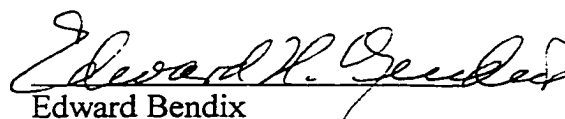
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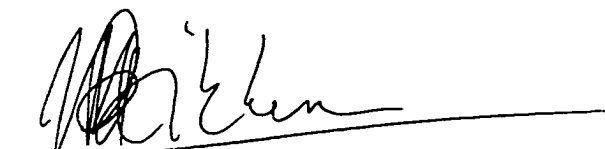
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Abstract

A Monosemy Approach to the Japanese Particle *No*:
Functional Categories as Linkers and Antisymmetry in Natural Language

by

Satoshi Koike

Adviser: Professor William McClure

In traditional grammars, the Japanese particle *no* is the genitive postposition, a pronominal particle, a (sentential) nominalizer and a (sentence-)final particle. Following the antisymmetry hypothesis of Kayne (1994) and assuming that Japanese is Spec-initial and head-initial, this thesis argues that all these uses can be synchronically reduced to a single source, i.e., *no* as a linker. Syntactically, *no* is a (nominal) functional category D like the structural Case-markers, *ga* (nominative) and *o* (accusative), and takes a nominal complement, DP, NP or CP. It is, however, being reanalyzed as an enclitic (the head of DP in Spec, DP) in some cases. Evidence for this historical transition comes from behaviors of descriptive genitives and the phonological process called “rendaku” or sequential voicing in compounds. Semantically, *no* has no referential meaning, but pragmatically, it behaves as a presupposition-marker and licenses NP deletion when it is not phonologically covert. The pronominal (thus referential) interpretation of *no* obtains when the empty complement of *no* (*pro*) has a (possible discourse) antecedent; otherwise

it is a nominalizer. In discourse, it is used as a marker of backgrounding. Sentences nominalized with *no*, as in the case of the *no-da/no-desu* construction, can serve as presentational utterances, and in such uses *no* can function as a social indexical. Presupposition-marking of *no* is responsible for its uses as a modality marker, especially as an evidential. From its uses as a hedge it also derives its various characteristics as a discourse modality marker, marking indirectness, formality, politeness, etc., although its origin lies in its emphatic uses. An interesting consequence of our analyses is that it sheds light on seemingly unrelated phenomena in terms of interactions of linguistic modules under our hypothesis called the Relativized Modularity Hypothesis.

To my immediate family,
including my two young nieces
— one was born just before I began work on this thesis
and the other while I was working on it —,
who will undoubtedly grow up to speak this beautiful language

“I will tell you the beginning, if it please your ladyships
you may see the end, for the best is yet to do”

— As You Like It

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It gives me great pleasure to express my gratitude to those people who have contributed to my dissertation research directly or indirectly. For better or worse, this work is a reflection of much of my academic thinking of the past several years at least, and almost everybody I have been in touch with over the years has (often unknowingly) affected it in some way. I only regret that so much of what I have learned from them did not make it into the final draft of this dissertation in a way that one can clearly see. I would be more than happy to thank each and every one of you and earn the dubious distinction as the writer of the longest dissertation acknowledgment note, but I shall restrain myself and thank only a selected few. So, if I do not mention your name, that may be because you are such a natural part of my (academic) life, since people often fail to acknowledge those that are neither very close nor “socially distant” (see the Bulge Theory of Wolfson 1988), or perhaps I just thought that you would not care to be mentioned here for some reason. I apologize for my temporary amnesia and poor organizational skills, if you believe that I have inadvertently failed to thank you in an appropriate place.

Believe it or not, I have never lived longer in one place continuously than here in New York City (Yes, I can't deny that I am somewhat nomadic.). Consequently, the effects that the city has had on me over the years are immeasurable. My life at CUNY, Graduate Center, like living in the City itself, has been a mixed blessing. Naturally, I shall concentrate on the bright/positive side, but it is nonetheless true that some of the hardships and difficulties that I have had to face have allowed me to grow as a linguist

and, more importantly, as a human being (and fortunately I still believe in the concept of giving respect as a means of earning it). I must admit that I have made some stupid (and not-so-stupid) mistakes, but I wish I could have used my energy — intellectual or otherwise — on something more productive much more often than I have been forced to. Some of the people I mention here — and some others I do not, most of whom belong to my non-academic circle of friends and acquaintances and will probably never get to see this passage — were there for me on those tough occasions, and I sincerely thank them.

I must first thank the diverse (current and former) faculty in linguistics at CUNY, Graduate Center, including my dissertation committee members, Bill McClure (chair), Ed Bendix, Marcel den Dikken and Gita Martohardjono. Much like the title of the dissertation, my dissertation committee has gone through more than my share of changes. Bill replaced Richard Kayne when he left for New York University. Richie has not seen a completed draft and I do not always follow his analyses, but his influence on the dissertation and on my linguistics research in general is impossible to ignore, although it is much more subtle and indirect than one might suspect. What may not be so obvious is that I (indirectly) learned from him what to do and what not to do in syntactic research. Gita joined the committee, when I had to let Ricardo Otheguy go; he gave me helpful comments on earlier chapters of the dissertation, and I am sorry that he had to leave. I originally thought I would be unable to ask Marcel to be on my committee, but I am glad that I asked him at the last minute and that he said yes on the spot. Both Gita and Marcel have been very supportive and helpful and I wish I had started talking to them about my research much, much earlier. Outside of linguistics, Lindsey Churchill in sociology kept my interests in conversation analysis during my very early days here, when I had a few

different ideas for my dissertation. He may be disappointed to find out that this dissertation lacks even a short section in (data-based) discourse/conversation analysis, a situation I hope to rectify in the near future.

In Spring 1990, Ed Bendix offered a course on Newari, a contact-induced Tibeto-Burman language spoken in the Himalaya Mountains, primarily in Nepal. The language, which was hitherto unbeknownst to me, was surprisingly similar in its syntactic structures (and most likely in its pragmatic principles and discourse functions) to Japanese, my native language, and other Asian languages that I knew of. The ‘mystery’ word in Newari that showed striking similarities to the Japanese particle *no*, which this dissertation is all about, was the ubiquitous particle *gu*. During the same semester, I wrote a paper (Koike 1990) for a syntax course with Bob Fiengo on this Japanese particle, which has kept me wondering since I was a child. Little did I know back then that I had hit a treasure trove of linguistic topics. This, among other things, prompted me to get seriously into linguistic theory and typology, and irrefutably marks a turning point in my linguistic research. My original interests in (especially micro-)sociolinguistics, however, has died hard; once a sociolinguist, always a sociolinguist. Like a phoenix flying out of ashes of dying embers, many a carnation of my old self is resurrected right here in this dissertation.

CUNY, Graduate Center was a very lonely place when I came here. That was especially true during the summer. We students have changed this over the past several years. During the summer of 1993 and part of the following fall, some of my colleagues and I had a study group to read and discuss Chomsky (1992) and other papers, which was very helpful. I thank the regular and occasional participants, the late Tracey Forrest,

Jae-Hong Lee, Lyn Ohira, Francisco Ordóñez, Harriet Taber and Sharon Utakis. The following summer, we read Chomsky (1994). This time Lyn and I were the only original members who remained until the end, and the study group at one point or another included, along with Jae, Lyn, Francisco, Harriet and Sharon, Judy Bernstein, Ruth Reeves, Ivy Sichel, Ioana Stefanescu and Miki Suzuki. Special thanks go out to Lyn for her encouragement and discussion outside the group. The tradition continued — this time reading Chapter 4 of Chomsky (1995) — during the Fall 1995 semester when I was away, and I joined the group in February 1996.

There are also other (present and past) fellow students and visitors (including visiting professors and scholars) that I would like to thank for being there and making my life at CUNY a little more bearable and occasionally not half bad. Some of them helped me more directly with my dissertation research, but it is impossible to stress too much the importance of seeing a friendly face or hearing a caring voice from time to time. They are: Tonia Androutopoulou, Judit Balassa, Dwijen Bhattacharjya, Marivi Blasco-Aznar, Chong-Il Cheon, Beth Craig, Michel DeGraff, Manuel Español-Echevarría, Rhoda Gilbert, Giuliana Giusti, Erich Groat, Nino Gulli, Takaaki Hashimoto, Yuki Hirose, Atsu Inoue, Robert Hollander, Takako Katsuno, Mana Kobuchi-Philip, Nobuko Kodama, Tina Kraskow, Gerardo Lorenzino, Debbie Mandelbaum Seymour, Sumiko Masaki, Heliana Mello, Friederike Moltmann, Carol Montgomery, Linda Pelc, Joan Rafel, Elena Rudnitskaya, Sheila Meltzer, Rossina Petrova, Sara Pyle, Silvia Rivero, Sal Santoro, Rosalie Schwartz, Ron Simon, Pornsiri Singhapreecha, Peter Slomanson, Daiko Takahashi, Arhonto Terzi, Lynne Ticke, Mihai Vinereanu, Marianne Washburn, John Whitman, and many, many others. I would especially like to thank Dwijen, Nobuko,

Carol and Rosalie for remaining my dearest friends in New York.

In 1993-4, I taught several graduate courses in Japanese applied linguistics at New York University. It was a difficult but worthwhile experience, and I thank the many people I met in this connection, including all my students and Tim Vance. I didn't know Tim when we were both at the University of Hawai'i, but I had the pleasure of having him as a guest lecturer in one of my Japanese phonology classes, which ultimately led to my teaching Japanese with him at Connecticut College a few years later. I would like to thank the faculty members in the Japanese and Chinese departments there for making my stay there less challenging than it could have been during the 1995 Fall semester, when I had to pay for two apartments and go back and forth between them. Especially, I would like to thank Tek-Wah King for his friendship and occasional discussions on Chinese linguistics then and since then. The dissertation could have been completed a little earlier without these and other teaching assignments, not to mention my failure to follow my own advice for others to work on a manageable, small topic, but I am glad that I had these opportunities; teaching the Japanese language and Japanese linguistics was in many ways a better education than any course I took as a student and it helped me go back to the basics, i.e., primary linguistic data.

Although I have not been able to get or remain in touch with many linguists outside my own little circle, the list of the people who gave/sent me their work and/or allowed me to occasionally discuss my academic interests with them is rather long and getting longer. This includes besides those already mentioned; Barbara Abbott, Chris Barker, Josef Bayer, Chris Brockett, Veneeta Dayal, Lars-Olof Delsing, Yoshio Endo, Josef Fioretta, Masaaki Fuji, Edward Göbbel, Katsuya Kinjo, Peter Hendriks, Kensuke

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Finally, my immediate family in Japan deserve very special thanks. They have always supported me, sometimes by not saying anything at all. On various occasions, my parents have shown me that it is never too late to start anything, which is exactly the opposite of what some have told me. They have also taught me one of the most important lessons of all: no one can take away what one (naturally) possesses within, one's intelligence, style and grace. I am especially grateful to my mother for always fostering my artistic sides since I was very young, which has ultimately allowed me to be very metalinguistically and socially aware. I am also thankful that I somehow inherited her optimism, without which I absolutely could not have survived all these years. I was fortunate to have my parents visit me in New York when I was already struggling with this dissertation and job searching. As I try to put myself in their shoes as they saw this city and the environs in which I had lived, I realize that I have come a long way and that I may still go much farther and further. Still, one thing remains certain: my heart and

thoughts are, and always will be, with them, wherever in the world I may happen to be.

Satoshi Stanley Koike

Poet by birth, linguist by choice.

August 31, 1999

Manhattan, New York City

“Lasciate ogni speranza, voi ch’entrate!”

— La Divina Commedia

PREFACE

While working on my MA thesis (Koike 1989), I came across a book for translators that contained a “cheat sheet” to identify various languages in the written form without knowing them or their writing systems. Oddly enough, Japanese, with arguably the most complicated writing system in the world, was claimed to be identifiable by a very common postposition/particle usually written in hiragana (one of the two Japanese syllabaries), *no* (の). It has recently come to my attention that a Web site called “LingWhat?” (<http://idris.com/lingwhat/lingwhat.html>) also notes that the hiragana *no* along with the presence of Chinese characters and the absence of Latin and Cyrillic alphabets can identify written Japanese. This appears to be a good method, as /no/ appears to be the most common of all the morae written in hiragana (Teller and Batchelder 1993, 1994). Since many content words are normally written in kanji (Chinese characters adapted and used in Japan) and not in hiragana, most instances of /no/ in written texts are likely to be those of the particle *no*.

This dissertation investigates structural and functional issues surrounding the status and uses of this particle, which has several seemingly distinct and diverse uses. It argues that *no* has a single entry in the lexicon as a linker D. If this is correct, *no* is unquestionably one of the most common particles, if not the most common one, in the language, since it also occurs in a reduced form, *n*. We will claim that *no* is sometimes covert (syntactically present but phonologically null), which makes it undeniably one of the most ubiquitous of all functional items in the language.

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LIST OF ABBREVIATIONS

- ACC: accusative marker
- ADV_N: adverbial *no*
- AgrP: Agreement Phrase
- AP: Adjective Phrase
- AspP: Aspect Phrase
- C(OMP): Complementizer, head of CP
- CAUS: causative
- CNP: complex Noun Phrase
- CON: connective
- CONJ: conjunction
- COP: copula
- CP: Complementizer Phrase
- D(ET): Determiner, head of DP
- DAT: dative marker
- DEC: declarative
- DEF: definite article
- DegP: Degree Phrase
- DIR: directional
- DP: Determiner Phrase
- EHRC: externally headed relative clause

EMPH: emphatic particle
F(EM): feminine
FP: (sentence-)final particle
FUT: future tense
GB: Government and Binding (Theory)
GEN: genitive marker
GenP: Gender Phrase
GER: gerundive marker
HON: honorific form
I(NFL): Inflection, head of IP
IHRC: internally headed relative clause
IMP: imperative
INF: infinitive
INST: instrumental
IP: INFL Phrase
IRR: irrealis form
LCA: Linear Correspondence Axiom
LF: Logical Form
LHRC: left-headed relative clause
LOC: locative
M(ASC): masculine
MJ: Modern Japanese
ModP: Modality Phrase

MP: Minimalist Program

N: nominal or Noun, head of NP

NC: noun/nominal classifier

NEG: negative element

NOM: nominative marker

NOMN: nominalizer

NP: Noun Phrase

NPI: marker for negative polarity items

NPT: non-past/non-perfective

NumP: Number Phrase

O/obj: object

OJ: Old Japanese

P: pre-/postposition

PASS: passive

PF: Phonological Form

PRES: present tense

PRF: prefix

PROG: progressive

PST: past/perfective

PL: plural

POL: politeness marker

PRN: pronominal

PST: past/perfective

Q: interrogative/question marker

QP: Quantifier Phrase

QUOT: quotative

RC: relative clause

REFL: reflexive

S: subject

SC: small clause

Spec: Specifier

TOP: topicalizer

TP: tense phrase

UG: Universal Grammar

V: verbal or Verb, head of VP (Verb Phrase)

CHAPTER I

INTRODUCTION

“The truth is a rabbit in a bramble patch. All you can do is circle around and say it’s somewhere in there.”
— Charles Seeger, Father of Pete Seeger (The New York Times Magazine, January 22, 1995)

This dissertation investigates theoretical and functional issues concerning interactions among linguistic components, i.e., the lexicon, morphology, phonology, syntax, semantics, pragmatics and discourse, in order to shed light on the internal architecture of the linguistic system. More specifically and less grandly, it explores various issues surrounding the Japanese particle *no*, which is apparently multiply (and cross-categorially) ambiguous. The work is partly descriptive, discussing some data that have never or hardly been discussed to our knowledge, while it deals with classical and new issues, some of which will be touched upon in this chapter, and offers proposals inspired by traditional ideas but couched in a recent framework.

Our primary data come from the usage of younger generations who speak a more-or-less standardized colloquial variety of Present-Day Japanese (frequently referred to as Common Japanese) and not (usually prescribed) Broadcast Japanese (a cover term for the varieties used in the mass media).¹ Common or the so-called ‘Standard(ized)’ Japanese is based on the yamanote or ‘uptown’ dialect of Tokyo Japanese, and when other dialects are discussed, we will basically refer to this as the Tokyo dialect, although they are not exactly the same. Data from other languages will also be given throughout

¹ The differences among Common and Broadcast Japanese are often very subtle and do not concern us.

the dissertation.

1.1. Overview of the Data and Problems

As noted in the preface, Japanese *no* is one of the most common particles and occurs in many major constructions in the language. It has several uses and functions: it is used as the genitive or possessive² postposition/case (or Case)-marker (1, possibly 2), a pronominal particle (2, 3, 4, 5), a (sentential) nominalizer (4, 5, 6, 7, possibly 3)³ and a (sentence-)final particle (6, 7).⁴

- (1) Sono hon -wa [Hiroshi-no hon] da.⁵ ‘lit. The book is Hiroshi’s book.’⁶
 that book-TOP Hiroshi-NO⁷ book COP⁸

² The term “genitive” refers to a syntactic relation, while the term “possessive,” which is narrower, refers to semantic (relational) relations.

³ “A nominalizer is a particle that makes a sentence into a noun phrase or clause” (Makino and Tsutsui 1986: 7).

⁴ The terms used here to describe the uses of *no* are not uniform, but they appear to be the most widely used labels attached to the uses. We use them here, since we believe that no linguistic descriptions or generalizations can be purely theory-neutral or pre-theoretical.

⁵ Our transliterations are Hepburn-style with a few modifications and follow more or less English orthography.

⁶ Most of our examples are relatively ‘idiomatic,’ because we wanted to avoid the seemingly contrived nature of linguistic examples that prevails in the linguistics literature and to obtain as natural data as possible. This somewhat redundant-sounding sentence is more natural than (2) in Japanese.

⁷ All the instances of *no* here are glossed as NO. For the sake of exposition and clarity, however, we will gloss *no* as GEN (genitive), PRN (pronominal), NOMN (nominalizer) or FP (final particle) in the examples to follow, according to the most prominent (in our opinion) use in each case.

⁸ The glosses are primarily meant for the convenience of non-Japanese-speaking readers and do not necessarily reflect our analyses of not directly related and/or not too crucial parts of the language. For example, it may not be correct to call *da* a/the copula, while the *-u/ru* and *-ta* on the verb probably mark imperfective and perfective aspect and not

- (2) Sono hon -wa [Hiroshi-no] da. ‘The book is Hiroshi’s.’
that book-TOP Hiroshi-NO COP
- (3) Hiroshi-wa [aka-i -no]-o kat -ta. ‘Hiroshi bought a/the red one.’
Hiroshi-TOP red-NPT-NO-ACC buy-PST
- (4) [Hon-o yon-de ir -u -no]-wa Hiroshi-da.
book-ACC read-GER be-NPT-NO -TOP Hiroshi-COP
‘The one who is reading a book is Hiroshi.’
or ‘It is Hiroshi who is reading a book.’
- (5) [Hiroshi-ga yon-de ir -u -no]-wa hon -da.
Hiroshi-NOM read-GER be-NPT-NO -TOP book-COP
‘What Hiroshi is reading is a book.’
- (6) Hiroshi-wa hon -o yon-de i -ru -no da.
Hiroshi-NOM book-ACC read-GER be-NPT-NO COP
‘It is (the case) that Hiroshi is (the one) reading a book.’
- (7) Hiroshi-wa hon -o yon-de i -ru -no?
Hiroshi-NOM book-ACC read-GER be-NPT-NO
‘Is it (the case) that Hiroshi is (the one) reading a book?’

With such data at hand,⁹ a basic descriptive question naturally arises: How should this particle be best described? More basically, is there only one particle (a case of possible polysemy) or are there several particles that happen to share the same phonetic form by accident (a case of accidental homonymy)? In other words, how is *no* listed in the lexicon?

Bedell (1972) discusses some earlier and sporadic attempts in traditional and early generative grammars to classify the uses of *no*. Reference grammars and textbooks for

non-past and past tense, respectively.

⁹ There are a few more arguably distinct uses, some of which will be discussed later.

learners of Japanese also refer to various uses of *no*, and appear to support the claim that these diverse uses of *no* represent a few to several separate lexical entries that happen to share the same phonetic form, though these studies vary as to which uses are clustered. Such an accidental homonymy approach seem to miss some important and fundamental characteristics of *no*, since its uses appear to overlap to a great degree and appear to be related not only structurally but also functionally, as we will show in detail. Therefore, it is highly unlikely that this is a case of (strong) homonymy, in which the form in question has two or more unrelated meanings (and two or more unrelated entries in the lexicon). Moreover, multiple homonymy is a rather marked phenomenon, and it should be adopted only after discovering undeniable evidence for it.

Unlike homonymy, multiplicity of meaning, or polysemy, is not uncommon. Polysemy entails that the lexicon contains one entry with two or more distinguishable meanings for the form in question. This does not necessarily mean that these meanings are listed separately in the lexicon, since they often appear to overlap, and in some cases, it may even seem that these meanings all derive from one and thus qualify to have a single description in the lexicon. In the latter case, monosemy can be seen as a special case of polysemy. In fact, Ruhl (1989: vii), while arguing for monosemy, claims that “some words have a highly abstract meaning,” while “other words, referring to highly diverse realities, represent the unity of that diversity.” The idea that the meaning of a word is not monolithic, i.e., no words contain only one single meaning, is not new, but this means that many, if not most, words are (at least apparently) polysemous, if not vague: monosemy and polysemy could be seen as the two sides of a coin. The only crucial difference is how these multiple meanings are related and described in the lexicon.

Much research in lexical semantics in this vein is done on lexical items like nouns, verbs and supposedly contentful prepositions/adverbials like *over*, *in* and *out*. Linguists, however, tend to resist such categorial polysemy as manifested by *no*, which never has a referential meaning, except possibly in the pronominal use. Such resistance against categorial polysemy is clearly due to the standard (and very often implicit) assumptions that syntactic categories are clearly listed in the lexicon and that a single lexical entry corresponds to a single syntactic category.

A single lexical item may have multiple meanings due to metaphoric or metonymic extensions (Johnson 1987: xii), but how can such an extension be possible for semantically (almost) empty functional items? More crucially, such extensions that traverse categorial boundaries are often difficult to conceive of, possibly because of the standard assumptions just mentioned. Polysemy among closed class items, however, is ubiquitous in natural language, and such cases include categorial polysemy of a similar sort (e.g., *that*, *to* in English, *à* in French, and the postpositions *ni* [dative, locative, etc.] and *to* [conjunction, comitative] in Japanese).

One of the most widely held post-Saussurean assumptions is that a linguistic form has only one meaning/function (Heine *et al.* 1991: 1). Johns' (1992) "One Form/One Meaning Principle" is a typical formulation of such an idea: it states that "[w]here morphemes are identical or similar in phonological properties, in the unmarked case, they are identical or similar in all lexical properties" (see Cowper 1995). A stronger monosemy hypothesis would state that there is a rigid one-to-one relation between form and meaning/function: there is only one meaning/function for a single invariant lexical item, *and* there is only one form for a single meaning/function.

This invariant approach is too strong, and does not seem to work for *no*, either, as its phonological behaviors are dependent on its uses. Japanese is a pitch accent language, in which every mora is either accented or unaccented. As a phonological enclitic, *no* never has an ‘accent(-nucleus)’ (Vance 1987) and is often reduced to /n/. This phonological reduction is only partially conditioned by what follows *no*; it is very common before the informal/formal copula *da/desu* especially in colloquial and/or rapid speech, but it is also found with other words. Most of these cases are instances of the nominalizer *no*, but the pronominal *no* can also be reduced. The genitive *no* is much less likely to be reduced, but it can be reduced when the following noun is a relational noun (Koike 1995a, 1995c).¹⁰

- (8) a. ame-n(o) naka¹¹ ‘in the rain’
rain-GEN inside
- b. ko-n-aida < ko -no aida ‘just recently’
this-GEN interval
- c. boku-n-chi < boku-n*(o) uchi ‘my house/home’
I -GEN house

It should also be noted that *no* may be stressed, a rather unlikely behavior for an otherwise well-behaved phonological clitic.¹² The pattern goes almost in the opposite direction in this case, and it is most common in the pronominal use, but is also possible in the nominalizer use. So, for example, the *no* in (9) may be stressed; the preferred reading would be the pronominal reading, but the *no* can be taken as a nominalizer as well.

¹⁰ Ed Bendix (p.c.) suggests that reduction or deletion of genitive marking in the presence of a relational noun may be a universal tendency. Indeed, the Chinese genitive marker *de* is often considered to delete when preceded by a relational noun (but see 3.3.3.3.).

¹¹ Note that /nn/ and /n/ are phonologically distinct in Japanese.

¹² It is not clear how stress and pitch interact with each other in Japanese.

- (9) Hon -o yon-de i -ru -no da.
 book-ACC read-GER be-NPT-NO COP

‘It is (the case) that (he/she) is (the one) reading a book.’

Since *no* does not have idiosyncratic allophones¹³ and stress is normally considered to be non-lexical in Japanese, these facts do not justify positing multiple entries for *no* in the lexicon. In this work, we will attempt to show that a strong monosemy approach is the correct choice for *no* and that its multiply ambiguous behaviors are due to non-lexical properties of natural language.

1.2. Preliminary Discussion

In Koike (1990), it is claimed that the uses of *no* are related and that in terms of syntactic distributions there are two kinds of *no*: the genitive *no* and the nominalizer *no*. The paper does not discuss the pronominal *no* and the final particle *no* in great detail, but it is plausible that they are to be subsumed under the two *nos*. The main goal of this thesis is to show that all the uses of *no* represent monosemy, and not homonymy or polysemy: there is only one entry for *no* in the lexicon, and there is basically a single description (each) for its syntactic, semantic and pragmatic functions. More specifically, our claim is that all uses of *no* derive from *no* as the referentially empty head of DP, which functions as a linker.

If there is a single lexical entry for *no*, where does the gradation in its phonological behaviors come from?¹⁴ Not all of these uses were found in Old Japanese

¹³ Vowel deletion is quite common in Japanese (see Koike 1995d, 1996; also see 3.3.2.).

¹⁴ Since we take language to be a cognitive object, how *no* is stored in the (mental) lexicon and retrieved (for computation), i.e., lexical insertion, is an important issue.

(or in other dialects). One possible explanation for the gradation then may be that there has been a process of grammaticalization,¹⁵ but all these uses are those of functional items, and the term may not readily apply to the case at hand (but see Yo Matsumoto 1988). Instead, we will examine the possibility of a process of “pragmaticization,” or conventionalization of pragmatic uses in discourse.¹⁶ The real history of the particle is of less significance to us than what can be discerned synchronically, since this thesis attempts to show how general facts of historical change can be incorporated into a synchronic study. Some historical facts will be examined, but they are not always used as the main evidence. This is because we assume that a detailed synchronic study can and will disclose historical vestiges and that consequently historical change can be, albeit incompletely, gleaned from a synchronic study. This is especially so in the case of an ongoing change like *ga-no* conversion (see 4.3.). We also believe that our approach is useful in accounting for facts about language acquisition. One important issue in this connection is that of overgeneralization of the nominalizer *no* both in first and second language acquisition.

This process of pragmaticization may have been preceded by a process of grammaticalization from a lexical item (or lexical items) to the genitive postposition. It is reasonable to assume that all functional items have ultimately lexical origins, and *no* may

¹⁵ Hopper and Traugott (1993: xv) define grammaticalization as “the process whereby lexical items and constructions come in certain linguistic contexts to serve grammatical functions, and, once grammaticalized, continue to develop new grammatical functions.” It is “the process by which grammatical morphology develops out of lexical items” (Givón 1984: 19). Although some linguists use the terms “grammatization” and “grammaticization” (see Traugott and Heine 1991), we use “grammaticalization,” since it is undoubtedly the most commonly used and the best established.

¹⁶ This notion itself is by no means new. The term “pragmaticalization” often used (e.g., Yo Matsumoto 1988) refers to a similar — possibly the same — process.

indeed derive from lexical items, but such a process must have long been completed by the time the pragmaticization of *no* started. It may be pertinent here to mention that there was the so-called adverbial *no* in Old Japanese, as shown in the following example from the Nara Period (710-794):

- (10) mura -tori no wa ga mur -e[y] in -a -ba (Hendriks 1992: 49)
 flocking-bird ADVN I -NOM flock-INF go away-IRR-when (I)

‘When I go away with a flock of retainers in the manner of a gregarious bird’

The adverbial *no* is no longer found in modern Japanese (but see the adjectival use discussed in 3.3.1. and the adverbial use of internally headed relative clauses noted in 4.2.1.3.). It has a few possible lexical origins (Hendriks 1992, 1994), which may have been grammaticalized into the genitive-nominative *no* of Old Japanese, though Hendriks argues that they are not related to each other.

It is important to note that there is a typological fact that buttresses our claim. A particle with very similar distributions to that of *no* is found in other languages, such as Newari¹⁷ (*gu*), (Mandarin) Chinese (*de*), and Lahu¹⁸ (*-ve*). The particle *-ve* in Lahu, for instance, shares with *no* a set of similar syntactic distributions and uses, the only difference being that *no* is not used as a relativizer.¹⁹ This difference is actually crucial in that the use of *no* as a relativizer is known to be overgeneralized in first and second language acquisition, as we will see in 4.1.2.

One may note that these four languages (Newari, Chinese, Lahu and Japanese) all happen to be spoken in or not so far away from China. Since these particles are

¹⁷ Newari is a Tibeto-Burman language spoken in Nepal (and also in India).

¹⁸ Lahu is a Lolo-Burmese language spoken in Laos, China, Thailand and Myanmar.

¹⁹ Matisoff (1972, 1973) employs a monosemy approach to this particle in Lahu.

phonologically very different, however, it is highly unlikely that this is due to lexical borrowing. We have not done extensive typological search and Sino-Tibetan languages and Japanese appear to share much in common, but it is also unlikely that this is an areal feature. This is because, surprisingly, Korean and Turkish, which are well known for their striking typological similarities to Japanese, do not have such a particle.²⁰ A homonymy approach does not explain these typological facts.

1.3. A Sketch of the Analysis and the Organization of the Dissertation

This section provides an overview of the dissertation. Since several non-central issues are repeatedly raised, we will briefly discuss some of them here, so that the reader can identify them, as they come up.

Chapter 2 presents some of the assumptions that we adopt for this study and contains some discussion of many of the theoretical notions and refinements needed for the following discussions. As a formal framework, it employs a recent version of the generative framework known as the Minimalist Program (Chomsky 1995) that adopts a part of the antisymmetry hypothesis of Kayne (1994b). This dissertation is theoretically unique in that it aims to take several components of the linguistic system into account in explaining linguistic phenomena under what we call a Relativized Modularity Hypothesis (2.3.).

Chapter 3 focuses on the internal structure of nominal phrases in Japanese, where we examine the genitive and pronominal *nos*.²¹ It will be noted that the traditional (and

²⁰ For the same reason, semantic borrowing or calquing does not seem to be the cause.

²¹ Since our claim is that there is only one *no*, a term like “the genitive *no*” is used to refer to *no* on the interpretation.

functional) claim that *no* is a linker or associative particle turns out to be promising. Adopting the reasonable and plausible assumption that *no* is a nominal functional head D, like the structural Case-markers, *ga* (nominative) and *o* (accusative), as well as Kayne's proposal (1994b) that language contains only Spec-initial, head-initial phrase structure, we can treat the genitive *no* and the pronominal *no* in a unified manner by arguing that the pronominal *no* is the genitive *no* with an empty complement. We claim that this empty complement is *pro*, which exists even in non-*pro*-drop languages like English and French. We should hasten to add, however, that the distribution of *pro* in DP is rather restricted. There are two ways to identify *pro*: discourse-based (with a discourse referent, as in the case of ellipsis) and non-discourse-based (without a discourse referent).

It will turn out, however, that this linker analysis is not sufficient to account for a wider range of data; the genitive *no* appears to be reanalyzed in some cases as part of the modifier DP in Spec, DP. Evidence for this ambiguity comes from behaviors of descriptive genitives and the phonological process called "rendaku" or sequential voicing. The latter applies to compounds and affix-stem formations and its application is historically declining, which supports our claim that there is a historical transition of *no* from the linker use to the modifier use.

There are three other issues that we will discuss in Chapter 3 and later chapters. One of them has to do with the so-called *no*-insertion rule, which has often been proposed in the literature. This rule can be very problematic, especially in a minimalist framework, in which all lexical items must be listed in the Numeration (see 2.1.). We will treat compounds and genitive phrases as basically the same except that the former may not have a phonologically overt *no*, so that it may or may not actually (i.e., phonologically)

materialize in the surface string. If this is a correct characterization, is *no* not inserted in these cases? Or is *no* present in the Numeration, or inserted later, but deleted just before it is pronounced? Theoretical and empirical considerations lead to a *no* deletion analysis.

Another issue is the syntactic status of *no*-phrases with regard to movement. Our linker analysis makes plausible base-generation of linked maximal projections. This does not, however, exclude the possibility that at least one of them is raised to be in its surface position. A small clause analysis, in which a linker is merged after the two linked maximal projections are merged and one of them moves and adjoins to the whole syntactic object, is rather attractive in light of a minimalist framework.

Closely related to this issue is the last one: how to generate multiple *no*-phrases. Whether they are base-generated or derived by movement, multiple *no*-phrases must involve DP recursion. In fact, as we will show, many phenomena can be better accounted for if one assumes that DP recursion is possible and quite common.

In Chapter 4, we will extend our analysis of *no* as a linker to the pronominal and nominalizer uses in relative clauses and sentential nominalizations. As is the case of the pronominal *no*, the nominalizer *no* is the head of DP that takes *pro* as its complement. Here, the two ways to identify *pro* to be proposed in Chapter 3 can differentiate the pronominal *no* and the nominalizer *no*. When there is a possible (discourse) antecedent and the complement *pro* is taken as the semantic head of the whole phrase, *no* is generally perceived as a pronominal. When there is no (discourse) antecedent, it is mostly regarded as a nominalizer.

Unlike similar particles in other languages, *no* does not appear in an ‘ordinary’ (externally headed) relative clause. We will claim that this is due to a historical change

similar to what has caused the ambiguity of the genitive *no* as the head and a suffix. In fact, there are *no*-marked relative clauses, so that even when *no* is phonologically covert, the syntactic position for it does exist.

No alternates with the nominative marker *ga* in some embedded clauses. This is called *ga-no* conversion, and indicates that the embedded clause is a relative clause and not a sentential complement. In spite of its unreliability, the conversion is useful in showing that another case of reanalysis is going on in a construction that involves *no*, i.e., the *no-da/no-desu* (*no* + informal/formal copula *da/desu*) construction, in which *no* can be taken as both the nominalizer and the final particle. This is also true of reanalyzed conjunctive postpositions like *no-de* ‘because’ and *no-ni* ‘though.’

It has been claimed that at least a *no*-clause as an internally headed relative clauses (IHRC) followed by the so-called accusative marker *-o* is an adverbial phrase and not really the direct object of the main verb. If this is correct, a sentence that contain an *o*-marked IHRC constitutes a paratactic construction. This should mean that an *o*-marked IHRC is a nominalized sentence, but *ga-no* conversion is largely possible in it. We argue that an IHRC with *ga-no* conversion may involve raising of the *no*-phrase, which brings forth a left-headed relative clause. Evidence for the latter claim comes from interpretations and intonational patterns of such clauses.

No has no referential or lexical meaning. This does not mean that it has no other functions but to link two maximal projections. As shown in Chapter 5, *no* functions as a presupposition-marker, partly because Spec, DP tends to be a preferred position for specific, and thus presupposed, constituents. As we will see, the meaning of two phrases linked by *no* is affected by referentiality, relationality, a thematic hierarchy, etc.

We will also note in Chapter 5 that it is necessary to make a clear distinction between the pragmatic and discourse modules. Pesetsky (1987) proposes D-linking to account for violations of Superiority effects in English questions with *which*. This behavior of *which* is not surprising, because its Japanese counterpart is *dono* (*wh* + GEN) with an incorporated *no* and D-linking is marking a phrase as presupposed. According to Pesetsky, *the hell* in English and *ittai* in Japanese can be used as markers of aggressive non-D-linking in that they obviate D-linking. However, sentences with both *dono* and *ittai* allow for D-linking with *dono*. Since D-linking is obviously pragmatic in nature while *the hell* and *ittai* are emphatic markers and discourse salience enhancers, effects of pragmatics are stronger than discourse effects, which supports our Relativized Modularity Hypothesis.

Chapter 6 examines the final particle *no* as a discourse modality marker and a social indexical. We will show that many of the discourse functions of *no* are due to its presuppositional uses. Since *no* is a modality marker, D can be a modal projection that takes a proposition in its Spec position. We will also note that the presence/absence of *no* may have much to do with discourse salience (intensifying and hedging uses).

Chapter 7 summarizes the dissertation. It also discusses some relevant issues that may lead to future research.

CHAPTER II

THEORETICAL PRELIMINARIES

“I view the progress of science as being the slow erosion of the tendency to dichotomize.”
— Dr. Barbara Smuts, a primatologist, University of Michigan (The New York Times, April 18, 1995)

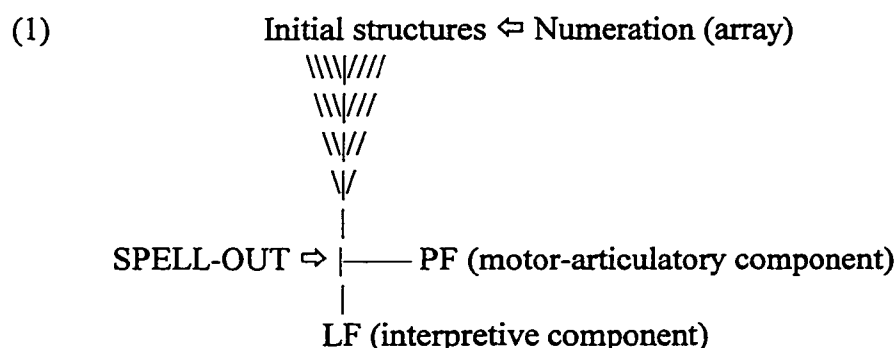
In this chapter, we present some of our assumptions. Our formal framework is the Minimalist Program (Chomsky 1995). This is a research program heavily driven by the conceptual necessity of economy and interface conditions, i.e., conditions that apply when the linguistic system meets other systems. One important aspect of the idea of economy for us is that the core of the linguistic system, being innate, must be very simple and restrictive. A more restrictive grammar is also theoretically favored, because it is more easily falsifiable. Much like Kayne’s (1994b) antisymmetry hypothesis (2.2), the current study is an attempt to “push the envelope” further to achieve an even more restrictive (and explanatory adequate) grammar in a broad sense of the term.

It is perhaps uncontroversial among those who regard it as psychologically real that the linguistic system interacts with other cognitive and neuro-physiological systems. We will discuss interface issues in some detail in 2.3., where we will formulate what we call the Relativized Modularity Hypothesis, based on the traditional idea that there are distinct linguistic components in the linguistic system and the fairly common assumption that they are autonomous but they do interact with one another.

2.1. The Minimalist Program¹

The general formal approach adopted in this dissertation is the Minimalist Program (MP hereafter) (Chomsky 1989, 1992, 1994, 1995),² which has come out of the tradition of generative grammar. As will become clear, however, we depart from it in nontrivial ways, and we will discuss such instances as they come up.

Unlike its immediate predecessor, GB Theory or Principles-and-Parameters Theory (Chomsky 1981, 1982, 1986a, 1986b), the MP does not include the levels of representation, D(eep)-Structure and S(urface)-Structure. Consequently, effects of certain conditions, such as the Projection Principle, the Theta Criterion and the Empty Category Principle (ECP), which were considered to apply at such levels of representation or their counterparts must be captured in some other way. The computational system (for syntax or Grammar) is crucially defined by two interface levels, i.e., PF (Phonological Form) for motor-articulation and LF (Logical Form) for (semantic) interpretation. Schematically put, the grammar is organized as in (1).



¹ Needless to say, this section is by no means intended to be an introduction to, or even a brief introductory outline of, generative syntax (or even the MP). Readers unfamiliar with the basics of the generative framework should start with consulting Sells (1985), Cowper (1992) and Haegeman (1994), among others.

² In this dissertation, we use the term “the Minimalist Program” to refer to the set of the minimalist assumptions that we have adopted.

In this derivational (in a non-temporal sense), rather than representational, model of grammar, lexical insertion takes place at the beginning of the derivation (Numeration), and all forms (at least all verbs) are inserted fully inflected.³ The MP employs a generally lexicalist approach, and inflectional affixes are manifestations of formal features to be “checked off” by their corresponding functional categories via Spec(ifier)-head agreement (i.e., sharing of features between a head and its specifier). This is (normally) done by Move, a movement (usually raising) operation.⁴ The level of SPELL-OUT, where the derivation meets the level of PF, is similar to S-Structure, but nothing constrains this level of representation, while PF and LF (may) have their own constraints. Since all languages are assumed to have exactly the same LF representations, the same movement operations (possibly excluding PF movement, such as V2-type topicalization⁵) occur in every language, if they exist in that language at all, the only crucial difference being the “timing” (pre- or post-SPELL-OUT) of the movement in question.⁶

In the MP, phrase structure is built bottom-up in a binary fashion with the operation called “Merge.” In (2a), A and B merge, and A, the head of the whole syntactic object, projects. For instance, in (2b) *the* is the head of the phrase *the book*.

³ See Vance (1987: 199-208) for some evidence that even the rather regular inflectional morphology of Japanese verbs may not be analytically compositional.

⁴ We are glossing over head-adjunction here. Movement in the MP is constrained by the extension condition and the Shortest Move condition among others. The idea of chains, which is important in much work, is not crucial in ours, since we do not discuss *wh*-movement and quantification in terms of operator-variable dependencies.

⁵ Jonas (1996) notes that V2 in Icelandic may not be a PF phenomenon, citing cases of V1 and V3 in the language.

⁶ Movement at LF is assumed to be feature movement in Chomsky (1995). We will propose phrasal LF movement instead in what follows (see Koike 1997/1998).

- (2) a. A
 \wedge
 A B
- b. the
 \wedge
 the book

This leaves us with many questions. One major question is: with X' Theory gone in the MP, how is phrase structure constrained? For example, how do we know that *the* gets to be the head in (2b)? What stops *book* from projecting? And how does semantic mapping work?⁷ Merge, as we have just described, is too unconstrained to be accepted with open arms. The MP, however, appears to retain part of X' Theory (e.g., the notions of minimal and maximal projections), and we adopt the following more or less standard assumptions about X' phrase structure. The head selects only certain types of complements (subcategorization). Specifiers are licensed by the head via Spec-head agreement; e.g., when there is a mismatch, no checking occurs. Spec-head agreement is bilateral or mutual, so we can assume that if a Spec or head position is filled, the whole projection will be projected.⁸ The important idea behind this is that specifier and complement positions do not bear the same relationship with their heads.

There are two types of syntactic categories: lexical and functional (Fukui and Speas 1986). There are four lexical categories; nouns (N), verbs (V), adjectives (A) and pre-/postpositions (P). They are defined by two two-valued (i.e., binary) categorial

⁷ In principle, it is not totally impossible to have different syntactic and semantic heads in this type of framework, since it does not say anything about semantic heads (or more specifically the status of heads at LF, for instance). For example, one can say that in (2b) syntactic head is *the* but that *book* is the semantic head in that *the* is semantically transparent. Percolation of (semantic and interpretable) features may be needed for such a treatment.

⁸ The last assumption leaves open the possibility that there are (syntactically) empty heads and empty specifiers, which we will show actually exist in natural language in spite of the fact that such elements may violate a global notion of economy.

features:¹⁰ [N] for nominal categories and [v] for verbal categories, as shown in (3).

(3)		[+ N]	[- N]
	[+ v]	A	V
	[- v]	N	P

The discussions in the following chapters suggest that this classification may not be very useful as a universal one (see also Koike 1994c).

As is often implicitly assumed, lexical categories are always dominated by functional ones. Functional categories include C(omplementizer), I(nflection) (or T[ense] and Agr[reement]) and D(eterminer) among others. In this dissertation, a fully articulated structure of functional categories is adopted for the clausal structure, but since the distinction is never crucial in this work, we will refer to AgrPs (Agr_sP, Agr_oP) and TP (and/or AspP) as simply IP. When the term “nominal phrases” is used, it refers to NP and maximal projections that dominate NP, like DP. The term “noun phrase” is reserved for NP.

Much of the following discussion rests crucially on the DP hypothesis (e.g., Brame 1982; Abney 1987), which states that a nominal phrase is headed by a functional element, D, and that it is structurally similar to a clause. Empirical evidence supporting this is found in many languages and a similar hypothesis has also been argued for outside generative linguistics (e.g., Hewson 1991). Other nominal functional categories have also been proposed, such as Number Phrase (NumP), Agreement Phrase (AgrP), Gender Phrase (GenP), Quantifier Phrase (QP) and Modal Phrase (ModP).

¹⁰ Categorical features are considered to be part of the lexical information for a lexically inserted item.

2.2. Antisymmetry of Syntax

It is uncontroversial that the neutral/canonical/unmarked surface word order in Japanese is Subject-Object-Verb (Specifier-Complement-Head): the subject occurs sentence-initially and the main predicate follows all of its arguments in Japanese. English word order is mixed: its basic word order is Subject-Verb-Object (head-initial), but in nominal phrases simplex adjectives generally precede the head noun (head-final). Such language variation is handled in a principled manner in GB Theory (and in the MP) with the use of “parameters,” values of which are innately given but must be set in the course of language acquisition. In the case of the word order variation, it has generally been assumed that there is a head directionality (or head/headedness) parameter with two values to choose from: head-initial (government to the right) or head-final (government to the left). For example, all modifiers appear to precede the head in Japanese, so upon encountering (positive) evidence, i.e., relevant linguistic input, the learner of Japanese sets the head-final value for the parameter.

A main problem with this parameter-setting model is that the differences between head-initial and head-final languages are reduced to one (set of) parameter(s).¹¹ If this were an accurate description, we should see a rather clear symmetry between these languages (with regard to relevant facts). In actuality, however, we find persistent asymmetry between the two types of languages, such as the following:

- (4) a. Postpositions, but not prepositions, can ‘agree’ with their complements (e.g., in Dutch¹²) (Kayne 1994b: 50).

¹¹ Due to the existence of mixed languages like English, it is generally assumed that the head directionality parameter is set for each phrase type.

¹² Some Dutch prepositions like *met* ‘with’ and *tot* ‘to’ have different forms when they

- b. So-called *that-t*(race) effects are only found in COMP-initial languages.
- c. Nominative long-distance anaphora is found only in COMP-final languages.
- d. Interrogative *wh*-movement is commonly present in COMP-initial languages, but is generally absent in COMP-final languages (Bach 1971).
- e. Relative pronouns are absent in prenominal relatives (Keenan 1985).
- f. Internally headed relative clauses are found only in head-final languages (Cole 1987; but see Koike 1994d/1997).
- g. Relative complementizers identical to sentential complementizers are found only in head-initial languages.

Moreover, some lexical items primarily occur in the second position of the (main) clause (e.g., verb-second, or V2, phenomena, clitic-second phenomena), but there appear to be no constructions that refer to, say, the second-to-last position of the clause.¹³ A fact that is relevant to us is that every language with a particle like *no* appears to be head-final except Chinese, which may be mostly an SVO language but has clearly head-final nominal phrases. Some of these facts may be explained with a linear precedence constraint of some sort, but it is clear that asymmetries do exist. It may be difficult to maintain that Japanese is rigidly head-final, since, as we will see in Chapters 3 and 4, it

follow their nominal complements, as in *ermee* ‘therewith’ and *ertoē* ‘thereto’ (Marcel den Dikken p.c.).

¹³ Many head-final languages are also verb-final languages, so that the verbal complex tends to occupy the sentence-final position. In those languages, an immediately preverbal position tends to be a focus position, which would be a second-to-last position, when the verbal complex consists of only one verb and inflectional affixes associated with it. We do not, however, know of any studies that refer to a focus position in these languages as a second-to-last position. In fact, Japanese is a verb-final language but an immediately preverbal position is not generally identified as a focus position. Moreover, focus is unlike other factors that we note here, which are (much more) syntactic in nature.

has what may appear to be postnominal modifiers and left-headed relative clauses.

Kayne (1994b) argues that “X-bar theory is not a primitive component of UG,” and claims that, given UG (Universal Grammar) with his Linear Correspondence Axiom (LCA), asymmetric c-command¹³ maps into linear precedence: i.e., if X asymmetrically c-commands Y, then X precedes Y. This means that a Spec-initial and head-initial pattern is the only permissible subcomponent of phrase structure, which yields a Specifier-Head-Complement (SHC) order.¹⁴ This is what we call the antisymmetry hypothesis. This denies the existence of the head directionality parameter, except as a purely descriptive term for variation in surface order. Consequently, mirror-image patterns at surface structures in so-called head-initial and head-final languages are only illusory. Kayne’s theory is very restrictive in that there is no (base-generated or derived) right adjunction. Phrase structure is mainly right-branching, except for maximal projections in Spec position.¹⁵ This creates a Spec-initial, head-initial version of the

¹³ Kayne (1994b: 16) applies “c(onstituent)-command” only to categories (and not to segments), so that his definition of “c-command” is as follows:

- (i) X c-commands Y iff *X and Y are categories* and X excludes Y and every category that dominates X dominates Y. [emphasis in the original text]

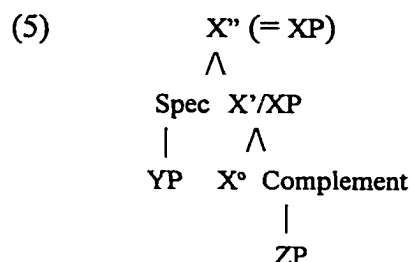
Kayne (1994b: 133n1 [Chapter 3]) adopts Chomsky’s (1986b: 9) definition of “exclude” (Kayne uses X and Y instead of α and β):

- (ii) X excludes Y if no segment of X dominates Y.

¹⁴ As Kayne (1994b: 36) notes, the LCA by itself is not sufficient to draw this conclusion, since it also allows for Spec-final and head-final structures, which have been argued for by Tonoike (1993) to account for Japanese word order.

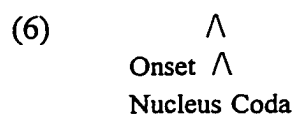
¹⁵ There is no distinction between substitution and adjunction in Kayne’s theory, so that there is no position that can be properly called a Spec anymore. We argue with Kayne that there are no multiple Specs, though a multiple Spec analysis has gotten rather popular in recent years and has been proposed for Japanese (see Chomsky 1995).

familiar phrase structure in a standard version of X'-Theory (e.g., Chomsky 1986b), as represented in (5), where X refers to any category.



Antisymmetry may be much more pervasive than one might think. One important fact is that no (real) symmetrical relations appear to exist in natural language; there seems to be much evidence that even conjunction is not symmetrical at all (Kayne 1994b).¹⁶

(6) represents one way of characterizing universal syllable structure: syllables have internal structure that consists of the onset (zero or more consonants), the nucleus (a vowel) and the coda (zero or more consonants). The nucleus is called the peak of the syllable and is an obligatory component of a syllable. The connection between the nucleus and the coda is closer than that between the nucleus and the onset: together, the nucleus and the coda form a unit called the rhyme/rime. Among other things, this accounts for the fact that compensatory lengthening is caused by coda deletion, and not by onset deletion.



¹⁶ Simple disjunction appears to be symmetrical, but whether linguistic disjunction in general is asymmetrical remains to be seen. The following uses of *or* in English show that linguistic disjunction could not be symmetrical in some cases.

- (i) a. Leave right away, or (else) you will miss the train.
b. Do as I say, or else!
- (ii) This building does not have a bathroom or it is in a funny place.
(the so-called bathroom sentence)

Note that this is similar to an SHC structure. The nucleus and the head are both obligatory, while codas and complements are not only optional but sometimes obligatorily absent,¹⁷ and onsets and specifiers are sometimes obligatory. In addition, both structures assume binary branching. If linguistic mapping is simple and straightforward, as the null hypothesis would have it, binary branching means that no real symmetric structure exists in natural language.

Under the antisymmetry hypothesis, obeying the Proper Binding Condition (Saito 1989: 187), which states that traces must be bound,¹⁸ may appear straightforward. If the Proper Binding Condition is never violated, there is only upward movement, glossing over the familiar problems of reconstruction effects and LF lowering operations. In Kayne's framework, this means that there is only leftward movement, since no rightward adjunction is possible. A problem arises if the Proper Binding Condition must be satisfied in every representation; what happens when a constituent moves to a higher position than that to which a part of it has already moved to? Such movements (including remnant movement, as in "Elected by the committee John never was.") are quite common (and rather inevitable) in this framework. We will discuss such cases in what follows and offer a proposal to overcome this problem.

Chomsky (1994) rejects the LCA, but accepts some of the consequences that Kayne derives from it. This is generally taken to mean that he accepts the LCA as a constraint at PF, and we take the same position. As noted above, one major problem with

¹⁷ Since the MP does not include non-branching non-terminal nodes, the complement of the (lowest) verb must be obligatory. This is exactly what Chomsky (1995) proposes, and in this sense, there are no real intransitive (unergative) verbs in the MP. This point is not crucial in our discussions to follow.

¹⁸ A trace is bound if it is c-commanded by its antecedent.

the MP is that Merge is much less restrictive than X' Theory. We adopt Kayne's antisymmetry hypothesis in very general terms, and assume that Spec-initial and head-initial X' phrase structure is all we get.

2.3. Relativized Modularity Hypothesis

Dichotomies are ubiquitous in linguistics. From Saussure's celebrated langue-parole contrast to Chomsky's well-known competence-performance distinction, dichotomies have been prevalent in linguistics. Even sociolinguists like Fasold (1990: vii-viii) maintain a dualist hypothesis: there are two kinds of language to be studied by linguists, i.e., language as a system (language as knowledge) and language use or language in context (language as a property of a speech community). It appears that most linguists either explicitly or implicitly support such a hypothesis. We argue, however, that finer distinctions need be made to fully account for most, if not all, linguistic phenomena.

The idea of dichotomy, which is generally favored by formalists, is in sharp contrast with that of a continuum with no clear-cut boundaries, which is often argued for by functionalists. Functionalists tend to argue that all linguistic phenomena have functional foundations, while some formalists provide structural explanations for obviously pragmatic and/or discourse phenomena. We contend that both positions at their extremes could not be correct in not taking into consideration the existence of distinct linguistic components and interactions among them. In other words, we believe that modularist and interactionist positions are not inherently incompatible.

Most linguists either implicitly or explicitly assume that there are more or less

distinct components that interact with one another in the linguistic system. For instance, Bresnan (1987: ix) notes that “[c]omplex natural systems such as language seem to exhibit the property Simon called “near-decomposability”: they can be factored into subcomponents in such as [sic] way as to maximize interactions within components and to minimize interactions across these components.” What is important is that interdependence and autonomy can coexist, and they must in any successful theory of language.

Based on this rather widely held but rarely explicitly noted assumption, we propose a modified version of the modularity hypothesis:¹⁹

(7) *Relativized Modularity Hypothesis:*²⁰

The linguistic system consists of several modules. Each linguistic module is encapsulated and is autonomous relative to those surrounding it; each module interacts only with an adjacent one.

This hypothesis is built upon the traditional and plausible assumptions that there are distinct modules²¹ for syntax, semantics, pragmatics and discourse and that they are universal (i.e., UG²² is so organized). Simplistically put, the four modules are organized

¹⁹ Based on the evidence that language is processed in restricted areas — albeit not in a single area — of the brain, the modularity hypothesis states that language competence in a very broad sense is a consequence of an encapsulated module that primarily deals with linguistic performance (see Fodor 1983). This, of course, can not mean that the linguistic system is totally insulated, since it has to interact with other systems.

²⁰ Di Sciullo (1990, 1996) also uses the term “Relativized Modularity,” which seems totally unrelated to ours.

²¹ The use of the term “module” here is clearly different from that used in GB Theory, under which grammar was composed of several modules that interact with each other (see Chomsky 1981: 135ff).

²² We assume without much argument that there are universal properties that all natural

as in (8).²³

(8) (((((syntax) semantics) pragmatics) discourse)

We call this an onion model.²⁴ Derivationally speaking, this model offers straightforward mappings from syntax to discourse.

It is essential for a model like ours to clearly define the boundaries of the linguistic components in question. Many linguists take the autonomy of syntax to be given. We also take semantics and pragmatics to be somewhat autonomous, but not completely. In our model, syntax is purely about phrase structure. The syntactic module must generate at the very least all types of phrase structure that are attested in natural language. In our restrictive model, the existence of syntactic parameters is not needed. This forces us to find independently motivated non-syntactic reasons for any cross-linguistic variation.

We believe that the modification to a rigid modularity hypothesis that we have proposed is inevitable, if we take seriously a modularity hypothesis as a hypothesis in linguistics. There are many linguistic facts that are at least partially controlled by our world knowledge and how we see the world. If this is not an indication that functionalists have been correct all along and interactions abound between the linguistic system and other systems, it must be the case that at least some parts of the linguistic system are

languages share, since it is a more restrictive hypothesis than otherwise. Nothing in the following discussions, however, hinges on the existence of UG as innate endowment.

²³ Our model may not seem very radical or especially new, but most research has been conducted in linguistics without independently defining (or even acknowledging) components of the linguistic system. If we take our position seriously, we would have to reanalyze most of the previous analyses of natural language, which, needless to say, is beyond the scope of a dissertation.

²⁴ This model was originally proposed in Koike (1994b).

susceptible to external influences. It appears that externally controlled facts are found mostly in the pragmatic and discourse domains, and to a much lesser extent in semantics, such as reflexivity (Peters 1995) and inalienability. As far as we know, there are no *purely* syntactic operations that are influenced by external factors. Since functionalist analyses would not be able to account for such a fact, this provides initial support for our hypothesis.

There are many questions to be posed with regard to the fundamental differences between syntax and semantics, e.g., how semantically explicit does syntax have to be? In our model, syntax is purely about phrase structure, so that the internal structure of a linguistic object may not be determined solely by its semantic behaviors, as the semantic module is independent of the syntactic one: sentential semantics, which includes some of the structural dependencies, has no place in syntax, though this is in no way meant to exclude the existence of levels of representation like LF.

We assume the existence of constraints in our system, which can be thought of as filters of some sort. Violations of constraints are predicted to be scaled with regard to the relative location of each module, hence the term “relativized modularity.” The syntactic module is the innermost module and is violation-free: the derivation will “crash” if it violates a syntactic constraint (as in the MP). Note that this is a much stronger position than most linguists appear to hold, since this means that there is no core-periphery distinction in syntax, and that there are no, say, idioms that violate syntactic constraints, unless they are totally syntactically unanalyzable. If a certain syntactic structure is available in any language at any time, syntax must be able to generate it, unless the proposed structure is wrong. The semantic module is slightly lax in this sense, and

violations may be tolerated, while the pragmatic module not only allows for violations but it may even assign a particular function to some of the violations. The pragmatic module is the most flexible of these three, since it is partially governed by external considerations, such as our communicative needs, i.e., language uses.²⁵ Note that the syntactic module is totally free of such influence, since it is the most deeply embedded and thus highly protected from non-linguistic modules. Finally, discourse-related mechanisms with tendencies and implicational hierarchies may be totally outside of the linguistic module, where induction and inference may rule. We expect at least slight cultural variation in discourse and parts of pragmatics, and when such variation exists language learning should be more difficult than otherwise. The presumed state of affairs just outlined is also described in the following statements that Stephen Anderson (1988) made in discussing morphological change:

Allowing one part of the grammar to ‘overgenerate’ in the context of constraints imposed by its interaction with other areas often makes it possible to bring order and coherence to each independently — order and coherence that would be impossible if the principles determining the range of possible phenomena in each part of the grammar had to be limited to statements internal to that domain alone. Such a modular conception of grammar thus seems in many cases the only path to a constrained account.

²⁵ It is important to note that we may not find violations of certain semantic or pragmatic principles in natural language. It is indeed possible that some semantic and pragmatic principles are universal in this sense. Violability of a principle in itself does not constitute a membership in a module, and semantic and pragmatic principles are not inherently violable, though traditionally, one of the main differences between syntax and pragmatics has been characterized with regard to violability of syntactic rules and pragmatic principles: syntactic rules are not violable, while pragmatic principles can be overridden (Leech 1983).

We have not discussed other linguistic components traditionally recognized in linguistics, such as morphology, segmental and suprasegmental phonology and the lexicon. The boundary between morphology and syntax is very often arbitrarily drawn depending on such language-specific and external factors as productivity and semantic opacity, and there is probably no universal boundary between morphology and syntax (see e.g., Spencer 1991). If it is in fact partly in the lexicon and partly in syntax, morphology may not be a component in our model. We assume that at least irregularities in morphology and segmental phonology, along with lexical semantics (semantic fields and language variation) are not to be found and reflected in the computation but in the lexicon, which is undoubtedly language-specific. Some semantic and pragmatic principles may be encoded in morphological terms: some of them may not be found in a language which does not have a means to obey them. We will argue that this is indeed the case with the particle *no*. In fact, the argument should go the other way around: it is historically the case that the semantic and pragmatic principles do cause innovation, e.g., creation of such lexical items to consistently satisfy them.

Now, the question is: how does this model fit into the MP? Since the MP posits a split in linguistic representations, our onion model can not be completely compatible with it. In the MP, PF is most likely the level where syntax interfaces with pragmatics and discourse along with suprasegmental phonology, while LF may not be the sole level for (semantic) interpretation in our model. We will briefly return to this question in the Conclusions.

CHAPTER III

THE SYNTAX OF *NO*-MARKED NOMINAL PHRASES

This chapter mainly examines the syntax of the *no*-marked nominal phrase, or *no*-phrase, and the genitive phrase,¹ dealing with the genitive *no* and the pronominal *no*. After a brief discussion on the syntactic/morphological status of the genitive *no* and the genitive *no*-phrase, we will show that these two uses of *no* can receive a unified analysis, if we adopt the traditional idea that *no* is a linker as well as the claim that it is the head of DP; the pronominal reading of *no* obtains when the genitive *no* has an empty complement, which we argue to be *pro*. This, however, is not the whole story. We will also demonstrate that the genitive *no* can be either a linker (the head of the whole genitive phrase, DP) or an enclitic (the head of DP in Spec, DP) and propose that there has been a historical transition from the former to the latter. Evidence for these two claims comes from behaviors of some descriptive or adjectival genitives and the phonological process called “rendaku” or sequential voicing.

Much of our discussion in this chapter will surround simple genitive phrases, but we will also examine among others demonstratives and other possibly pronominal particles not only in the Tokyo dialect but also in other dialects as well as in Korean and Turkish. Later, we will also deal with multiple *no*-phrases, where the possibility of movement within DP will be discussed.

¹ We call phrases of the type “XP-*no* YP,” i.e., two nominal phrases (maximal projections) linked by *no*, “genitive phrases.” We avoid the term “possessive phrases,” as used for similar phrases with the English possessive ‘s (e.g., Barker 1995), because Japanese *no* has much wider uses than ‘s.

3.1. The Status of the Genitive *No*

Our first task is to determine the syntactic and morphological status of the genitive *no*. Since most studies on Japanese are silent on this basic issue, this requires some discussion. Considering its distribution, there are three possibilities for a functional item like *no* with regard to its status in syntax and morphology; a suffix (a morphological object), a clitic (a morphological as well as syntactic object) or a head (i.e., a bound word, which is a syntactic object). We will first consider these three options, then we will discuss the traditional claim that *no* is a linker.

3.1.1. *No* as a Suffix

It is generally accepted that *no* is a/the genitive case-marker. We can assume, contrary to Chomsky (1995: 114), that the genitive case is not an inherent case but a structural case in the sense of Chomsky (1986a). In GB Theory, a structural Case is a bundle of features that are assigned to an argument in certain structural configurations. It is assumed that Case is abstract (Chomsky 1995: 110); the existence of a case-marker /marking/inflection, being in the realm of morphology/the lexicon, has no necessary link with the corresponding case actually licensed in syntax, so that in most studies on Japanese (that do not adopt a DP hypothesis) the phrase NP-*no* is regarded as NP, and not PP with *no* as a P head (but see, e.g., Miyagawa 1989). This assumption may be partially due to the fact that English, on which most earlier generative syntactic research was done, is a morphologically impoverished language with regard to its case inflections: outside of the pronominal system, there is no way to morphologically mark nominative or accusative

Case overtly in English, though it is reasonable to assume, as is generally assumed, that English assigns Case to lexical nominal phrases as well. Similarly, the Japanese structural case-markers *ga* (nominative) and *o* (accusative) appear to drop rather frequently in colloquial discourse, but it is rather odd to treat such cases as those with no Case.

If the English possessive 's is a genitive case-marker, it is different from the nominative and accusative Cases, much like Japanese *no*. It is widely held that there is no null genitive case in English, while in Japanese the genitive *no* almost never seems to delete: compounding is severely restricted in both languages (but see 3.3.2.).² This is clearer in English; whenever a minimal pair as in (1) exists, these phrases differ in meaning and also in syntactic distribution, as illustrated in (2) (see Koike 1995a, 1995c).

- (1) a. Chomsky's book (possessive)
 b. Chomsky book (agent, non-possessive)³
- (2) a. (*a/*the) (*new) Chomsky's (new) book
 b. a/the (new) Chomsky (*new) book

In the MP, Case features are checked under Spec-head agreement, so that, if *no* is a case-marking inflection/suffix and purely a morphological object, *no*-phrases are

² The relationship between the so-called POSS-ING construction (e.g., John's painting [of] a picture) and ACC-ING construction (e.g., John painting a picture), which we will not discuss in any detail, may also be relevant here.

³ Here, we do not mean to imply that the terms "agent" and "possessive" are thematic roles. The "agent" reading available here is due to the meaning of the head noun *book*, since such an interpretation is impossible with other nouns:

- (i) #a/the Chomsky sky/road/apple/computer

One may note that it is possible to conceive of situations in which these phrases can be used, but whatever interpretations available do not appear to be possessive.

base-generated and raise for feature-checking. Since Japanese is rigidly head-final on the surface, *no* is always a phonological enclitic attached to the head noun, and one can maintain that *no* is the genitive case-marker. Such a characterization, however, does not appear to be sufficient.

No is similar in many respects to the English possessive 's, which is often considered to be an inflectional suffix. Zwicky (1987), for example, argues that 's is an edge-located inflectional suffix ("EDGE inflection" for Lapointe 1990).⁴ It is called an edge-located suffix, because for many speakers it is a phrasal suffix: it attaches to the last word in the phrase, as illustrated in (3).⁵

- (3) a. [A friend of mine]’s car is here.
 b. [The man (standing) at the corner]’s hat is brown.
 c. [The student that I met with yesterday]’s parents came to see me today.

Barker (1995: 20) claims that 's has nothing to do with the genitive case suffix in Old English and is not the genitive case-marker but a phrase-final clitic in Present-Day English, because it may not be attached to the possessor noun that is not at the right edge of the phrase, as shown in (4) (cf. 3c).

- (4) *[The student’s that I met with yesterday] parents came to see me today.

In Japanese, the 'possessor' noun always occurs at the end of the *no*-phrase

⁴ These studies are not done in the GB-MP tradition, in which the syntactic/morphological status of English 's is hardly ever discussed extensively. Judging from Fukui and Speas (1986) and much later work, Zwicky's position appears to be basically the same as what GB-MP scholars (would) hold for 's.

⁵ English possessive 's tends to be suppressed when it is preceded by another 's (Zwicky 1987). To the degree that this is true, it is clearly different from *no*, a double occurrence of which may be possible. It is not entirely clear at this moment, if a double occurrence of *no* is driven by morphology, phonology, syntax or any combination of the three.

immediately before *no*, so that it is possible to adopt the position that *no* is an inflectional suffix. Japanese structural case-markers like *ga*, *o* and *no*, however, appear outside of other postpositions, as in (5a), though the impossible pattern in (5b) is what one would expect if they are like structural case-markers in other languages (e.g., Russian).⁶

- (5) a. Tookyoo-kara -no densha '(electric) train from Tokyo'
Tokyo -from-GEN train
- b. *Tookyoo-no -kara densha
Tokyo -GEN-from train

Also, the genitive *no* appears only once in coordinate structures, another unlikely behavior for a structural case-suffix (see Vance 1993).⁷

- (6) [Yumiko(*-no)-to Takao]-no ie 'Yumiko and Takao's house(s)'⁸
Yumiko -GEN-and Takao-GEN house

This suggests that *no* is a phrase-final clitic rather than an inflectional suffix.⁹

⁶ The unacceptability of (5b) also shows that postpositions like *kara* 'from' do not require the preceding noun to have a certain morphological case, thus dismissing a part of the motivation for positing morphological cases as in other languages.

⁷ The impossible pattern in (i) (cf. ii) suggests that Zwicky's claim that 's is a phrase-final suffix is open to debate.

- (i) *John and my house < *[John and me]'s house
(ii) John's and my house

Note that (ii) can not have a structure as shown in (iii), due to the general disinclination for backward pronominalization (Note that only coindexing is prohibited here, which does not rule out the possibility of accidental coreference. See the next footnote.):

- (iii) *[John's *pro*_i] and [my house_i]

⁸ (6) is acceptable, albeit somewhat marginally, with two *nos* and different bracketing, if the first *no* is taken to be a pronominal one. It would mean 'Yumiko's (house or something else) and Takao's house.' This is not a case of backward pronominalization but would be one of accidental coreference. See the preceding footnote.

⁹ There is a terminological confusion here, as Zwicky's assumptions about inflection are different from ours and for him the distinction that we are making here may not be valid.

and the pronominal *no* are distinct. If this is correct and these dialects are basically the same as the Tokyo dialect in other respects, however, both the genitive *no* and the pronominal *no* in the Tokyo dialect are in all likelihood present in earlier representations but one of them gets deleted later in the derivation (Okutsu 1974 cited in Murasugi 1991: 164; see Okutsu 1978/1983).

- (8) Hiroshi-no no ⇔ Hiroshi-no ‘Hiroshi’s’ (the Tokyo dialect)
 Hiroshi-GEN PRN

It may be possible to have two *nos* that are contiguous in the surface string in the Tokyo dialect (see Koike 1990), so that it does not seem plausible that this is (purely) due to a phonological constraint of some kind. Since it is rather unlikely for an argument clitic to delete,¹² it must be the genitive postposition that gets omitted in cases like (8). If the genitive *no* can delete, however, (9) should be possible in the Toyama and Kochi dialects, but it is not.

- (9) *Hiroshi- ga ‘Hiroshi’s’ (the Toyama and Kochi dialects)

If the genitive *no* in these dialects is a clitic of (more or less) the same kind, this dialectal difference is puzzling and casts doubt on the claim that the genitive *no* and the pronominal *no* in the Tokyo dialect are distinct.

3.1.3. *No* as a Head

In one notable way, the genitive *no* is less like the possessive *'s* than prepositions in English, which Zwicky (1985) regards as independent words. This has to do with the fact that Japanese postpositions are non-fused postpositions: i.e., there are generally no

¹² This should be the case, if *no* is like an argument clitic attached to the main verb in Athapaskan languages.

suppletive forms or exceptions that must be entered in the lexicon, except possibly for demonstratives, as we will see in 3.3.3.2. This is so even with pronominals, unlike the English possessive 's.¹³ Givón (1990: 478) notes that non-fused postpositions tend to appear as clitics, and indeed Japanese postpositions are all phonological enclitics and always part of a phonological word, much like English 's. The non-fused nature of Japanese postpositions seems to indicate that, unlike 's, they are morphologically freer than clitics.¹⁴ Indeed, applying Zwicky and Pullum's (1983) criteria to Japanese postpositions, Vance (1993) notes that they are more like independent words than affixes or clitics. If this is correct, they can be phonologically clitics but syntactically heads.

If this line of reasoning is on the right track, at least part of Case Theory must be rethought. If *no* is a head, it can be thought of as a genitive Case marker and not a morphological realization of the genitive Case(-marking). This idea may seem to be similar to Chomsky's (1995) assumption that the genitive Case is an inherent Case, as noted earlier. However, at least in Japanese, the same can be said of the nominative and accusative Cases as well.

If Japanese case-markers like *no* are heads, it is reasonable to assume that they are nominal functional categories. In fact, Tateishi (1989) assumes that the nominative *ga* is D and Tonoike (1991a, 1991b) argues that *ga*, *wa* (topic marker), *mo* 'also (emphasis

¹³ Turkish patterns with English in this respect.

¹⁴ In fact, some speakers write these postpositions separately from what precedes them (i.e., put a space between them) in romanized transliteration called "roma-ji." Moreover, Japanese enclitic particles are claimed not to form a single accentual unit with the preceding word in Old Japanese (Martin 1987: 169-72), unlike Present-Day Japanese, which incorporates such a particle into a single phonological phrase. If this is true, they were even more morphologically freer in Old Japanese, suggesting their historical transition from a freer to more bound status.

marker)' and *no* are Ds. One may want to claim instead that *no* is K, the head of KP (Kase Phrase) (Bittner and Hale 1996; see also Travis and Lamontagne 1992). Since *wa* and *mo* are unlikely to be Ks, such a claim would make a distinction between these postpositions, which are not structural Case-markers (Ds), and those that can be considered structural Case-markers, like *ga*, *o* and *no* (Ks). We do not see any justification for such a distinction for two reasons: (i) as we will see, *ga*, *o* and *no* have uses that are not for marking structural Cases; (ii) it appears that all these postpositions are originally emphatic markers (see 6.1.4.1.).¹⁵

3.1.4. *No* as a Linker (and a Head)

Apart from these three possibilities, it has been proposed that the genitive case-marker is a linker. This is a rather traditional, albeit seemingly purely descriptive, idea that is applied to many languages (see Croft 1990: 32-33; see also Taylor 1996: 292-3).¹⁶ This is especially so in Old Japanese. Akiba (1978) uses the term “associative” to refer to the function of *ga* in Old Japanese, which was used like *no* in Present-Day Japanese, as well as *no* in Modern Japanese as connectors or “linkers” of “nouns that have strong association” (Fujii 1991: 176). Fujii (1991: 177-8) also maintains that the relationship between the two nominal phrases is not just genitive or appositive in both

¹⁵ Assuming that so-called structural Case-markers in Japanese are Ds has an added advantage: it appears to support the idea that there is a parallelism between the nominal structure (DP) and the sentential structure (CP), as found in other languages. This has been argued for by Saito (1983a, 1983b) in the seemingly parallel phenomena of Case-drop and Comp-drop in Japanese.

¹⁶ In some languages, there are lexical items that are called linkers, such as *na/ng* in Tagalog (Schachter and Otnes 1972) and the relative linker *yang* in Malay (Prentice 1987).

Modern Japanese and Old Japanese.

Of the three options that we have reviewed, the idea of the genitive *no* as a head, which is quite plausible by itself, appears to be the most compatible with the view that it is a linker. These two ideas, however, can not be easily combined under the standard assumptions that Japanese is head-final and that there is only binary branching. If Japanese is head-final, the idea that *no* is a linker and a head can only be accommodated in a Spec-final structure, as in (10a) (see Tonoike 1991a, 1991b, 1993). Such a structure, however, does not reflect the semantic dependency between the two linked nominal phrases in a straightforward manner.¹⁷ Since the null hypothesis is to assume that syntactic and semantic structures overlap in general, such a structure would be dispreferred, and only after discovering undeniable evidence we would be tempted to adopt it. If Japanese is head-initial, both claims can be accommodated in a Spec-initial structure, which reflects the semantic dependency between two maximal projections, as illustrated in (10b):¹⁸

- (10) a. \wedge
 \wedge YP
 XP *no*
- b. \wedge
 XP \wedge
 no YP

Since we assume that *no* is D, the whole syntactic object in (10b) is DP.¹⁹ In the rest of

¹⁷ This is in fact far from obvious, although a detailed discussion will take us too far afield. It should be noted, however, that the clitic analysis that we propose for some phrases below allows for a structure similar to (10a).

¹⁸ This is not the only structure that is possible under a linker head analysis. See 3.4.3.1.

¹⁹ Abney does not regard the English possessive *'s* as the head of DP, because of the existence of the phrase *John's every wish*. The internal structure of DP he adopts is illustrated in (i).

(i) [DP John's [D' every [NP wish]]]

the chapter, we will try to defend the view that *no* is a linker and a head.²⁰

3.2. The Pronominal *No* as a Linker

In this section, we will argue that the pronominal *no* is the same as the genitive *no* and occupies the same position. In other words, the pronominal *no* is a linker and the head of DP, which takes a null pronominal complement, *pro*.

3.2.1. NP Deletion

With an animate possessor, as in (11), repeated from 1.1., the behavior of the pronominal *no* closely parallels that of English 's, as in (12).

- (11) a. Sono hon -wa [Hiroshi-no hon] da. 'lit. The book is Hiroshi's book.'
 that book-TOP Hiroshi-GEN book COP
- b. Sono hon -wa [Hiroshi-no] da. 'The book is Hiroshi's.'
 that book-TOP Hiroshi-PRN COP
- (12) a. That is [Mary's book].
- b. The book is [Mary's].

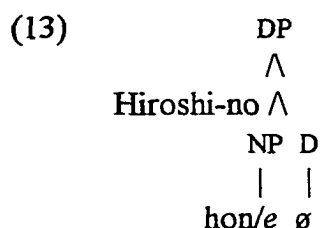
Based on this fact, Saito and Murasugi (1990) maintain that (11b) involves a case of NP deletion, as has been argued for English cases like (12b). We basically follow this analysis, since this can treat the pronominal *no* in these cases as the genitive *no* without

Barker (1995: 30) notes that the phrase is a frozen form, which probably should not be used to determine the internal structure of DP, and assumes that 's is a syntactic marker and not a functional head (Barker 1995: 31), although it is not entirely clear what a "syntactic marker" would be in our framework. The interpretations for this and similar phrases suggest that (i) may not be the correct representation for *John's every wish*, as opposed to *every wish of John's* and *every wish that John has/has had/had/had had* (see Szabolcsi 1994 for relevant discussion).

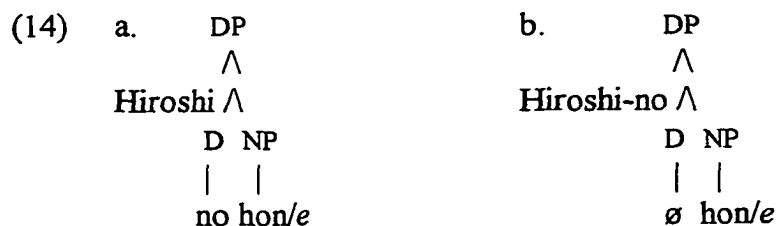
²⁰ This may go against another classical claim (Bloch 1970: 61-62n45) that there are two genitive *nos*: the referent particle *no* and the copula *no*. See 5.2.2.

new stipulations and avoids the problem of which one of the two *nos* is to be deleted, which we discussed in 3.1.2.

Saito and Murasugi are not explicit about where the syntactic position for *no* is in this case, but their analysis implies that it is basically the same as that for English 's, which can be taken either as an enclitic attached to the possessor in Spec, DP or the head of DP. Though they adopt a DP hypothesis, they could not say that *no* is a head D, since they assume that Japanese is head-final (and Spec-initial). So, the structure that they adopt must be (13):²¹



We assume instead that Japanese is head-initial, so that *no* can be the head of DP, as in (14a), although (14b) can not be ruled out, which we will come back to in a later section.



This immediately raises the following two questions:

- (15)
- a. What is the nature of the empty category or categories in these structures?
 - b. How is/are the empty category/categories licensed?

²¹ According to this structure, Japanese D is empty at least in genitive phrases. This raises a question of positing DP, unless NP recursion is ruled out. Moreover, this structure with an empty head NP is problematic in the MP, since that means that it is possible to merge two empty nodes. More plausibly, this D may be filled with a structural Case-marker for the whole phrase, although such a structure raises a question about semantic mapping.

We will try to answer these questions in the following subsections.

3.2.2. The Empty Category in NP Deletion is *Pro*

To answer the first question, the empty complement in the case of NP deletion is most likely *pro*. The pronominal nature of this empty category can be discerned not only from the interpretation of the empty NP but also from the restriction(s) on the possible interpretation of such an NP. As often noted (Kamio 1983 cited in Saito and Murasugi 1990), NP deletion in Japanese is difficult with abstract nouns, even when the antecedent is clearly available in discourse, as in (16) (Saito and Murasugi 1990).²²

- (16) a. *_{[NP} Sono toki-no Yamada-sensei-e -no izon] -wa Taroo-no datta.
 that time-GEN prof. -on-GEN reliance-TOP was²³

‘The reliance on Prof. Yamada at that time was Taro’s.’

- b. *_{[NP} Sono yokunai kenkyuu-ni taisuru taido] -wa Hanako-no da.
 that good-not research -toward attitude-TOP is

‘That bad attitude toward research is Hanako’s.’

It should be noted that there seem to be independent reasons why (16a) and (16b) are awkward. Most importantly, it appears that the antecedent of the empty category in NP deletion needs to have a non-temporal property. Temporal stability is a prototypical nominal quality (Givón 1984: 55), so that the empty category involved must be *pro*. This property is clearly incompatible with a temporary, if not stage-level, reading forced by *sono-toki-no* ‘that time-GEN’ in (16a). Consequently, compared with (16a), (16b) with *taido* ‘attitude’ is in fact relatively less awkward. What makes (16b) worse than it should

²² English *one* may have a similar restriction on its antecedent.

²³ The glosses are Saito and Murasugi’s.

be is the position of the adjectival (or relative clause) modifier *yokunai* ‘not good,’ which is in a very unnatural position (with no prior discourse). A more natural position, we believe, would be just before the head noun, as in (17):²⁴

- (17) ?*[_{NP} Sono kenkyuu-ni taisuru yokunai taido] -wa Hanako-no da.
 that research-toward good-not attitude-TOP is

‘That bad attitude toward research is Hanako’s.’

One way to account for this abstractness constraint is to assume that this empty category has a feature (e.g., [+ CONCRETE]). Most likely, this is only possible if the empty category is *pro* and not just a phonologically empty copy of its antecedent, as is widely assumed to be the case for ellipsis in general. Noting that Dutch NP deletion cases also exhibit gender agreement between the missing head noun and determiners and adjectives, Kester (1994) proposes that *pro* in Dutch NP deletion has features. Following this proposal, one could propose that *pro* in Japanese NP deletion cases carry a concreteness feature, though this should probably not be taken as a syntactic condition.

It is important to note that NP deletion is even possible when there is no discourse antecedent: examples like the following are possible, if not totally perfect:

- (18) a. Fuku -ni ?(nani-ka) shiro-i -no -ga tsui -te iru yo.
 clothes-to something white-NPT-PRN-NOM stick-CON be FP

‘There’s some white stuff/something white (stuck) on (your) clothes.’

- b. ?(Nani-ka) tsumeta-i -no -o kat -te ki -te.
 something cold -NPT-PRN-acc buy-GER come-GER

‘Go and get me something cold/some cold ones.’

- c. ?(Dore -de -mo) suki-na -no -o tabe-te kudasai.
 which.one-COP-EMPH fond-COP-PRN-ACC eat-GER give.IMP

²⁴ One possible reason that Saito and Murasugi (1990) avoided (17) is that *sono* ‘that’ can be taken to modify *kenkyuu* ‘research’ in it.

‘Please eat whatever you like.’

All the sentences in (18) are fine with *nani-ka* ‘something’ or *dore-de-mo* ‘whichever it is,’ but without it, they are somewhat awkward. With such a phrase, the pronominal *no*, or more appropriately the *pro* as the complement of *no*, actually has a discourse antecedent, since *nani-ka* or *dore* ‘which one’ introduces a discourse referent/entity, nonspecific as it might be, into the current discourse. An important point is that even without these items, the sentences in (18) are possible.

Compared with Japanese, the following English examples are perfect, in which the antecedent for *pro* is unspecified plural human beings (usually generic):

- (19) a. New York’s rich and famous *pro* (*pro* = people, residents, etc.)
 b. New York’s poor and needy *pro* (*pro* = people, residents, etc.)

Although this is generally dismissed as a peculiar fact about (certain) English adjectives (or English NP deletion), English *pro* in DP can have other kinds of antecedents as well.

Consider the following examples:

- (20) a. You are demanding the impossible *pro* of me. (*pro* = thing[s] [to do]?)
 b. the devil’s own *pro* (*pro* = followers/offspring)
 c. her first-born *pro* (*pro* = offspring/child)
 d. the guilty/accused *pro* (*pro* = party/persons/people)
 e. a given *pro* (*pro* = fact)
 d. Give her my best *pro*. (*pro* = regards)
 e. I met a student at Mary’s *pro*. (*pro* = house/apartment/residence)

These examples show that the antecedent(s) of *pro* can be independent of the adjective/genitive (i.e., modifier) that precedes it and that there are no single lexical

nouns that *pro* refers to in most cases. Moreover, they suggest that the antecedent of *pro* may be non-linguistically (i.e., conventionally) determined, which is why these expressions seem idiomatic. An interesting example is the name (in French) of a hotel in Montreal, Canada:

- (21) Le Reine Elizabeth ‘The Queen Elizabeth’ (a hotel in Montreal)
the Queen

(21) includes the masculine definite article *le*, which agrees in gender with the missing masculine lexical noun *hôtel* ‘hotel’ and not with Queen Elizabeth.²⁵

Based on these observations, we contend that *pro* in DP may or may not have a discourse antecedent and that if it does not have a discourse antecedent, its antecedent is conventionally determined. It should be noted in this connection that Murasugi (1991) notes that cases like (16) and (17) are fine, if the *no*-phrase in question obtains a kind reading (e.g., *Hanako*’s ‘Hanako’s kind of thing’ or ‘a kind of thing that Hanako would do’; see 5.1.3.).

3.2.3. Licensing NP Deletion

As for the licensing of the empty category in NP deletion, we will basically adopt Lobeck’s (1991a, 1991b) proposal. Lobeck claims that the complement of a functional head that agrees with its specifier via Spec-head agreement can be deleted.²⁶ She shows that this can uniformly account for three kinds of ellipsis in English; IP deletion (formerly

²⁵ Marcel den Dikken (p.c.) points out that the masculine gender may be the default gender in French. If so, the empty pronominal may not carry a gender feature in French. At this moment, we do not have any evidence for or against this proposal for French.

²⁶ Lobeck’s analysis is crucially based on the notion of ‘government,’ which is no longer available in the MP. Consequently, we just assume that Spec-head agreement is enough to license *pro* in the complement position.

sluicing),²⁷ VP deletion (formerly VP ellipsis), and NP deletion (formerly N' ellipsis).

(22) includes an example of each from Lobeck (1991b) with the old and new category labels, and (23) shows how this is schematically represented.

- (22) a. Although John's friends were late for his rally, [_{DP/NP} Mary's [_{NP/N'} e]] came on time.
- b. Even though she doesn't know exactly [_{S'/CP} who [_{S/IP} e]], Mary thinks that someone interesting is speaking tonight.
- c. Because [_{S/IP} Mary might not [_{VP} e]], John will attend the rally.

- | | | | |
|------|----------------------|----------------------|----------------------|
| (23) | a. DP | b. CP | c. IP |
| | ∧ | ∧ | ∧ |
| | SPEC ∧ | SPEC ∧ | SPEC ∧ |
| | D [_{NP} e] | C [_{IP} e] | I [_{VP} e] |

In the case of NP deletion, this allows for two types of Ds that license complement deletion: a phonologically overt D like *no*, and a phonologically covert D with an agreement feature [+AGR].²⁸ These two correspond to the two possible positions that we

²⁷ Sluicing may not constitute a case of IP deletion but one of CP deletion in Japanese, as has been argued by many (see Merchant 1998 and the references cited therein).

²⁸ We do not have much to say about the empty categories involved in IP deletion and VP deletion here. Iatridou and Embick (1997) note that *pro* may not take a sentential linguistic antecedent (CP/IP) in a *pro*-drop language. Even if IP deletion is in fact CP deletion (see the previous footnote), this makes it unlikely that the empty category in such cases is *pro*. In spite of the widely held misconception largely due to Hankamer and Sag (1976), VP deletion without a linguistic antecedent appears to be possible in limited cases in English, as in (ia) (cf. ib and ic).

- (i) a. May I (e.g., cut in)?
 b. Would you mind (e.g., leaving us alone for a few minutes)?
 c. Is it dark in here, or is it just me (e.g., who thinks so)?

It has been observed that Japanese does not exhibit VP deletion, but from this viewpoint, it is not clear if this is really the case in light of examples like (iii):

have noted earlier for *no*: *no* as the head of DP, as in (14a), and *no* as an enclitic attached to the ‘possessor’ in Spec, DP, as in (14b). These two analyses have also been proposed for English ‘s, but, to the best of our knowledge, no conclusive evidence has been provided to argued for one or the other. Similarly, both analyses are plausible for the pronominal *no* with an animate possessor.

Our head analysis, however, appears to be superior to the clitic analysis, if we examine the pronominal *no* with a nonreferential ‘possessor,’ as in (24a). The *no* in (24a) follows an adjective *aka-i* ‘red’²⁹ and is unambiguously the pronominal *no*, since *no* can not occur with an overt head noun, as shown in (24b):

- (24) a. *aka-i no* ‘a/the red one’
 red-NPT PRN
- b. *aka-i (*no) hon* ‘a/the red book’
 red-NPT book

Needless to say, it is preferable to assign the same structure to (24a) and (24b). This is possible under our linker analysis, under which *no* is the head of DP and its complement is empty (*pro*) in (24a). If this is correct, *no* must be absent when there is a phonologically overt complement, but it is probably more accurate to say that *no* must be phonologically overt when the complement is empty. This is partly because there are examples like (25), in which the noun *aka* ‘red’ precedes *no*, that closely resemble those

-
- (ii) *Chotto ii desu ka?* ‘Is it OK (e.g., to have a word with you)?’
 a.little good COP Q

²⁹ The morpheme *-i* is a non-past (or non-perfective/imperfective) inflectional ending that appears after the adjectival stem. The gloss for *aka-i* should therefore be ‘is/are(/will be) red.’ This suggests that a Japanese adjective is a clausal modifier (or a ‘relative’), as we will argue in 4.1.1.

like (24)³⁰:

- (25) a. *aka no* 'the/a red one'
 red PRN
 b. ?*aka no hon*³¹ 'the/a red book'
 red GEN book

In fact, a clitic analysis is impossible for (24) without some modifications. This is because (24a) can not possibly derive from *aka-i no no*, due to the impossibility of *aka-i no hon*, as shown in (24b). Moreover, it is not clear what the syntactic category of *aka-i-no* is, if it is a constituent at all.

- (26) a. *aka-no* 'red one (one of the red ones)' or 'red'
 b. *aka-i-no* 'red one (one that happens to be red)'

Both (26a) and (26b) are cases of NP deletion, but (26a) can also be a nominal modifier, while (26b) can not. The two analyses for (24b) are represented in (27a) and (27b):³²

- | | |
|---|--|
| <p>(27) a. DP
 ^
 DegP D'
 ^
 akai D NP

 (*no) hon/<i>pro</i></p> <p><head analysis></p> | <p>b. *DP
 ^
 ? D'
 ^
 akai-no D NP

 ∅ no/hon</p> <p><clitic/pronominal analysis></p> |
|---|--|

³⁰ *Aka-no* is an example of adjectival genitives, which we will discuss in more detail.

³¹ Unlike (24b), (25b) is not perfect, although this is not due to syntactic factors (see 5.1.2.).

³² Following Koike (1994c), we assume here that adjectives like *aka-i* are DegPs and not APs, although nothing hinges on this choice at this moment (but see 4.1.1.).

3.2.4. Pronominal Particles in Other Dialects, Korean, Turkish and English

Before we move on to a more detailed look into behaviors of *no*-phrases, discussion of other dialects of Japanese as well as other languages may be in order. As we noted earlier, some dialects of Japanese, such as the Toyama dialect (Murasugi 1991; Masaru Inoue p.c.) and the Kochi dialect (Takaaki Hashimoto p.c.), have a particle that unambiguously behaves like a pronominal but is phonologically different from *no*. In these two dialects, the particle happens to be *ga*, as we have seen. In Kansai dialects, we see a sequence *no-n*, which may (or may not) stand for two contiguous *nos*. These two patterns are illustrated along with that of the Tokyo dialect in (28):

- (28) a. Rika-no(*-no) (the Tokyo dialect) ‘Rika’s *pro*’
 b. Rika-no *(ga) (the Toyama and Kochi dialects)
 c. Rika-no-n (Kansai dialects)

This appears to argue against our claims that *no* is a linker and that there is no pronominal *no*. If *no* is a linker, at least *ga* in the Toyama and Kochi dialects is most likely to be its complement and is a pronominal, as shown in (29a). On the other hand, if *no* is a clitic, there is no pronominal and the complement of *no* is *pro*, as we have proposed. The latter option is illustrated in (29b).³³

- | | |
|-------------------|-------------------------|
| (29) a. DP | b. DP |
| ^ | ^ |
| XP ^ | XP-no ^ |
| no (no) (Tokyo) | (no) <i>pro</i> (Tokyo) |
| n (Kansai) | n (Kansai) |
| ga (Toyama/Kochi) | ga (Toyama/Kochi) |

Either way, it is clear that, if we want to assume that *nos* in all the dialects are one and the same, our proposal must be modified. But which is the correct analysis?

³³ XP stands for either NP or DP here.

It is important to note that the nominative case marker, which we take to be a D is also *ga*. If the pronominal *ga* and the nominative *ga* are one and the same, as a monosemy hypothesis would have it, (29b) is quite plausible. Moreover, (29b) treats so-called pronominals as functional categories, which is theoretically attractive, and may be the more likely analysis of the two for Korean and Turkish, too. Korean has a pro-form *kes* (30), which appears to correspond to both *no* and the formal noun *koto* ‘fact’ in Japanese, while Turkish needs the morpheme *ki* after the genitive to obtain a pronominal reading, as in (31):

(30) Chelsu-uy kes ‘Chelsu’s one’ (Korean; Murasugi 1991: 201)
Chelsu-GEN one

(31) John-in -ki ‘John’s’ (Turkish; Sarah Kennelly p.c.)
John-GEN-KI

The genitive postpositions in these languages are unlike *no* in that they seem to be more fused and more agglutinative. This is clearer in Turkish, which exhibits vowel harmony: the vowel in the genitive postposition *-In* agrees with that/those in the ‘possessor,’ which is *John* in (31). It is therefore plausible to assume that the genitive postpositions are clitics in Spec, DP and are never D heads in these languages. This may explain another major difference between Japanese and Korean: compounding is much more common in Korean, as the Korean genitive postposition is often optional, while it is largely limited to fixed expressions and Sino-Japanese morphemes in Japanese:

- (32) a. John*(-no) hon ‘John’s book’
 John -GEN book
- b. John(-uy) chayk (Korean; Jae-Hong Lee p.c.)
 John -GEN book

This account can be extended to Turkish, in which compounding appears to be quite

dialect should be treated as a linker in some cases, as we will see in the next section.

3.3. Two Syntactic Positions for *No*

In this section, we will first examine two sets of facts that show that there are two syntactic positions for *no*. We argue that both positions are available in the Tokyo dialect (probably as opposed to some other dialects and Korean and Turkish), but that *no* is undergoing a historical transition from a linker to an enclitic. This reanalysis is not completed in the Tokyo dialect, unlike English and Norwegian, which provide some historical evidence for such a change.

3.3.1. Descriptive Genitives and Adjectives

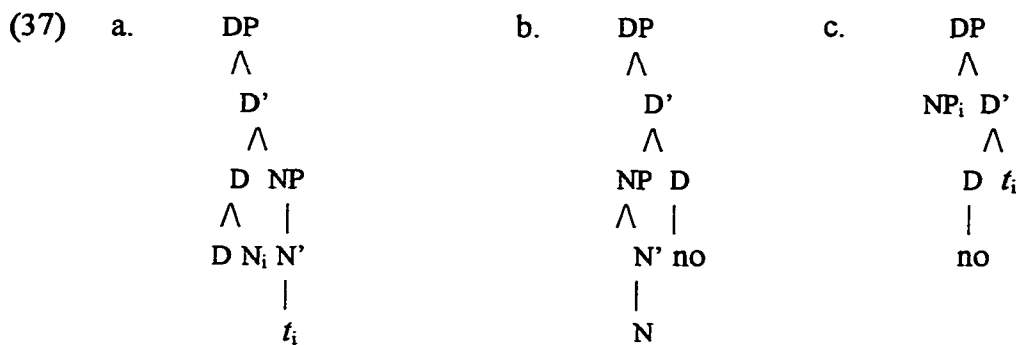
It has been widely observed that some (mostly prenominal) adjectives in English and Romance (e.g., *mere* in English, *mero* in Spanish/Italian) behave differently from other adjectives in having the following characteristics (see Cinque 1994):

- (35) a. They can not be used in predicate position (e.g., **The fact is mere*).
- b. They can not be modified (with *very*, for example), and do not (normally) inflect (e.g., **merer*, **merest*).
- c. They can not be used in an elliptical construction (e.g., **the mere*, **un(o) mero* ‘a mere one’ [Spanish]).

Koike (1994c) notes that in Japanese (and Korean) these adjectives are expressed, if not with sentential adverbs, with genitives, as in (36).

- (36) tada -no gakusei ‘just a student, a mere student’
 mere-GEN student

Assuming that *no* is a D, Koike claims that there is no maximal projection called AP and that there are two kinds of adnominal “adjectives”: DP “adjectives” (e.g., *mere*, *tada-no*) and DegP “adjectives” (e.g., *young*, *waka-i* ‘young’) (see Abney 1987).³⁵ Consequently, it is proposed that *mere*-adjectives in English (and Romance) are derived by head-to-head movement, as in (37a), while in Japanese, which is assumed to be head-final in the paper, such adjectives involve no movement before SPELL-OUT (37b) but LF head-to-head movement, so that all these languages have almost the same LF representations:³⁶



³⁵ The paper does not discuss “keiyoo-dooshi,” or adjectival verbs, in Japanese. See 4.1.1.

³⁶ As noted in Koike (1994c), a similar analysis has been proposed by Watanabe (1992: 47-52) for the contrast found in the ways in which these two types of languages form existential quantifiers, universal quantifiers and negative polarity items (NPIs). They occur as single lexical items in English, while they are formed by adding the morpheme *ka* (question marker) or *mo* ‘also’ (emphatic marker) to *wh*-phrases in Japanese:

- | | | | |
|-----|--------------------|------------------------------------|---------------------|
| (i) | a. dare | ‘who’ (<i>wh</i> -phrase) | |
| | b. dare- <u>ka</u> | ‘someone’ (existential quantifier) | |
| | c. dare- <u>mo</u> | ‘everyone’ (universal quantifier) | |
| | d. dare- <u>mo</u> | ‘anyone’ (negative polarity item) | (Watanabe 1992: 51) |

There are gaps in these paradigms, which suggests that these are indeed morphological paradigms. On the other hand, the so-called “pleonastic” *-no koto* ‘lit. ’s matter’ can intervene between a *wh*-word and *mo*, but not between a *wh*-word and *ka*. This may argue against a head-to-head or a morphological incorporation analysis for universal quantifiers and NPIs.

- | | | |
|-------|--------------------------------------|---|
| (ii) | a. dare- <u>ka-no koto</u> (-ga/o) | b. [dare- <u>no koto</u>]-ka(-*ga/*o) (literal meaning only) |
| (iii) | a. (*dare- <u>mo no koto</u> (-ga/o) | b. [dare- <u>no koto</u>]-mo(-*ga/*o) |

Since we assume that Japanese is head-initial, however, the structure in (37b) is no longer available, but we could argue that *mere*-adjectives in Japanese have the same surface structure as in English (37a) except that the order of D and N is switched. Since the D-N sequence corresponds to a single lexical item in English, the order of D and N is most likely a matter of morphology. This analysis would make Japanese and English even more similar than the above analysis in that they are not different in syntax but diverge only in morphology. Much like the above analysis, this is in the spirit of the MP.

Alternatively, we may assume that the NP complement of *no* moves to its specifier position (Spec, DP), as in (37c) above. This yields the desired surface order and is compatible with the fact that *no* is never fused. This analysis is similar to a linker analysis in that *no* is regarded as the head of head-initial DP, but it involves only one argument, so the D is not actually functioning as a linker. It is tempting to attribute this local movement to the strength of some feature of D; NP moves into Spec, DP so that some feature of D is checked off. In fact, this appears to account for the spelling out of (seemingly) non-moved (weak) functional categories as independent words in creoles (Bernstein 1997). However, postnominal functional categories may occur as enclitics even in standardly head-initial languages like Romanian and Norwegian.

It should be noted that our analysis, in which “adjectives” are phrasal, is incompatible with earlier analyses that treat *mere*-adjectives as heads that take NP complements (e.g., Bernstein 1992, DeGraff and Mandelbaum 1993),³⁷ not to mention

³⁷ Following Bernstein (1992), DeGraff and Mandelbaum (1993) claim that intersective adjectives like *red*, and ‘autonomous’ adjectives like *mere*, differ with regard to their selectional properties and syntactic positions: the former projects to AP and is an adjunct, while the latter takes NP as its complement. Adjectives like *old* are ambiguous between the two readings, as illustrated in (i), and can either project to AP and be adjoined to NP (intersective) or take NP as a complement (autonomous).

those analyses that regard all adjectives as heads (e.g., Abney 1987). Noting that *mere*-adjectives can be crossed over by a proper N in Romance (see Longobardi 1994), Cinque (1994) argues against this head (A°) analysis of *mere*-adjectives. If this is correct, there is no problem with an analysis in which “adjectives” are always phrasal.³⁸ Consequently, all “adjectives” are either adjuncts or in Spec position. One major problem that remains is that we no longer have an explanation for the correlation between the (almost) necessarily prenominal position of *mere*-adjectives and their characteristics in (35), but Cinque (1994) also notes that this correlation does not always hold in Romance. Moreover, Japanese has what appear to be adjectival genitives, as in (38), that are different from DP adjectives like *tada-no* ‘mere’; some of them do not appear in predicate position (39a), where they appear without *no* (39b), while others appear in predicate position with or without *no*, as illustrated in (40a) and (40b) respectively.

- (38) a. ame -no yoru ‘rainy night’
rain-GEN night
- b. kuro -no booshi ‘black hat’
black-GEN hat
- (39) a. *Sono yoru -wa ame-no dat-ta. ‘The night was a rainy one.’
that night-TOP rain-GEN COP-PST
- b. Sono yoru-wa ame dat-ta.
that night-TOP rain COP-PST
- ‘*lit.* As for the night, (it) was rain’
- ‘The night was rainy.’ or ‘That night it rained.’

-
- (i) a. Our old friend just walked in. b. Our friend who just walked in is old.

³⁸ Non-DP adjectives in Japanese are most likely relative clauses (see 4.1.1.). Therefore, they should be treated as phrases.

- (40) a. Sono booshi-wa kuro -no dat-ta. 'The hat was a black one/kind.'
 that hat -TOP black-GEN COP-PST
- b. Sono booshi-wa kuro dat-ta. 'The hat was a black one.'
 that hat -TOP black COP-PST

Adjectival genitives are also found in English, which Ike-uchi (1991) calls descriptive genitives:

- (41) a women's college, these boy's socks, a child's language, a doctor's degree

This shows that 's can not be purely a "possessive" marker and it is similar to *no* in this respect as well.³⁹ These genitives appear with modifiers, if not with *very*.⁴⁰

- (42) a. *predominantly* women's colleges b. an *all girls'* school

Tremblay (1991) also notes that "possessives really function like adjectives" in that "[b]oth can modify the head noun from inside the NP" "or from outside it": in the following French examples, both dative possessives and adjectives appear in postnominal and predicate positions.

- (43) a. un livre à Marie 'a book of Mary's'
 a book DAT Marie
- b. Ce livre est à Marie. 'This book is Mary's.'
 this book is DAT Marie

³⁹ Even without event nominals, some non-possessive genitives in English behave differently from adjectivals, as the following examples illustrate:

- (i) a. America's most favorite star b. *American most favorite star
 (ii) a. the most favorite American star b. *the most favorite America's star

⁴⁰ Semantically speaking, it is not clear if the *predominantly* in (42a) modifies *women's* or *women* only. Intuitively, the latter appears to be correct, which suggests that English 's is also a linker (at least in some cases).

- (i) *predominantly* black colleges
 (ii) These colleges are *predominantly* black/*women's.

- (44) a. un livre intéressant 'an interesting book'
 a book interesting
- b. Ce livre est intéressant. 'This book is interesting.'
 this book is interesting

The *ame-no* in (38) corresponds to *rainy* in English and appears adjectival, but it does not appear to be a lexical item even under the incorporation/head-to-head movement analysis illustrated in (37a). This is because, unlike the *rain* in *rainy*, the *ame* in *ame-no* can be modified with an (adnominal) adjective as in (45a) but not with an adverbial as in (45b), which modifies *ame-no* as a whole.⁴¹

- (45) a. [hageshi-i ame]-no hi 'day of a heavy rain'
 intense rain-GEN day
- b. *[hageshi-ku ame-no] hi 'heavily rainy day'
 intensely rain-GEN day

Moreover, it is difficult to maintain the lexical incorporation analysis for the *ame-no* in (46); incorporation of *no* may not occur, if at all, as a morphological process in this case.

- (46) ame-no oto 'the sound of rain/*rainy sound'
 rain-GEN sound

This makes more plausible the claim that *no* is a linker. If this is correct, (38) and (46) must have the same structure as in (47):

- (47)
- $$\begin{array}{l}
 \text{DP} \\
 \wedge \\
 \text{ame D}' \\
 \text{'rain'} \wedge \\
 \text{D yoru/oto} \\
 | \text{'night'/'sound'} \\
 \text{no}
 \end{array}$$

Of course, it is possible to state that *ame-no* is a lexical item in (38) but not in

⁴¹ The majority of adverbs in languages like English derive from adjectives. Japanese adjectives have an adverbial form, which corresponds to such an adverb.

(46). This may not be a totally ad hoc claim. In fact, some genitive phrases are ambiguous, as shown in (48), which we can account for by appealing to the two structural representations that such a phrase can have:

- (48) ame-no hi ‘day of rain (e.g., day to appreciate rain)/rainy day’
rain-GEN day

An interesting fact that we have not mentioned so far is that *tada-no* appears to be ambiguous in some cases, as in (49).

- (49) tada -no hon ‘a mere/free book’
mere/free-GEN book

Moreover, as shown in (50), while the meaning that we discussed earlier, i.e., ‘mere,’ is not available in predicate position, the other meaning, i.e., ‘free (of charge),’ is available, much like the phrase *kuro-no* ‘black’ in (40).

- (50) a. Sono hon-wa tada-no da. ‘The book is a *mere/?free one.’
that book-TOP mere/free COP
- b. Sono hon-wa tada -da. ‘The book is *mere/^{ok}free.’
that book-TOP mere/free-COP

It is difficult to explain this fact, if one assumes that there is a single incorporated or non-incorporated phrase, *tada-no* and it is ambiguous. Although these two meanings appear to be related, such an analysis can not account for the differences in syntactic behaviors that we have noted.

If we assume that there are two homophonous but structurally different phrases, however, the facts generally follow without additional stipulations (but see 5.1.2.). *Tada-no* in the sense of ‘mere’ is an incorporated form and is in the Spec, DP, as shown in (51a). It does not appear in predicate position (50a), because it does not stand alone

without a head noun to modify: it does not license NP deletion.⁴² This is basically the insight behind the head analysis of Bernstein (1992) and DeGraff and Mandelbaum (1993), which we have argued against. (50b) does not have this reading, because *tada* is not a syntactic constituent on this interpretation and therefore can not move or stand alone. As is illustrated in (51b), *tada-no* in the sense of ‘free (of charge)’ is not a syntactic constituent but is a noun (*tada*) in Spec, DP followed by *no*, a linker D, which licenses NP deletion. This is why *tada* can appear alone, as in (50b).

- | | | |
|------|---|---|
| (51) | a. DP
\wedge
tada-no D'
\wedge
\emptyset NP/* <i>pro</i> | b. DP
\wedge
tada D'
\wedge
no NP/ <i>pro</i> |
|------|---|---|

Similarly, we can say that *ame-no* in (39a) is a descriptive genitive, in which *no* is not a linker head D, while the *no* in *kuro-no* in (40a) is a linker head D, which licenses NP deletion:

- | | |
|------|---|
| (52) | a. * <i>ame-no</i> <u><i>pro</i></u> ‘rainy one’

b. <i>kuro-no</i> <u><i>pro</i></u> ‘black one’ |
|------|---|

3.3.2. Compounds and Sequential Voicing

Strong evidence for the claim that *no* is a linker comes from the simple fact that compounds and genitive phrases are very similar. This is probably true in any language, but it is clearly so in Japanese. One might note that compounds are morphological objects, while genitive phrases are syntactic ones. Such an assumption has prevented researchers from capturing the insight that they are very similar in a formal way. It is

⁴² In other words, this *tada-no* is exactly like ‘real’ adjectives. Note that our analysis is compatible with the claim that adjectives are in Spec positions (Cinque 1994).

well known, however, that the boundary between morphology and syntax is differently drawn in each language. It is clear, therefore, that following such boundaries between morphology and syntax and delimiting the object of study is not the best way to figure out universal linguistic representations. In fact, in generative studies, few linguists appear to follow such an approach closely, as can be evidenced in the history of research on verbal morphology. More crucially, we have shown in the last subsection that morphology and syntax interact in a systematic way: some adjectives in English and Romance occur as single lexical items, while their counterparts do not in Japanese (and Korean).

If compounds and genitive phrases have internal syntactic structures, it is highly likely that they share the same structure except for one important difference: compounds (appear to) lack a morphologically overt functional category that is present in genitive phrases.⁴³ Moreover, this functional category appears to function as a linker in our sense of the term.

The main evidence we present here has to do with the phonological process called “rendaku” or sequential voicing (SV). SV replaces a voiceless obstruent with a voiced one,⁴⁴ when it is the initial consonant of a non-initial morpheme in a compound or a stem-affix formation (Martin 1952; Itô & Mester 1986; Vance 1987: 133-48). SV has been a topic of much interest for a long time in Japanese linguistics, since there are many exceptions that can not be accounted for. The place name in (53b), for instance, unlike

⁴³ As noted earlier, there are syntactic and semantic differences between compounds and genitive phrases. We believe, however, that these differences do not warrant positing totally different structures for them, since (most of) the differences are due to non-structural factors.

⁴⁴ This is not exactly correct, since the phoneme /h/ is replaced with a /b/ or a /p/ due to historical changes involving these consonants. It is, however, highly plausible that SV was (more or less) purely a voicing process at one point, as the name indicates.

that in (53a), does not involve SV, though no known conditions, such as Lyman's Law (Lyman 1894)⁴⁵ and the Right Branch Condition (Otsu 1980),⁴⁶ seem to block it. Since the second segment in each compound is the same, no phonological or lexical accounts can explain away such an exception.

(53) a. Ioo-jima = ioo + shima 'Two Jima'

b. Hiro-shima

It has been claimed (Unger 1975: 8-9) that SV is a result of the loss of a vowel and a preceding nasal between the two elements in question and that this NV sequence is most likely the genitive *no*. If this is correct, the above contrast can be accounted for by simply assuming that genitives (54a) and adjectives (54b) behave differently with regard to SV, the *i* in (54b) being a non-past adjectival ending.

(54) a. Ioo-jima = ioo -no shima 'lit. Island of Sulphur'
sulphur-GEN island

b. Hiro-shima = hiro -i shima 'lit. Broad Island'
broad-NPT

Koike (1995d, 1996) gives the following four synchronic arguments in support of Unger's claim, which is based on diachronic facts. First, there are minimal pairs like (55) in which the presence of *no* is correlated to the absence of SV and vice versa. Secondly, loss of a vowel that results in assimilation of a consonant to an adjacent consonant is also attested in Modern Japanese. For instance, in dialects spoken around Tokyo in fast/rapid

⁴⁵ As noted by Norinaga Motoori (1730-1801), SV does not apply when the second part of a compound contains a voiced obstruent. This is now called Lyman's Law (Vance 1987: 136; Shibatani 1990: 174).

⁴⁶ According to the Right Branch Condition, SV only applies to a "constituent that is on a right branch at the lowest level of a constituent tree" (Otsu 1980). The effects of the condition only show up when there are three or more elements in the compound in question, so that it is irrelevant for all the examples we consider here.

speech and/or colloquial speech in general, the vowel /a/ in the negative morpheme *-ana-* deletes and when /r/ precedes it, the consonant assimilates to the following /n/ (56) (Koike in prep.). Thirdly, SV is not the only case of postnasal voicing in Japanese (57) and postnasal voicing is widely attested in other languages (Pater 1995). And finally, compounds that involve SV are pragmatically similar to genitive phrases. As we will see in 5.1., *no* marks presupposition (Koike 1994a, 1994b), and the idea of presupposition implies contrast, as illustrated in (58).

- (55) a. *kawa -no kutsu* b. *kawa-gutsu* ‘leather shoe(s)’
 leather-GEN shoe
- (56) *wakar -ana -i* ⇔ *wakannai* ‘do not understand’
 understand-NEG-NPT
- (57) *kan-jiru/zuru = kan + suru* ‘feel’
 feel do
- (58) a. *ama-gasa < ame -no kasa*⁴⁷ ‘umbrella’
 rain-GEN shade
- b. *hi-gasa < hi -no kasa* ‘parasol’
 sun-GEN shade

This analysis, however, fails to explain why omission of the genitive *no* and that of the adjectival ending *i* have different phonological effects, since /n/ and /i/ both contain a [+ VOICED] feature that can cause assimilation. It is of course possible to assume that vowel deletion applies in both cases so that there is no [VOICED] feature left for /i/. But such an account can be circular, since nominal and adjectival roots are not always easily distinguishable.

We have been assuming, following Koike (1994c), that *no*-phrases are DPs and that adjectives are DegPs. When their heads are empty/covert, the contrast between DPs

⁴⁷ See below for the alternation of *ama* and *ame* ‘rain.’

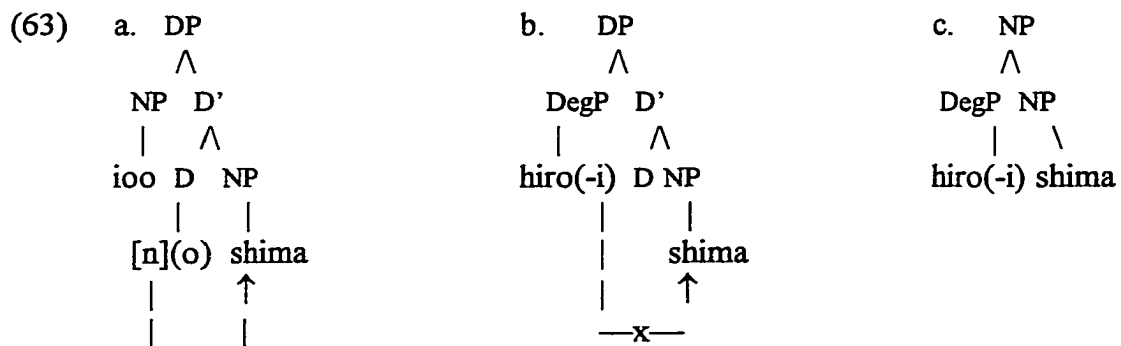
generally, functional) elements in them, while the latter do.⁵⁰

(62) a. tan -gutsu 'ankle-length (*lit.* short) shoes'
short

b. *mijika-gutsu = *mijika-i kutsu
short

It is therefore plausible to assume that this morphological ambiguity of the morpheme *naga* is causing its ambivalent behaviors.

If *no* is a linker, the syntactic structure for (53a) would be that in (63a). The internal structure of (53b) is either (63b) or (63c), depending on whether the DegP is substituted (in Spec, DP) or adjoined to the head NP *shima* 'island.' Following Cinque (1992, 1994) and our earlier discussions, we claim that (63b) is the correct structure, although the choice does not affect our main claim here.⁵¹



According to Chomsky (1995: 245), head-complement relations are the 'most local' of all relations between the (terminal) head and any XP. We claim that this is because the head and its complement are sisters, unlike the head and its specifier or adjuncts, and are syntactically, and consequently phonologically, adjacent to each other.

In fact, Spec-head morpho-phonological interactions and head-complement interactions

⁵⁰ It should be noted that *mijika* may consist of two lexical items rather than one, which may at least be partially responsible for this contrast as well.

⁵¹ See 4.1.1. for some discussion on the status of DegP.

- (69) a. [[un-grammatical]-ity] b. [un-[grammatical-ity]]
 (70) a. [Tom's] a linguist. b. [[Tom]'s a linguist].

The latter case is also very similar to the case of the English possessive 's:

- (71) a. [[Mary's] apartment] b. [[Mary]'s apartment]

An interesting difference between these two homophonous clitics in English is that, while syntacticians would probably uniformly choose (70b) over (70a) as the correct syntactic bracketing, there appear to be many syntacticians who would prefer (71a) to (71b) as such. Undoubtedly, this is largely due to the fact that the former 's has a full form (*is*), while the latter 's does not have a full form. If the sentential and nominal structures are parallel to each other, these two cases, along with that of the genitive *no*, should receive similar treatments, if not exactly the same one. In other words, (70b) may represent the correct (partial) syntactic bracketing in the case of the English possessive 's, and, if we are correct, both (70a) and (70b) should fit the bill.

We do not see the reanalysis of *no* to be a syntactic operation but one due to two different patterns of lexical insertion. Lexical insertion constitutes a crucial (but often overlooked) part of lexical learning, patterns of which we believe are often underdetermined with regard to relevant syntactic structures. Since there is no new syntactic structures involved in this case, there is no drastic historical change in our proposal. A drastic change is both theoretically undesirable and empirically unlikely. Our proposal accounts for the gradual nature of syntactic change and does not involve parametric change of any kind. We believe that the linguistic system is dynamic, but this is not because there is structural variation but because the language input is generally underdetermined with regard to lexical insertion.

3.3.3.1. Incorporation as a Historical Process

Di Sciullo and Williams (1987: 89-91) claim that *the man's hat* can be analyzed in the following two ways, which they call a "coanalysis."

(72) a. [_{NP} [_{NP} the man]'s] hat b. [_{NP} the [_N [_N man]'s]] hat

They claim that (73a) derives from an earlier string, (73b).

(73) a. [[John's] hat] b. [[[John]_{NP} his]_{NP} hat]

They suggest that there was a historical transition from the head *his* to the suffix 's. In fact, (often invariant) *his* was used in this construction in the mid to late Middle English period, 13C through the beginning of 18C, to be more precise (Barker 1995: 23). The pronoun *his* and 's, however, do not seem to be historically related (see Barker 1995: 20-3). But 's may be taken as a (modern) variant of *his*. Di Sciullo and Williams are therefore correct in stating that there was a (possible) syntactic ambiguity for speakers of Middle English, who did not have access to the Case system of Old English. The structures in (72) and (73b), however, are incompatible with our assumptions about phrase structure. We argue that a structure like that in (73b) did not exist in English syntax and that the correct syntactic structure for the same nominal phrase is (74), where the DP in Spec, DP may be taken as adjectival in the sense discussed above.

(74) [_{DP} [_{DP} John [_{D'} his]] [_{D'} [_{D'} e] [_{NP} hat]]]

It may be puzzling how a phrase like *John his* can be taken to be adjectival, but by this time *his* was probably already reduced to a schwa plus /z/, so that the phrase was already "opaque" in the sense that the internal structure was not obvious, as we have discussed.

It is reasonable not just with regard to the syntactic structure but also in terms of

syntax-semantics mapping to assume that a structure as in (74) was preceded by a much simpler structure, as shown in (75).

(75) [DP John [D' his [NP hat]]]⁵⁷

If this is correct, *his*'s are (at least historically) ambiguous between the head of DP in Spec, DP and the head of the whole DP, exactly like what we have argued for *no*. This structure suggests that *his* is a linker, much like 's and *no*. Moreover, *no* appears to have an 'anaphoric' counterpart, as may be the case with *his* and 's.⁵⁸ In the following Japanese example, the semantic head of the whole phrase is an abstract noun, *yasashisa* 'kindness,' which virtually blocks a double modifying reading (the latter reading shown below) and allows for an 'anaphoric' reading of *sono* 'that/the.' *Sono* derives from the now obsolete demonstrative *so* and the genitive *no*. If we take *sono* to be a D (see 3.3.3.2. for more on these fused demonstratives), (76) can have the same structure as in (75).⁵⁹

(76) anata-no sono yasashisa
you -GEN the kindness

⁵⁷ Some speakers of English use sentences like (i) instead of (3c) above in speech. There is no pause or clear intonational break between *yesterday* and *his*. Our analysis can assign the same structure to the DP in (75) and (i).

(i) [[A student that I saw yesterday] his parents] came to see me today.

⁵⁸ Due to a lack of exclusively reflexive forms, English possessive pronominals are ambiguous between anaphoric and non-anaphoric readings, as illustrated in (i).

(i) Mary likes her car. (*her* = Mary's/someone's)

⁵⁹ With a first person possessor, *kono* 'this' is used instead of *sono*:

(i) boku-no kono kimochi 'my feeling/sentiment'
I -GEN this feeling

‘your kindness (kind nature)’ BUT ?‘that kindness of yours’

This ‘anaphoric’ reading disappears, when *sono* precedes the possessor:

- (77) sono, anata-no yasashisa
the you -GEN kindness

‘that kindness of yours’ BUT *‘your kindness (kind nature)’

Now consider the following examples from T. Noguchi (1997: his [69]):

- (78) a. Dono titioya-mo_i [sono_i itiban sita -no musume]-o kawai_igaru.⁶⁰
every father -also that most under-GEN daughter-ACC love

‘Every father_i loves his_i youngest daughter.’

- b. *Dono titioya-mo_i [itiban sita -no sono_i musume]-o kawai_igaru.
every father -also most under-GEN that daughter-ACC love

‘Every father_i loves his_i youngest daughter.’

This pattern is puzzling, since the bracketed part in (78b) is independently acceptable with a non-anaphoric (i.e., deictic) *sono*.⁶¹ If *sono* is a head that requires its antecedent or its trace to be in its Spec position, however, we can account for the contrast in (78) without resorting to any special characteristics of demonstratives in Japanese, or *sono* in particular.⁶² If the phrase *dono titioya(-mo)* (or *dono chichioya[-mo]*) ‘every father (-EMPH)’ moves out of the bracketed phrase (as in Possessor Ascension; see 4.3.2.) to obtain (78a), its trace must be in Spec of DP headed by *sono*, where another phrase like

⁶⁰ The transliterations, glosses, indices and translations are all Noguchi’s.

⁶¹ *His* in Middle English could have been a bound variable (as well), but unfortunately, it is not known (at least to us) if phrases like (i) with coindexing to indicate coreference were possible in Middle English:

(i) [nobody/somebody/everybody]_i his_i book

⁶² Demonstratives exhibit unexpected cross-dialectal and cross-linguistic variation (see 3.3.3.2.)

itiban sita-no (or *ichiban shita-no*) ‘the youngest’ can not occur.⁶³

The (apparent) transition from *his* to *'s* in English shows clearly (maybe more than that of *no*) that there is a process of lexical incorporation between the head and its specifier. Norwegian is another case in point, in which the same type of ambiguity is currently observed. As shown in (79), there are two ways to express possessive relationship in Norwegian (Fiva 1984).⁶⁴

(79) *Pers* bil = *Per sin* bil ‘Peter’s car’
 Peter’s car Peter his.REFL car

The form *Pers* appears to have resulted from incorporation of *sin* into *Per*, and, unlike in English, the newer form seems to coexist with the older form. Without a closer and fuller examination, it is not possible to find evidence that the structure and pattern of lexical insertion shown in (80a) is available, but, if it is not, this reanalyzed form should be eventually available. This would represent a historical transition from (81) through (80b) to (80a).⁶⁵

⁶³ Spatial prepositions in “head-initial” languages like English correspond to sequences of *no* plus a relational noun plus *no* in Japanese, as shown in (i). It is interesting to note that no modifiers can intervene between *no* and *ue* in (i), except a possibly ‘anaphoric’ and somewhat emphatic *sono*.

(i) *tsukue-no (sono) ue -no hon* ‘a/the book (right) on the desk’
 desk -GEN top-GEN book

⁶⁴ There are two more ways to express possession in Norwegian, as in (i) (Fiva 1987 cited in Barker 1995: 24, in which *hans* is misspelled as *has*) and (ii) (Fiva 1984):

(i) *bil-en hans Per* ‘Peter’s car’
 car-the his Peter
 (ii) *bil-en til Per* ‘Peter’s car’
 car-the to Peter

⁶⁵ Phrases like (81) are possible in (substandard) German and Dutch. In fact, it is generally believed that the Norwegian expression was borrowed from German.

(80) a. [_{DP} Pers [_{D'} *e* [_{NP} bil]]] b. [_{DP} Per [_{D'} -s [_{NP} bil]]]

(81) [_{DP} Per [_{D'} *sin* [_{NP} bil]]]

Another point to note about the Norwegian case is that the (linking) pronominal used in (81) is a reflexive possessive pronominal. This strongly suggests that *his* in the Middle English possessive constructions was indeed an anaphor (at least at one point). If this is correct, the phonological reduction of these linking pronominals in English and Norwegian may be said to have involved loss of the syntactic feature [+ ANAPHOR]. A more plausible analysis, however, would be to assume that there has been a loss of Spec-head agreement as evidenced by the loss of agreement between the possessor and the linking pronominal, which is still found in (substandard) German.

Fiva (1984) argues that *-s* is a variant of (non-argument) *sin*. Consider (82):

- (82) a. ?Hvem er det 's (bil)? 'Whose (car) is that?'
 who is it.'s car
- b. Hvem er det sin (bil)?
 who is it REFL car
- c. Hvem sin (bil)/hvems (bil)/hvis (bil) er det?
 who REFL car who.'s car whose car is it

Unlike English, Norwegian allows for extraction of a *wh*-word on the left edge of DP, which can even leave *-s* behind as in (82a). Since *-s* is a phonological clitic, it needs a phonological host and *det* 'it' serves as such in (82a) but its syntactic host is the trace of *hvem*.⁶⁶ As (82c) illustrates, when *sin* or *-s* is fronted, the complement, which can be null,

⁶⁶ Kayne (p.c.) notes that (ia) is surprisingly not as bad as one might expect. Along with the sharp unacceptability of (ib), this indicates that *what woman's* is not a constituent, as we would predict. This means that 's is still a linker in some cases.

- (i) a. ?[What woman]_i were you talking to a friend of t_i's?
 b. *[What woman's]_i were you talking to a friend of t_i?

must also be fronted. This shows that (80b) and (81) are the correct syntactic structures at least in these cases.

Fiva argues that *sin* is both an argument and a non-argument, the latter of which we take to be a functional item. Since we have seen above that *no* is not an anaphor by itself, there is no stranding of *no*. It is also the case that *no* and *-s* in Norwegian are both enclitics, so that they are not easily stranded in the first place, as (82a) is not perfect. In fact, *-s* and *sin* do not have exactly the same syntactic distribution:

- (83) a. *bil -en-s b. bil-en sin 'his own car'
 car-the-'s car-the REFL

Since the definite article *-en* is most likely a D, this may cast doubt on the claim that *-s* and *sin* are both Ds. If *-en* is reanalyzed as a clitic at least in these cases, it is puzzling why (83a) is unacceptable. This may mean that *-s* is a clitic in Spec, DP, after all.⁶⁷

Spec-head incorporation is not limited to heads that are phonological enclitics. Unlike *no* and 's in English, *of* in English is generally considered not to be a clitic and definitely not to be an enclitic, but it behaves like *no* and 's in some cases. For example, in (84) and (85), where *of* (*a*) is often reduced to a schwa plus /v/ plus a schwa, underlined segments appear to behave as adjectives⁶⁸:

- (84) a. a hell of a/helluva town b. a whale of a friend

- (85) This is a bitch of a problem.

As McCawley (1989) notes, *bitch* is the syntactic head but *problem* is the semantic head

⁶⁷ There is an alternative analysis under our assumptions. According to it, both *-s* and *sin* are linkers but they have different referential properties. We will not pursue that option here.

⁶⁸ Note that what comes after *of* is a singular noun with an indefinite article in the construction in question, while in the typical partitive case it is a plural noun with a definite article.

in (85). This rather productive pattern is not a problem, however, if we simply regard *of* as a linker in English.

Pseudo-partitives like (86) constitute another case in point. (87) shows that French *de* is exactly like *no* in such cases.

(86) a lot of/lots of flowers

(87) a. beaucoup de fleurs (French) b. takusan-no hana ‘many flowers’
 lot -GEN flowers lot -GEN flower

If cases like (88) below are on a par with these examples, these are cases of Spec-head incorporation and not head-to-head (e.g., Q-to-D) movement, because the phrase *sorry excuse* in (88) could not be a head and the choice of *for* in it can be accounted for by Spec-head agreement of some kind.

(88) (what) a sorry excuse for a man

Preposition incorporation is not limited to *of* in English. Unlike (89a) and (90a), the adjective-preposition sequences in (89b) and (90b) appear adverbial; we probably do not want to say that *to* can take an adjectival (DegP) complement, just because of cases like (90b).

(89) a. The airport is far from the city.

b. The people are far from (being) innocent. (Ike-uchi 1991)

(90) a. It is close to the train station.

b. It is close to impossible.

An even clearer case is the hedging adverbial use of *sort of/kind of* in English:

(91) I sort of/kind of liked it.

This recalls the adverbial *no* in Old Japanese (see 1.2.), and may suggest that it was in

fact the same as the nominative-genitive *no* in Old Japanese (pace Hendriks 1992, 1994).

Richard Kayne (p.c.) notes that *kind* can be invariant in the phrase *kind of*. *Kind of* is frequently reduced to *kinda* with a schwa at the end. We take this to be evidence that the phrase is reanalyzed at least in colloquial speech.

(92) three kind_ of horses

The *kind* in (92) may be used in a more literal sense than we have seen in other cases, but in cases like (93) it is a part of a modifier ending.

(93) He has never been a Hollywood kind of guy.

This probably means that phonology is not always a good indicator of syntactic reanalysis. Since we believe that the linguistic system is modular, this is most likely an inevitable state of affairs. It is important to note, however, that in all these cases non-syntactic factors⁶⁹ appear to be driving syntactic reanalyses. Moreover, such a reanalysis invades the morphological domain,⁷⁰ as it involves lexicalization. The examples given for the “cline of lexicality” by Hopper and Traugott (1993: 7) in (94) may have actually involved incorporation of *of* as well as *full*, considering cases like those in (95):⁷¹

(94) a basket *full* (of eggs...) > a *cupful* (of water) > *hopeful*

(95) a. a spoonful of sugar b. a handful of candies (see Koike 1994c)

It should be noted that Spec-head incorporation is much more general than it

⁶⁹ There may be a phonological reason for reanalyses as well, which probably has to do with stress patterns. We leave this topic for future research.

⁷⁰ Givón (1971: 413) states that “[t]oday’s morphology is yesterday’s syntax.”

⁷¹ Our analysis above did not include any examples of stem-affix formation, but it does apply to such cases as well. Such an analysis of affixation, or suffixation, to be more precise, can be incorporated into a bigger picture of lexicalization.

might seem at first. For instance, Vergnaud and Zubizarreta (1992) posit a rule of morphological conflation in French, *Suppletion* (96), which is basically a Spec-head incorporation rule, for incorporated forms as in (97).

(96) [DP pronoun [D' determiner]] ⇔ suppleted form

(97) a. eux + le = leur b. eux + les = leurs
 them DET.MASC their them DET.PL their

This type of suppletion is not found with pronouns in Japanese, partly because pronominals do not constitute a closed class in the language. However, the demonstratives in Japanese do exhibit at least partial incorporation and we will examine them in the next subsection.

At this moment, one might be tempted to hypothesize that reanalysis is only for the head and its specifier(s) and that the head and its complement are never reanalyzed and merge as a word. An exception to this generalization that readily comes to mind is morpho-phonological suppletion of the following types (see Marantz 1989).

(98) a. de + le = du b. de + les = des (French)
 of DET.MASC of DET.PL

(99) a. de + el = del b. con + mi = conmigo (Spanish)
 of DET.MASC with me

Most of these cases, however, do not involve head-complement incorporation: (98a), (98b) and (99a) most likely derive from incorporation of two heads (most likely Ds). The only (possibly) problematic case is (99b) and the like, in which the extra final syllable at the end like the /go/ in (99b) may be of syntactic significance, if at all. We leave this for further research.

3.3.3.2. Demonstratives

Japanese has incorporated modifiers, as shown in (100), with the deictic or demonstrative morphemes *ko*, *so*, *a* and *do*.⁷² We call these modifiers “demonstratives.” The demonstratives are incorporated forms, because they are different from unincorporated forms: (i) they contain a high pitch *no*, except in *dono*, although the genitive *no* generally has a low pitch; (ii) they do not allow for a pronominal reading.

- (100) a. *ko-no* ‘this’ (*‘this one’)
 b. *so-no* ‘that (closer to the hearer)’ (*‘that one’)
 c. *a-no* ‘that (far from the speaker/hearer)’ (*‘that one’)
 b. *do-no* ‘which’ (*‘which one’)

Under our assumptions, there are basically three syntactic positions for *no* in a demonstrative, as illustrated in (101) with *kono*: ‘this’:

- | | | |
|--|---|--|
| (101) a. DP
\wedge
ko-no D'
\wedge
D NP

(no) * <i>pro</i> | b. DP
\wedge
ko D'
\wedge
D NP

-no * <i>pro</i> | c. DP
\wedge
D'
\wedge
D NP

ko-no * <i>pro</i> |
|--|---|--|

As noted, the demonstratives do not allow for a pronominal reading, i.e., no NP deletion. We have suggested that *no* must be an overt head to license NP deletion. In fact, phrases that are homophonous with the demonstratives but contain a low pitch *no* allow for a pronominal reading. Therefore, (101b) can not be the correct choice. It is not clear if this should also rule out (101c), in which the head contains an overt *no* but NP deletion is impossible. We have already noted the anaphoric use of *sono*, which we treated as a *D*.

⁷² Japanese has a three-way deictic system, as in Spanish and other languages. A precise characterization of the distinctions in use among them is not crucial here.

This may warrant the same treatment for the others as well as the non-anaphoric *sono*, although that may mean abandoning the assumption that Spec-head agreement is purely syntactic. Moreover, demonstratives are often considered determiners in a wide sense of the term, which may also support the idea that they are Ds (maybe universally by default).

It is also relevant to note that the demonstrative morphemes *ko* and *so* could stand alone and be used as modifiers without *no* in Old Japanese (OJ), as illustrated in the archaic phrase in (102a) and its modern counterpart in (102b).

- (102) a. *ko*-*tabi* (archaic) b. *ko*-*no* *tabi* ‘this time/occasion’
 this time

Since *tabi* ‘time’ includes a voice obstruent, /b/, (100a) can not involve SV, even if it is a compound, due to Lyman’s Law. Thus, we can not tell if (102a) involved a covert *no*, as in (101a). One may, however, want to argue that *ko* was in Spec, DP and the head D was empty in Old Japanese, but *no* was inserted in the D position later (see 4.1.2.).

An important point here is that *ko* in OJ appears to have stood alone, while *ko-no* can not. In other words, *ko* in OJ, but not *ko-no* in modern Japanese, corresponds to *this* in English. If a [+AGR] feature in D is enough to license NP deletion in English, then we could say that *this* occupies Spec, DP. This may not work for OJ, since the pronominal *no* is not a recent innovation and NP deletion was possible in OJ, as illustrated in the following example from OJ: if *ko* occupied Spec, DP in OJ, why was there *no* in cases like (103), if not only for the sake of recoverability of the missing complement of *no*?

- (103) *Man’yoo-shuu-ni ira -nu furuki uta, mizukara-no-o-mo tate-matsur-ase-tamai, ...*⁷³
 Man’yo-shu -to enter-NEG old poem self-GEN-ACC-EMPH present-POL-CAUS-POL

‘The emperor made them present old poems not to be found in the *Man’yoshu* and

⁷³ The transliteration is modernized here for convenience.

some (poems) of their own...' (Ikeda 1975: 195-6)

It appears, therefore, beneficial to take *ko* in OJ to be a D head⁷⁴ but *ko-no* in modern Japanese to be in Spec, DP. In the latter case, the head may be occupied by a [-AGR] feature or a covert *no*, which can not license NP deletion.

At least in some cases, however, the demonstratives could be analyzed as the D heads. Consider (104):

- (104) a. Hiroshi-no [ko-no hon] 'this book of Hiroshi's'⁷⁵
 Hiroshi-GEN this book
- b. ko-no (#) Hiroshi-no hon '(intended reading) this book of Hiroshi's'

When a demonstrative co-occurs with a possessive phrase, (104a) represents a basic word order, while that in (104b), in which # marks a slight pause,⁷⁶ appears to represent a case of dislocation or scrambling.⁷⁷ We have not discussed how scrambling inside DP should work, but if scrambling involves raising, i.e., an extended structure, as is generally assumed for sentential scrambling, (104a) and (104b) could not have the same structure. Consequently, no matter what scrambling involves (i.e., either adjunction to DP or DP recursion), one could assume that the demonstratives are Ds, as in (101c), if the possessor phrase occupies Spec, DP.

⁷⁴ The same goes for Turkish, but not for Korean, which does not allow for demonstratives to stand alone and requires *kes* to appear.

⁷⁵ The *ko-no* here can not have an 'anaphoric' reading, because the possessor is not the first person.

⁷⁶ Compare (104b) with (i), which does not have a slight pause in it.

(i) [ko-no Hiroshi]-no hon 'lit. a/the book of this Hiroshi's'
 this Hiroshi-GEN book

⁷⁷ Korean appears to behave in the same way.

The last analysis is not only possible but likely as an alternative, if our analysis of SV is correct in that it involves a reanalysis. It should be noted that such a reanalysis may not need to invoke a change in syntactic structure, and a change of syntactic bracketing can be simply a matter of a change in lexical insertion. As a matter of fact, all these cases that we have seen in the last few subsections involve a reanalysis but not restructuring in that no new syntactic structure is posited and no new syntactic operation is introduced. Our analysis is in fact in the spirit of Koike's (1994c) proposal for adjectives that we have discussed above in that language change and variation are captured in terms of morphology, the lexicon and lexical insertion, in which syntactic adjacency plays a major role. Needless to say, this is fully compatible with the main ideas of the MP as well.

3.3.3.3. *No* Insertion or *No* Deletion?

Our analysis treats compounds on a par with genitive phrases, the only difference being that a phonologically overt *no* may not occur in the former. Before we move on to another section, we should discuss the nature of (overt and covert) *no* in linguistic representations, since we have touched upon the issue without discussing it in any detail.

As we noted elsewhere (Koike 1990), *no* appears to be inserted, whenever there are two contiguous nouns (Ns), unless compounding is possible. Consequently, insertion of *no* has often been proposed as a rule. One formulation of this rule under a DP hypothesis is given in Saito and Murasugi (1990; also see the references cited there; Bedell 1972; Murasugi 1991: 11):

(105) $\emptyset \Leftrightarrow \underline{no} / [_Y X _ Z]$, where X is DP or PP, and Y, Z are (projections of) N or D.⁷⁸

⁷⁸ Saito and Murasugi (1990) note that X can be NP, considering genitives like *ame-no* 'rain + GEN.'

Saito and Murasugi assume that (105) is an S-Structure rule, but they also note that it might be a D-Structure rule or a PF rule. Since there are no rules or such levels as S-Structure and D-Structure in the MP, (105) can only represent a PF operation. If the *no* insertion rule applies before SPELL-OUT, we can not specify when it is supposed to apply, unless it applies whenever relevant conditions are met. This is incompatible with a derivational model like the MP, since all lexical items must be listed in the Numeration and supposedly inserted before SPELL-OUT. If *no* is not in the linguistic representation by SPELL-OUT, then it can not be in the Numeration, so that it can not have a syntactic node that it can correspond to. Due to the Extension Condition (106), in fact, insertion of syntactic nodes is impossible in the MP.

(106) *Extension Condition* (Chomsky 1992): All operations must extend the tree.⁷⁹

Obviously, a *no* insertion rule is based on the idea that *no* is semantically empty, much like English 's⁸⁰ and *of*, which Chomsky (1986a: 87, 192) calls a semantically empty Case-marker. This is consistent with the common claim that the genitive *no* only “signals a grammatical connection between two nouns” (Alfonso 1966: 73). If we assume that *no* is merged⁸¹ early but can be covert at PF, it is possible to incorporate this insight into our current analysis. In other words, *no* can be either overt or covert.

Kitagawa and Ross (1982) examine Japanese *no* along with the Chinese particle

⁷⁹ An important (possible) exception is head movement, which does not need to extend the structure.

⁸⁰ Chomsky (1986a: 195) posits a POSS-insertion rule applying in the context: [_{NP} NP __].

⁸¹ It is possible that *no* is merged with a small clause made up of two maximal projections, one of which raises to merge with it. This is similar to what is often assumed for the copular structure and might also apply to the conjunctive structure. We will not explore this option here, which will not be able to explain SV facts as well as we have. See 3.4.3.1.

de, which has a similar distribution to that of *no*, and propose MOD (modifying marker) insertion and *no* deletion rules. A *no* deletion rule is needed, because Chinese *de* is used as a relativizer, but *no* is not. The problem with this analysis is that *de* in Chinese does delete quite liberally, much like the Korean genitive postposition *-uy*. Since it appears that deletion of these particles is governed by nonstructural factors (see Chappell and Thompson 1991 for Chinese *de*),⁸² the phonological presence/absence of *no* and these particles are likely to be crucial at PF, and for us, this means that it is not purely due to syntax. It is important in this connection that, as noted earlier, *no* deletion has been proposed for some cases like (8), repeated here as (107):

- (107) Hiroshi-no no ⇨ Hiroshi-no ‘Hiroshi’s’ (the Tokyo dialect)
 Hiroshi-GEN PRN

Now, we can take this as a case of the possessor phrase (*Hiroshi-no*) in Spec, DP with a covert *no* in D. If this is correct, we can say that both *nos* are genitive and that there is no pronominal *no*.⁸³ If the phonological absence of *no* in cases like this is motivated by language-specific factors, it should not be surprising to find a language that exhibits two contiguous phonologically identical (or very similar) Ds. Modern Greek may be such a language.⁸⁴

- (108) afto *(to) vivlio ‘this/that book’
 that (the) book

⁸² The presence of a relational noun as the head noun is just one of such factors.

⁸³ This is incompatible with our claim that *no* must be present in cases of NP deletion, but if *no*-phrases are syntactically ambiguous, the current analysis may be correct for some speakers.

⁸⁴ The demonstrative *afto* can also appear postnominally in Modern Greek.

- (i) to vivlio afto ‘this/that book’
 the book that

The deictic morpheme *afto* seems to include the definite article *to*. If this is the case, it is odd that it has to appear twice. Moreover, *to* occurs after *afto*. If *afto* is in Spec, DP, this pattern receives a straightforward treatment similar to what we have just proposed for some cases in Japanese:

(109) [_{DP} *afto* [_{D'} *to* [_{NP} *vivlio*]]]

If Japanese demonstratives are like *afto*, we could say that they are in Spec, DP and a covert *no* occupies the D position.

(110) a. *ko-no hon* ‘this book’ b. [_{DP} *ko-no* [_{D'} (*no*) [_{NP} *hon*/**pro*]]]
 this book

This can account for why NP deletion is impossible with a demonstrative. As noted earlier, *no* appears to be phonologically present in NP deletion, so that we can account for this by reinterpreting Drubig’s following principle intended for focus interpretations rather liberally and stating that *no* as the head of DP must be prominent if and only if its internal argument is not prominent.

(111) *Head Prominence Principle* (Drubig 1994)

A head is prominent, iff its internal argument is not prominent.

It is plausible to assume that “prominence” can mean overt phonological presence. Then, if we apply this principle to the case of *no*, we can say that *no* must be overt when its internal argument (i.e., complement) is empty.

The possibility of empty heads raises an important theoretical question: if language is “economical,” how could there be a meaningless filler like an empty head? This is also a question about the existence of a dummy or a place-holder in linguistic representations, which we know exist. Expletives, such as *there* and *it* in English, are

said to be syntactic “place-holders,” to satisfy an EPP feature, for example. We could easily extend this idea to other functional categories that are referentially meaningless, such as copulas, conjunctions and genitive markers like *no*. Most of these functional items are linkers in our definition, and they are indeed phonologically absent in some cases. The question is: if they can be absent at all, why aren't they *always* absent?⁸⁵

One might want to regard *no* deletion as the result of a historical process like grammaticalization. Grammaticalization tends to involve a decreasing morphological and/or phonological prominence of the lexical item in question, as demonstrated by the cline in (112). The case of *let's* in English that Hopper and Traugott (1993: 13) discuss (113) is an example of such a process.

(112) word > affix > phoneme

(113) (let) us > (let)'s > (let)s

If our analysis of SV is correct, *no* has five kinds of morpho-phonological manifestations. Consequently, one can assume a natural progression from *no* as an independent head to a zero morpheme, as might be argued for as representing a grammaticalization process involving *no*:

(114) no > -no (affix) > n > [+ VOICED] (distinctive phonological feature) > ∅

What we have argued is that this is not the case and that the actual picture is much more complicated. In other words, (114) does not represent one but a few distinct historical transitions. One of them is an apparent syntax to morphology transition from a linker to an affix. If our analysis of SV and compounding is correct, /n/ and a [+ VOICED] feature

⁸⁵ It is important to note that we do not question their syntactic presence in all these cases: they are syntactically present, and some of the features that such lexical items carry may be in fact present in the Numeration. An important point is that we argue that their phonological features are sometimes either deleted or suppressed at PF.

derive from the head /no/ at least in those cases in which SV applies. And, as we have just proposed, the covert *no* corresponds to *no* as the head.

3.3.4. Pronominal Particles in Other Dialects, Korean and Turkish Revisited

This might be a good place to reexamine the pronominal particles in other dialects and Korean and Turkish. An interesting fact that we have not noted so far is that the pronominal particle appears to be incompatible with a demonstrative even in those dialects in which the pronominal is not *no*. So, for example, (115) is unacceptable in the Kochi and Toyama dialects:

- (115) **ko-no-ga* ‘this one’ (the Kochi and Toyama dialects)
 this -PRN

This is quite puzzling, if the pronominal *ga* is a real pronominal and stands for NP.⁸⁶ In fact, this pattern is possible in Korean:

- (116) *i kes* ‘this one’ (Korean)
 this thing

There are, however, two differences between these two patterns. One is that Korean demonstratives appear without the genitive postposition *-uy*. Assuming that D must be phonologically present to license NP deletion in Korean as well, a demonstrative in Korean could not be a head, if *kes* is a pronominal that stands for NP, since the head must be phonologically empty to account for this pattern. The other difference is that, unlike

⁸⁶ Masaru Inoue (p.c.) suspects that older speakers of the Toyama dialect might use this pattern. If this is true, it could be a problem for us: if our claim that *no* is a head but is being reanalyzed as a clitic in the Tokyo dialect extends to the demonstratives in the Toyama dialect and the pronominal *ga* in it is a head, exactly the opposite should be expected. This may mean that the pronominal *ga* may have been reanalyzed as the pronominal for quite some time in this dialect. Younger speakers may not use these forms because they use forms like *kore* ‘this (one)’ as in the Tokyo dialect instead.

kes in Korean, *ga* is used as the nominative marker and is a phonological enclitic, as noted earlier. (115) is therefore reminiscent of the Norwegian pattern in (83a), repeated here for convenience, in which two enclitics are attached to the head noun.

- (117) *bilens ‘his own car’
 car.the.’s

Turkish exhibits a third pattern. Except for *hangi* ‘which,’ Turkish demonstratives are like English counterparts in that they can stand alone and, even when followed by a head noun, do not occur with the genitive postposition (Underhill 1976):

- (118) a. bu ‘this’
 b. şu ‘this/that’
 c. o ‘that; he/she/it’
 d. hangi ‘which’ (*‘which one’)

So, it is possible to treat Turkish demonstratives (118a-c) as heads, although it is equally possible to say that they occupy Spec, DP and that an [+AGR] feature is in the head D position, which licenses NP deletion.⁸⁷ Without a further examination, it is not clear which analysis is correct and we leave this for further research.⁸⁸

3.4. Multiple Genitive Phrases

If our analysis so far is correct, Japanese must allow for DP recursion, since what has been considered to be an NP is in many cases a DP, which can be Case-marked so

⁸⁷ We do not have much to say about *hangi* ‘which,’ except that it can not be a head, if the phonological prominence of the D head is required to license NP deletion in Turkish.

⁸⁸ The discussion so far has not touched upon the status of empty specifiers, which we have assumed exist. See 5.4.3.

that the whole phrase is also a DP:

- (119) [DP [DP Keiko-no kuruma]-ga /o] 'Keiko's car (NOM/ACC)'
 Keiko-GEN car -NOM/ACC

Since we assume that Japanese is head-initial, it is possible that the inner DP in (119) is in the complement position of the outer D (or a part thereof) and raises to its Spec position.

If DP recursion is possible in Japanese, multiple *no*-phrases as in (120) may be analyzed as cases of DP recursion and not N' iteration (Fukui 1986).

- (120) Keiko-no kuro -no sedan 'Keiko's black sedan'
 Keiko-GEN black-GEN sedan

Such a structure can be base-generated or derived by movement, although a simple economy consideration would rule out a movement analysis. The little known and noted fact that Japanese allow for what may appear to be postnominal modification may or may not support the idea that movement is involved in deriving overwhelmingly prenominal modification patterns in Japanese. Movement in DPs is a rather huge and complex topic that has not received its due attention, especially with regard to Japanese, and we can not possibly examine it in full detail here. We will, however, briefly discuss some important points in this section. The discussions in this section will be mainly syntactic, which will turn out to be less than conclusive. We will return to most of the unresolved cases in Chapters 4 and/or 5.

3.4.1. Multiple Prenominal Genitive Phrases

Unlike English phrases with 's or of (or even *the*),⁸⁹ which we can regard as linker

⁸⁹ Even if we disregard nested structures, this is not exactly correct, since 's-phrases can iterate when one of them is a descriptive genitive and *of*-phrases can iterate with a complement or appositive DP.

Ds, *no*-phrases can iterate.⁹⁰ Fukui (1986), among others, claims that Japanese can (in theory) have an unlimited number of prenominal genitives.⁹¹ Our DP recursion analysis also allows for this pattern, so that the problem for us is rather the fact that phrases (DPs) headed by *'s*, *of* or *the* do not iterate in English, although *'s* and *of* do occur together, as in so-called double genitives:⁹²

- (121) a. two books of Mary's
 b. a friend of Sue's

One can therefore argue that English also allows for DP recursion but that, since it has three (referentially empty) linkers, the same D may not easily appear twice. In other words, English does not exhibit multiple determiner constructions as in Modern Greek (Androutsopoulou 1995):⁹³

-
- (i) a. Jane's women's shoes
 b. the portrait of the only daughter of the mayor of the city of Tokyo

⁹⁰ This is the major reason that Fukui (1986) claims that there is no D in Japanese, since in his system a functional category does not iterate.

⁹¹ As a matter of fact, not unlike the “subjects” in multiple subject constructions (see Tateishi 1991), the number of (non-appositive, non-nested) prenominal genitives is severely limited, probably fewer than several. Part of the reason for this lies, as one might expect, not in syntax but in processing (partly due to memory restriction, which is more severe in the case of subjects in Japanese for obvious and not so obvious reasons) as well as in semantics/pragmatics (e.g., a condition similar to the ‘aboutness’ condition on the multiple subject construction).

⁹² Even *the* can appear along with *of* and *'s*, as illustrated in (i), although such a phrase is rather awkward without a relative clause.

- (i) a. the two books of Mary's ??(that I borrowed)
 b. the friend of Sue's ??(that I met yesterday)

⁹³ If our analysis so far is correct, English has a phonologically empty linker, too, as the translation of (122) appears to indicate.

- (122) to meghalo to ghermaniko to piano⁹⁴ ‘the big German piano’⁹⁵
 the big the German the piano

Agreement in some languages can also be regarded as Ds, so that Spanish DPs like (123) can be thought of as cases of DP recursion, contrary to standard analyses.⁹⁶

- (123) l-a-s niñ-a-s list-a-s ‘the smart girls’
 DEF-F-PL girl-F-PL smart-F-PL

We can take (123) as a case of DP recursion with *-a-s* (marking feminine agreement and plural agreement) as D, or each D may be said to contain agreement features for gender and number, for which Spanish generally shows agreement within DP (In the latter case, each word is in Spec, DP.). Although the latter analysis may seem preferable at first, the former may not be unlikely, if we take the /l/ in the definite articles *el*, *la*, *las* and *los*, and the like as a deictic morpheme. Except for overt agreement and word order, the Spanish pattern is very similar to that in Japanese, as illustrated in (120), repeated here as (124):

- (124) Keiko-no kuro-no sedan ‘Keiko’s black sedan’
 Keiko-GEN black-GEN sedan

⁹⁴ The definite article, the adjective and the head noun all agree in Modern Greek. Here, they are all marked as neutral singular.

⁹⁵ One might note that Modern Greek is “head-initial,” while Japanese is “head-final” so that the relationship between each D and the head noun that it is supposed to ‘modify’ is different in these languages. Such a comment is only relevant in a framework in which syntactic representations and semantic interpretations are assumed to be transparently mapped on to each other, or at least the idea of modification has a significance in syntax. Such a strong position, however, is empirically unjustifiable. Our main point here is that DP recursion is (syntactically) possible and is empirically supported. Moreover, treating Japanese multiple *no*-phrases on a par with Modern Greek multiple determiner constructions is not only possible but most plausible under our linker analysis, under which (some) Ds are meaningless (i.e., have no semantic consequences).

⁹⁶ It is often noted that noun classifiers and gender markings serve a similar function and languages make use of either of the two. Moreover, some languages like Thai exhibit multiple classifier constructions. If we take classifiers as Ds, such a construction may also be considered a case of DP recursion.

If this is correct, movement may be needed in either Japanese or Spanish, or possibly both to derive the surface orders. We will return to this issue after the next subsection.

3.4.2. ‘Postnominal’ Genitive Phrases

As a rigidly “head-final” language, Japanese should not exhibit postnominal modification at all. There are, however, two types of constructions that may appear to involve postnominal modification. One has to do with the phenomenon called quantifier float, as illustrated in (125a-e), in which the underlined quantifier phrase⁹⁷ *ni-satsu* ‘two volumes’ appears to modify the noun *hon* ‘book,’ in spite of the fact that it does not appear (immediately) before the noun (and form a part of a phonological phrase), as in (125f), where *no* occurs before the noun. Specifically, in (125a) and (125e), *ni-satsu* occurs after *hon* and can constitute (a part of) a phonological phrase, so that they seem to represent cases of postnominal modification.

- (125) a. Akiko-wa kyoo hon -o ni -satsu kat-ta. ‘Akiko bought two books today.’
 Akiko-TOP today book-ACC two-NC buy-PST
- b. Akiko-wa kyoo ni-satsu hon-o katta.
- c. Akiko-wa ni-satsu kyoo hon-o kat-ta.
- d. Ni-satsu Akiko-wa kyoo hon-o kat-ta.
- e. Akiko-wa kyoo [hon ni-satsu]-o kat-ta.
- f. Akiko-wa kyoo [ni-satsu-no hon]-o kat-ta.⁹⁸
 -GEN

We believe that phonological phrasing is crucial in many cases, including those with

⁹⁷ By the use of the term “quantifier phrase,” we do not mean to imply that we regard *ni-satsu* as QP.

⁹⁸ See 5.1.3. for the difference between (125f) and (125a-e).

floating quantifiers, although it is rarely noted in the literature. A quantifier phrase appears to be an adverbial in (125b-d), and even in (125a), it seems to be an adverbial, when it is pronounced separately from the noun *hon* (as indicated by a possible slight pause and a rise in pitch, which generally shows that a new phonological phrase has started). Looking only at Japanese examples and ignoring phonological cues, it may appear that (125a) does not involve a case of postnominal modification and (125e) contains a simple appositive expression. Korean provides crucial evidence in this regard, which exhibits double accusative marking in these cases, so that schematically we get a sequence ‘book-ACC two-NC-ACC’ instead in Korean:

(126) John-i chayk-ul 2-kwen-ul ilk -ess-ta. (Cho 1993 cited in Sung 1996)
 John-NOM book -ACC 2-NC -ACC read-PST-DEC

‘John read 2 books.’

Double accusative case-marking is (basically) barred in Japanese, which can be attributed to the general prohibition against double occurrences of the accusative case-marker *o* in a clause, known as the Double *O* Constraint (originally proposed by Harada 1973). Since multiple subject constructions are possible in Japanese, it is unexpected that double accusative marking, while possible with floating quantifiers in Korean, is totally impossible in Japanese. This suggests that the fact that double accusative marking does not occur in Japanese with floating quantifiers is (largely) independent of the Double *O* Constraint. This in turn leaves the possibility of double case marking prevented at PF in Japanese. Since we take *o* to be D as well, this would be a case of PF deletion of D (in possibly a DP recursion structure), much like what we have suggested for *no*. A careful discussion of these cases would take us too far afield, but we believe that nothing much

that is totally new needs to be said for these cases as far as *no* is concerned.

The other type of possible postnominal modification is illustrated in (127a):

- (127) a. ?hon -no aka-no ‘a/the book that is red’
 book-GEN red-GEN
- b. ?aka-no hon ‘a/the red book’

(127a) is not perfect, but this does not appear to be a syntactic effect. This is because

(128) is perfect.⁹⁹

- (128) [Keiko-no sedan]-no kuro -no ‘Keiko’s sedan that is black’
 Keiko-GEN sedan-GEN black-GEN

This ‘postnominal’ pattern is even more difficult to get with an animate possessor (non-descriptive adjective uses), but is nonetheless possible:

- (129) a. ??hon -no Keiko-no ‘Keiko’s book’
 book-GEN Keiko-GEN
- b. Keiko-no hon
 Keiko-GEN book

The low acceptability of (129a), apart from its (seemingly) extremely low frequency of use, should not be attributed to syntactic factors, since (130), which should have basically the same syntactic structure in relevant aspects, is clearly better than (129a).

- (130) ?hon -no [Keiko-no imoto] -no ‘book that is Keiko’s sister’s’
 book-GEN Keiko-GEN younger.sister-GEN

It appears that there is a heaviness effect showing up in these ‘postnominal’ modification cases. We will discuss reasons for the awkwardness of some of these phrases, along with the differences in interpretation between prenominal and ‘postnominal’ modification in 5.2.3. and 5.3.

⁹⁹ Those native speakers who feel that (129) is not natural should embed the phrase in an appropriate sentence.

The existence of apparent postnominal modifiers in Japanese may not be so surprising, since many languages appear to exhibit both pre- and postnominal modification. Modern Greek, for instance, has a multiple determiner construction with a prenominal or postnominal modifier, as in (131b).

- (131) a. to kokino (to) vivlio ‘the read book’
 the red (the) book
- b. to vivlio to kokino (Tredinnick 1992)
 the book the red

It is well known that Romance languages exhibit both pre- and postnominal adjectives, although not all adjectives can appear in both positions (examples from Spanish; Bernstein 1993: 4):

- (132) a. una casa blanca b. *una blanca casa ‘a white house’
 a house white a white house
- (133) a. un mero accidente b. *un accidente mero ‘a mere accident’¹⁰⁰
 a mere accident a accident mere
- (134) a. las olorosas flores (nonrestrictive) ‘the fragrant flowers’¹⁰¹
 the fragrant flowers
- b. las flores olorosas (restrictive)

In English, a simplex adjective generally precedes the head noun, but there are simplex postnominal adjectives in English as well (Bolinger 1967):

- (135) a. [The navigable rivers] are to the north.
 b. [The rivers navigable] are to the north.
- (136) a. [The responsible people] were punished.

¹⁰⁰ The *mero* in (133) is a *mere*-adjective (see 3.3.1.).

¹⁰¹ As shown in (134), when an adjective appears in either position, there is a difference in restrictiveness. See 5.2.3.

b. [The people responsible] were punished.

According to Comrie (1980 cited in Hopper and Traugott 1993: 139-40), Classic Mongolian possessives occur in both prenominal and postnominal positions. Here, the contrast appears to be that of emphasis.

(137) a. minü morin b. morin minü 'my horse'
my horse horse my

Although impossible in Japanese, demonstratives can be postnominal in some languages. As noted earlier in a footnote, the demonstrative *afto* in Modern Greek can appear in both prenominal and postnominal positions:

(138) a. afto *(to) vivlio b. to vivlio afto 'this/that book'
that (the) book the book that

3.4.3. Movement in DPs

The various patterns that we have seen so far naturally begs the question: Are *no*-phrases base-generated or moved? In the above, we have noted that DP recursion should be possible (probably in any language). Looking only at Japanese, it is not difficult to claim that multiple genitive phrases are instances of base-generated iterated DPs. If we assume that semantic relations¹⁰² are hierarchically represented,¹⁰³ however, at least some of the prenominal modifiers in Japanese may be thought to be raised from

¹⁰² See 5.3. for the relationship among thematic roles within DPs.

¹⁰³ Of course, this does not have to be the case, but it is a natural assumption under our Relativized Modularity Hypothesis. The syntax to semantics mapping is one of the most controversial issues in the literature. In the case of inflectional morphology, the rigidity of morphology in general appears to argue against a movement analysis, although it is probably fair to say that neither possible syntactic options nor detailed semantic relations among inflectional morphemes are well understood. Our discussion here and later focuses on syntactic relations among adnominal modifiers, which are more transparent.

postnominal positions. Such a treatment is desirable from the point of view that all languages share the same representations at one point in the derivation. Moreover, this particular analysis would have been a likely analysis under GB Theory. The MP, however, does not contain a level before SPELL-OUT like D-Structure, which was thought to represent argument structure and thematic relations in GB Theory. Moreover, putting semantics before syntax, so to speak, like this is incompatible with our Relativized Modularity Hypothesis, according to which syntax should come before semantics. The only plausible and economical movement option, then, is to raise some phrases in some languages at LF. Of course, this does not preclude the possibility that some phrases are actually raised before SPELL-OUT in some cases, but movement in the MP is heavily constrained by economy considerations so that movement is thought to occur only when necessary.

3.4.3.1. A Small Clause Analysis

As we noted earlier in footnote 81 in 3.3.3.3., a small clause analysis is a theoretically plausible alternative to our linker analysis. Under this analysis, two maximal projections, i.e., XP and YP in (139), each of which stands for NP or DP, are base-generated as sisters¹⁰⁴ and form a small clause (SC), and then one of them is raised. In the footnote, we only noted the option in which *no* is merged with the small clause, as in (139), but it can be attached to the raised XP or YP as an enclitic (with or without an intervening head). These two options roughly correspond to the linker analysis and the clitic analysis that we have discussed, respectively.

¹⁰⁴ This violates the LCA, so that one could argue that, if the LCA is a PF constraint, the raising of the NP/DP can be motivated by it.

- (139) a. \wedge
 $YP_i \wedge$
 no SC
 \wedge
 XP t_i
- b. \wedge
 $XP_i \wedge$
 no SC
 \wedge
 t_i YP

As we noted in the footnote, the former analysis is not only similar to our linker analysis in spirit but is also similar to a standard analysis for copular and conjunctive structures. The latter analysis, on the other hand, is problematic, since it needs to account for the fact that the clitic *no* needs to be inserted. If there is no intervening head, the *no*-phrase is adjoined to the small clause, in which case it is even more difficult to account for the insertion of *no* without resorting to a *no*-insertion rule or the like. One alternative is to stipulate that the raised DP/NP already has *no* attached to it, when it is merged with another DP/NP to form a small clause, which can possibly provide a motivation for the DP/NP raising. If this raising of a *no*-phrase is to check off its feature (strong feature, since the movement is overt in Japanese), there must be an intervening, albeit phonologically empty, head to ‘attract’ it.

There is also an independent theoretical reason to dismiss a simple adjunction analysis, if a statement like the following is correct.

- (140) Adjunction is possible only to a maximal projection (hence, Xⁿ) that is a nonargument. (Chomsky 1986b: 6)

This rules out adjunction to DP, if DP is an argument, as we assume it is. The multiple occurrence of D would mean recursion of DP (no head adjunction to DP without its specifier), and no layered or multiple specifiers are available to DP (no XP adjunction to DP, as an intervening head is needed). This means that apparent multiple adjunction to

DP is in fact a case of DP recursion (contra e.g., Koizumi 1995).¹⁰⁵

A small clause has been a problem in syntactic theory, since it does not conform to X' Theory. Some have attempted to rectify this situation by arguing that a small clause does have a head, resulting in a claim that is essentially the same as our linker analysis. Moro (1995), for instance, argues that a small clause is AgrP, which may be taken to be the same as DP in our framework. Such an analysis coupled with the fact that an intervening head is needed in the case of *no* argues convincingly that our DP recursion analysis is correct. This analysis is represented in the following two representations:

- (141)
- | | |
|---|---|
| <p>a. DP
 \wedge
 YP_i \wedge
 no DP
 \wedge
 XP \wedge
 (no) t_i</p> | <p>b. DP
 \wedge
 XP_i \wedge
 no DP
 \wedge
 t_i \wedge
 (no) YP</p> |
|---|---|

This analysis, however, faces a few problems that our linker analysis does not. One is that the structures in (141) appear to be unnecessarily more complex than our alternative with no movement in simple cases. Although the movement may be motivated by a feature that the raised DP/NP has, it is not entirely clear what kind of feature it is that we are dealing with. This analysis would also force us to abandon our SV analysis, which is based on the special relationship between the head and its complement, at least for (141b), in which the upper head *no* is not adjacent to YP. If SV is to apply after the DP/NP raising, (141a) would be a problem, since there is no evidence for this type of raising after an application of SV. Another problem is that in simple cases the lower D is obligatorily empty. This may mean that (141) actually involves D

¹⁰⁵ A stronger position to hold is to claim that there is no adjunction at all. If this is the case, this will greatly simplify phrase structures in general.

movement. This again raises the question about the impossibility of feature checking upon merging a DP/NP with *no* and another DP/NP in (141b). (141b) is problematic in yet another way in that both the DP/NP raising and the D movement in it would be vacuous.

Based on these considerations, we will not pursue a small-clause(-type) analysis in this work, although it is probably not impossible to implement it, so that it can overcome the problems that we have noted. Instead, we will mainly examine the possibility of phrasal movement and head movement in multiple genitive phrases in this section.

3.4.3.2. Scrambling in DP

As noted earlier, multiple prenominal genitive phrases, as in (120) repeated here as (142a), can be base-generated. It is interesting to note, however, that, if we switch the order of the two genitive phrases, as in (142b), the phrase is very awkward.

- (142) a. Keiko-no kuro-no sedan ‘Keiko’s black sedan’
 Keiko-GEN black-GEN sedan
- b. ??kuro -no Keiko-no sedan ‘lit. black, Keiko’s sedan’
 black -GEN Keiko-GEN sedan

This pattern is reminiscent of English patterns:

- (143) a. Jane’s black sedan b. *black Jane’s sedan¹⁰⁶

Needless to say, this pattern is also found with descriptive genitive as *women’s*, as noted in an earlier footnote:

- (144) a. Jane’s women’s shoes b. *women’s Jane’s shoes

This pattern is replicated with compounds, supporting the intuition that phrases like

¹⁰⁶ Bill McClure (p.c.) notes that (143b) is not as bad as indicated in the text, especially with a stress on the word *black*, much like the Japanese counterpart (142b).

women's shoes are like compounds:

- (145) a. Jane's silk shirt b. *silk Jane's shirt

These English patterns suggest that a phrase like *kuro-no sedan* 'black sedan' (and possibly simplex-adjective-plus-head-noun sequences in English like *black sedan*) is like a compound. Consequently, (apparent) scrambling out of such a phrase crossing over a possessive 's-phrase is barred. Since the 'scrambled' phrases in English here are totally impossible, one is tempted to give a purely syntactic analysis for the unacceptability of these phrases. This would, however, raise a question about the mildness of the unacceptability of (143b), since the same analysis should apply to it, too. Moreover, (146b) is perfect.

- (146) a. Keiko-no kuro -i sedan 'Keiko's black sedan'
 Keiko-GEN black-NPT sedan
- b. kuro -i Keiko-no sedan '*lit.* black, Keiko's sedan'
 black-NPT Keiko-GEN sedan

An important point is that it appears that (146b) involves scrambling of the adjective. This is confirmed by a (possible) slight pause after the adjective and the rise in the pitch in the possessor *no*-phrase, which can generally be considered to indicate the beginning of a new phonological, and possibly syntactic, phrase (see Selkirk and Tateishi 1988, 1991). So, (146b) should contain a nested structure and not a double modification (i.e., coordinated) structure. Syntactically, this means that (146b) should contain a DP recursion structure.¹⁰⁷ Consequently, we argue that the unacceptability of (143b) is not due to syntactic factors. We will offer our account of this pattern in 5.3.

¹⁰⁷ There is much to be said about the roles that pauses, intonation and phonological phrasing play in complex modification structures that involve scrambling and coordination.

Similar asymmetries are found with other double/multiple *no*-phrases. For instance, (147a) is fine, while (147b) is very awkward, although the animacy difference between the nominal phrases *yabanjin* ‘barbarian(s)’ and *sono toshi* ‘the/that city’ should block an anomalous reading (‘the/that city’s destruction of the barbarians’).

(147) a. *yabanjin -no [sono toshi]-no hakai*
 barbarian-GEN that city -GEN destruction

‘the barbarians’ destruction of that city’

b. ?*[*sono toshi]-no yabanjin -no hakai*
 that city -GEN barbarian-GEN destruction

This may appear to be due to the subject-object asymmetry, which have been argued to be found elsewhere in the grammar of the language, but it may be more accurate to view this as an effect of a thematic hierarchy of some kind (see 5.3.).

As noted earlier, the demonstrative *sono* can have an ‘anaphoric’ reading. This reading is possible, we argued, when *sono* is regarded as a D head and follow its antecedent (in Spec, DP or another c-commanding position). This is illustrated in (76) and (77), repeated here as (148a) and (148b).

(148) a. *anata-no sono yasashisa*
 you the kindness

‘your kindness (kind nature)’ BUT ?‘that kindness of yours’

b. *sono, anata-no yasashisa*
 the you kindness

‘that kindness of yours’ BUT *‘your kindness (kind nature)’

It is interesting to note that this anaphoric reading fails to obtain in cases like (149a), in which the possessor *tomodachi* ‘friend’ can be thought not to c-command the *sono*.

- (149) a. [tomodachi-kara -no] sono tegami ‘that letter from a/the friend’
 friend -from-GEN that letter
- b. sono [tomodachi-kara-no] tegami
 that friend -from-GEN letter

The *sono* in (149a) may still be said to be a D head, but it is clear that at least (148b) and (149b) must contain a DP recursion structure.

3.4.3.3. Complement Raising

As we saw in 3.4.2., ‘postnominal’ modification is possible in Japanese, although it is rather awkward with an animate possessor as in (128a), repeated here as (150a):

- (150) a. ??hon -no Keiko-no ‘Keiko’s book’
 book-GEN Keiko-GEN
- b. Keiko-no hon
 Keiko-GEN book

This pattern appears to parallel that of English, as shown in (151).¹⁰⁸

- (151) a. *?the book of Jane’s b. Jane’s book

One way to account for these cases is to assume that the possessor phrase as the complement of *no* or *of* (e.g., *Keiko-no* or *Jane’s*) moves to a prenominal position both in Japanese and English. In English, this would mean that *of* gets suppressed or deleted and that *the* is possibly replaced with *’s* in (151b), but the Japanese case appears to be quite straightforward. The existence of a literary or archaic nominal phrase in Italian like (152) (Nino Gulli p.c.) shows that this is a promising analysis.

¹⁰⁸ This is based on the assumption that (153a) is a definite phrase, which is not exactly correct.

- (152) *la di lui figlia* ‘his daughter’¹⁰⁹
 the of him daughter

This analysis may also apply to demonstratives in Romance. In Spanish, a demonstrative may appear postnominally, which may optionally raise to a prenominal position (see Simpson 1997).

- (153) a. *(el) hombre este b. este hombre *t_i* ‘this man’
 the man this

Demonstratives may be heads (Ds) in Romance, so that (153) may not involve phrasal movement. In the case of Spanish, a prenominal demonstrative and a definite article may not co-occur, so that one can see the definite article *el* in (153a) as an expletive, which occurs when a demonstrative does not move. The pattern at hand is also compatible with the analysis that treats the *este* as an XP in Spec, DP, but if Spanish demonstratives are like Italian possessives in relevant aspects, the word order in (152) casts doubt on such an analysis.

It is interesting to note that a postnominal demonstrative is barred in English:

- (154) a. *the man this b. this man

Since Japanese does not have an article like *the* or *el*, neither the English nor Spanish pattern can be exactly replicated, but Japanese patterns with English in this respect:

- (155) a. *otoko-no kono b. kono otoko ‘this man’
 man this

Whether prenominal demonstratives are derived by movement or not, these patterns beg

¹⁰⁹ Movement must obey the Extension Condition in the MP, so that it must target the highest node. Given that such a condition is basically on the right track, complement raising of the kind just suggested must occur before the definite article is merged: in (152) the phrase *di lui* ‘of him’ raises first and then *la* merges with the resultant structure. This may mean that the landing site for the possessor phrase is different in English and Romance (see Koike 1997/1998).

the question of why postnominal demonstratives are impossible in English and Japanese.

We will return to this issue briefly in 5.2.3.

Another case that this complement raising analysis may apply to is that of Japanese descriptive genitives, as in (127), repeated here as (156):

- (156) a. ?hon -no aka-no ‘a/the book that is red’
 book-GEN red-GEN
 b. ?aka-no hon ‘a/the red book’

This may not, however, apply to other ‘postnominal’ modification cases like (157):

- (157) a. hon -no aka-i -no ‘a/the book that is red’
 book-GEN red-NPT-GEN
 b. aka-i (*no) hon ‘a/the red book’

The sequence *aka-i-no* can not appear before the head noun, as shown in (158b). One might suspect that the sequence can not be a constituent, so that it can not move. If our proposal about NP deletion is correct, however, it can be a constituent, i.e., DP with *pro* in the complement position. If this DP can raise to a prenominal position (Spec, DP), (158) should be possible, which it is not, unless *no* can be covert just in this case.

- (158) *_{[DP} aka-i no *pro*]_i hon *t*_i ‘a/the red book’

Does this mean that not all genitives must raise? Consider (127) and (142b), repeated here as (159a) and (159b):

- (159) a. [Keiko-no sedan]-no kuro -no ‘Keiko’s black sedan’
 Keiko-GEN sedan-GEN black-GEN
 b. ??kuro-no [Keiko-no sedan] ‘lit. black, Keiko’s sedan’
 black -GEN Keiko-GEN sedan

(159a) and (159b) are the same in meaning, so that one may wish to derive one from the other. (159b) can be derived from (159a) by adjoining *kuro-no* to the DP *Keiko-no sedan*

'Keiko's sedan,' which appears to be impossible. Naturally, this leaves the possibility that the head noun or the nominal phrase that contains the head noun raises instead. We have already argued against the head analysis, but the phrasal raising analysis is not only compatible with the data that we see here but also with the Head Prominence Principle, for which *pro* and a trace should be treated as the same.

Kayne (1994b: 85-6) in fact proposes such an analysis. According to him, the QP *two pictures* in (163a), for example, raises to obtain (160b).¹¹⁰

(160) a. D° [John ['s [two pictures]]] b. [two pictures]_i[[_D of] [John ['s [e]_i]]]

This analysis, however, does not seem to apply to other cases. For instance, the indefinite article *a* can not intervene between *John's* and *friend*, as illustrated in (164b). One could argue that this is a case for obligatory raising, but it is difficult to see how it is different from (161b).

(161) a. a friend of John's b. *John's a friend

More problematic are cases like the following:

(162) a. two friends of yours/mine b. *yours/mine two friends

It should be noted that there is an alternative analysis that is simpler and more plausible. Since forms such as *hers* can stand alone as possessive pronouns, we could say that such forms involve *pro*, so that their internal structure is as follows:¹¹¹

(163) [_{DP} her/your [_D -s [_{NP} *pro*]]]

¹¹⁰ Kayne (1994b) assumes that 's is AGR and *of* is D. Abney's DP hypothesis is based on the existence of an AGR feature in D and for our purposes, the nominal AGR and D can be considered the same, as we have suggested.

¹¹¹ Here, we do not intend to argue that the D head position is *necessarily* occupied by the morpheme *-s*, which may or may not be synchronically related to the possessive 's. Since there are forms like *mine* and *his*, English must have a suppletion rule of the sort proposed for French (see above).

Similarly, we can assume that there is *pro* after the postnominal possessive, as in (164).

(164) a friend of John's *pro*

Extending this analysis to Japanese, we could say that 'postnominal' modification cases in Japanese involve *pro* as well. Consequently, we claim that (159a), repeated here as (165), has *pro* after *kuro-no*, so that the whole phrase can be base-generated.

(165) [Keiko-no sedan]-no kuro -no *pro* 'Keiko's black sedan'
Keiko-GEN sedan-GEN black-GEN

So far, we have treated descriptive genitives on a par with adjectives. If our claim that 'postnominal' genitives are base-generated is correct, postnominal adjectives should be base-generated as well. We argue that that is correct, based on the fact that phrases like (166a) and (166b) are possible. Our analysis can account for the obligatory presence of the second *no*, which is otherwise puzzling.

(166) a. hon -no aka-i -no *pro* 'a/the book that is red'
book-GEN red-NPT-GEN

b. [Keiko-no sedan]-no kuro -i -no *pro* 'Keiko's sedan that is black'
Keiko-GEN sedan-GEN black-NPT-GEN

If our analysis so far is correct, we can not derive prenominal and/or postnominal modification in Romance and other languages. In fact, we have already argued for a base-generated DP recursion analysis for Spanish phrases like the following:

(167) l-a-s niñ-a-s list-a-s 'the smart girls'
DEF-F-PL girl-F-PL smart-F-PL

This argues against the standard analysis, in which the raising of the head N is responsible for the existence of postnominal adjectives in Romance. Such an analysis does not account for the agreement among the determiner, the adjective(s) and the head noun, which may be seen as agreement among heads under our analysis. Moreover, it is not

very easy under such an analysis to explain phonological and semantic differences between prenominal and postnominal adjectives that are supposed to be the same and do not move. For instance, the Spanish adjective *gran(de)* ‘big’ appear in different forms and meanings before and after the noun it modifies:

(168) a. un gran hombre ‘a great (i.e., morally good) man’

b. un hombre grande ‘a big/tall/old man’

One way to account for this pattern is to stipulate that prenominal and postnominal adjectives are (almost) homophonous adjectives that have separate entries in the lexicon. This, however, appears to go against economy principles, if they also apply to the lexicon. Moreover, such an analysis misses the correlation between the relative position of the adjective and its meaning. The correlation is evident even in English, in which postnominal adjectives are not as common as in Romance. In (136), repeated here as (169), the adjective *responsible* appears to have different meanings.

(169) a. [The responsible people] were punished.

b. [The people responsible] were punished.

In (169a), the bracketed DP refers to the people who are reliable and trustworthy by nature, while in (169b), it tends to pick out those who are to blame for a crime committed, for instance. It appears that the DP in (169a) is like a compound in that it refers to a temporary stable entity, while that in (169b) (on the relevant interpretation) involves a reduced relative, as in (170):

(170) [The people responsible (for) pro] were punished.

In other words, what we are arguing is that the adjective *responsible* is attributive in

(169a) but overwhelmingly predicative in (169b).¹¹² It should be noted that we are not saying that a postnominal adjective always has a predicative reading, as is clear from (171), which is ambiguous.

(171) The people were responsible.

It is interesting to note that a predicative reading disappears when the adjective is modified with *very*, which what we also find with postnominal adjectives:

(172) a. The people were very responsible.

b.??[The people very responsible (for) pro] were punished.

If we are correct, it is reasonable to assume that the adjective in (168b) is followed by *pro* and that the extra *-de* or the feature that corresponds to it is in the lower D that licenses this *pro*.¹¹³

Now, recall that autonomous adjectives, or *mere*-adjectives, can not be used predicatively. As noted, the descriptive genitive *tada-no* is ambiguous between the autonomous and non-autonomous readings, ‘mere’ and ‘free.’ Interestingly, the autonomous reading is unavailable in when the genitive occurs in ‘postnominal’ position:

(173) a. tada -no hon ‘a mere/free book’
 mere/free-GEN book

b. hon-no tada-no ‘a book that is *mere/free’¹¹⁴

¹¹² Cinque (1994) notes that predicative adjectives are postnominal.

¹¹³ This recalls the long and short forms of Russian adjectives; the long form is only used attributively while the short or long form can occur in predicate position (Siegel 1976; Comrie 1987).

¹¹⁴ (173b), as it stands alone, may seem awkward even on the acceptable reading, but it is perfectly acceptable if embedded in a suitable sentence:

(i) [Hon-no tada-no] -ga nan -satsu-ka at -ta -kara, ni -satsu morat -te ki -ta.
book-GEN free-GEN-NOM what-NC -Q be-PST-from two-NC receive-GER come-PST

appears to be going through a historical transition from a linker head D to part of the modifier DP in Spec, DP. Other issues have been discussed, but some of them need a more thorough examination, which we will turn to in the following chapters.

CHAPTER IV

THE SYNTAX OF *NO*-MARKED CLAUSES

This chapter continues our examination of the syntax of the pronominal *no* as a linker and licenser of NP (or more generally, complement) deletion, focusing on its similarities to the nominalizer *no*. We argue that, like the pronominal *no*, the nominalizer *no* is the head of DP that takes *pro* as its complement. The difference is whether the *pro* has a possible (discourse) antecedent or not. When it has a possible antecedent, *pro* is taken as the semantic head of the whole phrase: *no* is perceived as the pronominal *no*. Without an antecedent, *no* is a nominalizer. This is the same distinction noted for *pro* in DP in 3.2.2.¹

We will also discuss various issues relating to *no*-clauses. These include relative clauses and similar clauses, interpretations and functions of various kinds of *no*-clauses in a sentence, *ga-no* conversion and movement in relative clauses.

4.1. *No* and Externally Headed Relative Clauses (EHRCs)

In this section, we show that our analysis of *no*-phrases in Chapter 3 extends to *no*-clauses, or clauses that end with *no*. This is because Japanese adjectives can be seen as relatives (IPs) in Spec, DP. We then discuss the obligatory absence of *no* in relative clauses, the fact that makes *no* somewhat different from similar particles in other languages, and the ambiguity of *no*-clauses in general between pronominal and nominalizer readings.

¹ As we will see, the actual distinction is not as clear, which supports our contention that the distinction between the pronominal and nominalizer readings is only apparent.

4.1.1. Adjectives and EHRCs

In Chapter 3, we have exploited the ambiguity of *no* between genitive and pronominal readings in phrases like (1) to argue that the pronominal reading obtains when *no* takes *pro* as its complement.

- (1) a. Keiko-no *pro* ‘Keiko’s’ (possessive)
 b. aka-no *pro* ‘a/the red one’ (descriptive genitive)
 red

We extended this analysis to similar phrases, such as (2):

- (2) [aka-i] -no *pro* ‘a/the red one’
 red-NPT-GEN

The *no* in (2) is unambiguously the pronominal *no*, because it can not occur with an overt head noun:

- (3) aka-i (*no) hon ‘a/the red book’
 red-NPT book

We treated an adjective like *aka-i* ‘red’ as DegP in Spec, DP:

- (4) DP
 \wedge
 DegP \wedge
 (no) NP/DP/*pro*

DPs like (4) can be base-generated, and we claimed that *no* is phonologically overt when its complement is *pro*. Although treating adjectives as DegPs was certainly adequate for our purposes in the last chapter, there is evidence that adjectives in Japanese are clausal.

Japanese is typologically unique in having two morphologically distinguishable classes of adjectives. One is simply called adjectives, while we refer to the other as nominal adjectives. Sometimes, the former is called *i*-adjectives and the latter

However, this is probably due to the non-referential nature of some nominals that occur in nominal adjectives. Besides, there are cases in which the copular part systematically fails to occur and such instances are not accounted for in inflectional paradigms found in any grammar:

- (6) a. Sono hito -wa kirei (*-da/?desu)? 'Is that/the person pretty?'
 that person-TOP pretty
- b. Sono hito -wa kirei (*-da/*desu) ka-i? 'Is that/the person pretty?'⁴
 that person-TOP pretty Q -FP
- c. Sono hito -wa kirei (*-da/*desu)-rash -i.
 that person-TOP pretty -seem-NPT
- 'That/The person seems to be pretty.'

This shows that the copular part of a nominal adjective is morphologically separable from the adjectival stem.

The discussion so far recalls our analysis of Japanese DP adjectives (e.g., the ambiguous *tada-no*) in 3.3. Both cases appear to involve a lexicalization process that are morphologically transparent in that there is no suppletion involved and contain a (mostly non-referential) noun and a functional element. Interestingly, similar arguments can be advanced with regard to adjectives, in which the morpheme *i* has a relatively free morphological status, much like *na* in nominal adjectives. One important kind of evidence for this has already been introduced: some color modifiers have one form that ends with *no* and another with *i*.⁵

- (7) a. aka/ ao /kuro /shiro -i 'red/blue/black/white'
 red blue black white-NPT

⁴ See 4.3.1. for some discussion on the final particle *i*.

⁵ See 5.1.2. for differences in meaning between these and other minimal pairs.

- (14) a. hyooshi-ga aka-i hon 'book with a red cover/that has a red cover'
 cover -NOM red-NPT book
- b. me-ga kirei -na hito 'person who has pretty eyes'
 eye-NOM pretty-NA person

These facts point to the conclusion that, as often proposed, Japanese adjectives are relative clauses (or “relatives”; see below). If this is correct, a Japanese adjective is not DegP but at least IP/TP (or AspP).¹¹ We can still assume that it occurs in Spec, DP.¹² Since we assume that there is a covert linker *no* as the head of DP, this means that *no* can link a clause and a nominal phrase (DP/NP) as well as two nominal phrases, as we have seen.

- (15) DP
 ∧
 IP ∧
 (no) NP/DP/*pro*

Indeed, the patterns in (2) and (3) are found in a relative clause that contains a verbal complex (a verb possibly followed by an auxiliary or a series of auxiliaries):

- (16) a. [anata-ga kat -ta]-no '(the) one that you bought'
 you-NOM buy-PST-PRN
- b. [anata-ga kat -ta] (*no) hon '(the) book that you bought'
 you-NOM buy-PST book

(16b) is a typical “head-final” relative clause in that the semantic head *hon* ‘book’ is preceded by the bracketed modifying clause. We call the modifying clause a “relative” here to distinguish it from a relative clause, the term that we reserve for the whole

¹¹ This greatly undermines the usefulness of DegP as a universal syntactic category and suggest a serious reexamination of its usefulness in other languages.

¹² Later in this chapter (4.4.1.), we will adopt Kayne’s (1994b) analysis of a relative clause as a DP with a CP complement, which leads to the possibility that CP may occupy Spec, DP. This will not affect our current discussion.

no is obligatory when the head noun is phonologically null. It follows then that *no* can be null or phonologically covert when the head noun is overt, but it need not be. But *no* always seem to be absent in Japanese EHRCs.

It should be noted that some speakers overgenerate *no* after a clausal modifier (including an adjective) both in early first and second language acquisition (see e.g., Clancy 1985; Murasugi 1990, 1991 and Ota 1989, respectively). This is easily accounted for under our analysis, since all we need to say is that the acquisition of Japanese involves learning to suppress *no* after a relative at (or by) PF, for which there is always a syntactic position.¹⁵ In first language acquisition, learners eventually retreat from this over-generation, which marks the point when this suppression requirement is finally at work.

In the previous chapter, we saw that *D* may delete or be suppressed, but what is suppressing *no* after a relative? An important clue may be found in Old Japanese (OJ),¹⁶ in which verbs, adjectives and auxiliaries (or verbals) had a prenominal form that was often different from the predicative form but that was lost in the course of historical change.¹⁷ When it differed from the predicative form, the prenominal form was often longer. Clearly longer prenominal forms were only found among verbs and auxiliaries,

¹⁵ In second language acquisition, Chinese learners are known for this ‘mistake/error,’ but English learners also overgenerate *no*, so that it is unlikely that this is just a case of transfer from the learner’s first language.

¹⁶ Like elsewhere in the current work (unless otherwise noted), we are not using the phrase “Old Japanese” as a technical term for a specific period in the history of the language, but only in contrast with more modern varieties of the language, which we collectively call “Modern Japanese.”

¹⁷ Kaplan and Whitman (1995) discuss issues that are closely related to ours at hand and also examine Korean. Although similar facts are presented (Our description of verbal and adjectival forms are much more comprehensible, albeit rather brief.), their conclusion is different from ours, partly because they assume that Japanese is head-final.

and the extra element was *ru* at the end (or possibly *ur* before the imperfective *u*). Some examples follow with the Modern Japanese (MJ) counterparts, which are used both in prenominal and predicative contexts:

	<u>predicative form</u>	<u>prenominal form</u>	<u>MJ</u>	
(18)	agu	aguru	ageru	‘raise’
	nagaru	nagaruru	nagareru	‘flow’
	ku	kuru	kuru	‘come’
	su	suru	suru	‘do’

Although the exact nature of this extra element is not clear, it is reasonable to assume that it functioned like a relativizer. If this is correct, prenominal forms of some verbals in OJ included an empty relativizer, while some verbals, such as all adjectives, had suppletive forms:

	<u>predicative form</u>	<u>prenominal form</u>	<u>MJ</u>	
(19)	keru	keru	keru	‘kick’
	ari	aru	aru	‘exist’
	sirosi	siroki/siropkaru ¹⁸	shiroi	‘white’
	tanosi	tanosiki/tanosikaru	tanoshii	‘enjoyable’
	sizukanari	sizukanaru	shizuka-da/na	‘quiet’

As shown in (18) and (19), the prenominal forms generally survived,¹⁹ so that we see a now familiar syntactic ambiguity, much like that of the genitive *no* as the head and a

¹⁸ The latter prenominal form of an adjective only appeared before some auxiliaries.

¹⁹ The /k/ in the prenominal form of an adjective often dropped in OJ, so that the same prenominal forms may be found both in OJ and MJ.

suffix (RC stands for a clausal relative without the prenominal ending *ru.*):²⁰

- | | | | | | |
|------|----|-------------------|--|----|---------------------|
| (20) | a. | DP | | b. | DP |
| | | ∧ | | | ∧ |
| | | RC ∧ | | | RC(- <i>ru</i>) ∧ |
| | | - <i>ru</i> /∅ NP | | | (no) NP/ <i>pro</i> |

(20a) can represent at least some relative clauses in OJ, while other OJ relative clauses may have had a structure like (20b), which also represents MJ relative clauses.²¹ If this is correct, *no* was never there in relative clauses. In fact, *no* was not used after a clause in OJ, in which zero nominalization was the norm. *No* was later introduced in sentential nominalization in MJ, which still retains zero nominalization in frozen formulaic expressions (Horie 1993):

- | | | | | | | | |
|------|----|-------------------------|------|------|----------------|---------|-----------------------------------|
| (21) | a. | [<i>Yat te mi-ru</i>] | _- | -ga | ii. | | ‘You should try it.’ |
| | | do-GER try-NPT | | -NOM | good | | |
| | b. | [<i>Mitome-zaru</i>] | _- | -o | e | -na -i. | ‘You can’t help but accept that.’ |
| | | accept | -NEG | -ACC | obtain-NEG-NPT | | |

The existence of these expressions suggests that the empty D may have a feature at least, because it is undesirable and uneconomical to allow empty elements, such as an empty head and its complement, to merge. Moreover, the transition from zero nominalization to nominalization with *no* can be seen as a change in the licensing condition for empty complements: in OJ, Spec-head agreement was sufficient, while MJ requires an overt head in addition.

²⁰ This also recalls the possibly linker-like behaviors of the adjectival endings *-i* and *-na* in MJ that we have seen in 4.1.1.

²¹ One might claim that the morpheme responsible for adnominal marking was not *-ru* but *-ur*, but it is important to note that *-ru* could have been thought to be a linker in OJ. In fact, our ultimate claim makes this distinction trivial, because (i) not all verbals had an extra element like *-ru* and (ii) what was crucial was that there was a feature in D that agreed with the relative (IP) in Spec, DP in OJ.

If we are correct, we should see *no* after a non-verbal element in MJ. This prediction is indeed borne out: there are relative clauses with *no*, when they do not contain a verbal predicate.²²

- (22) a. [musuko-ga daigakusei] -no Tanaka-san
 son -NOM college.student Tanaka-Mr./Ms.
 ‘Mr./Ms. Tanaka, whose son is a college student’
- b. [Ken-ga akuyaku]-no eiga (see Endo 1994)
 Ken-NOM evil.role movie
 ‘movie(.) in which Ken is (playing) the evil character’

This is reminiscent of descriptive genitives, as in (23a), which can actually occur with a *ga*-marked nominal phrase, as shown in (23b):

- (23) a. ?aka-no hon ‘red book’
 red book
- b. [hyooshi-ga aka]-no hon ‘book with a red cover’
 cover -NOM red book

If we can call the phrases in (22) relative clauses, these should be called relative clauses as well. If so, it is not surprising that (23a) is syntactically ambiguous in the same way that we argue that a relative clause is. Since *no* is obligatory in relative clauses without a verbal predicate, we can now say that a [+verbal] feature in a relative (IP²³) in Spec, DP only agrees with an empty head in MJ. This requirement is diachronically justified, as we have seen, but is totally ad hoc for language learners, who must learn it.

²² These two examples differ in that (22a) appears to contain a gap, while (22b) may not. Note that the former contains a *ga*-marked relational noun, *musuko* ‘son,’ as in the examples in (14). (22b) may, however, contain a gap before the noun *akuyaku* ‘evil character,’ which must be related to the semantic head *eiga* ‘movie.’

²³ A relative without even a verbal like the bracketed part in (22b) may still be IP, if *ga* is I (Whitman 1996a, 1996b).

In this section, we have claimed that the absence of *no* in most relative clauses is due to a historical change similar to what has caused the ambiguity of the genitive *no* as the head and a suffix. This obviously did not take place in other languages that have a particle like *no*, because probably they have always had a particle like it as a linker. One could see this historical change in Japanese as one that contributes to its transition from more isolating to more agglutinating patterns. Other languages that have a particle like *no* appear to be isolating, at least much more so than Japanese is. In fact, Korean and Turkish, the two languages that are syntactically very similar to Japanese but do not have such a particle, are agglutinating and much more fusional than Japanese, as we saw in 3.2.4.²⁴

4.1.3. Ambiguity of *No*-Relatives

Our analysis so far has treated the pronominal *no* and the nominalizer *no* as one and the same functional item. If this is correct, *no*-clauses used as relatives, or *no*-relatives, should always be ambiguous. That is indeed the case.²⁵

Consider (16a), repeated here as (24):

(24) [anata-ga e kat -ta] -no
 you -NOM buy-PST-PRN/NOMN

‘(the) one that you bought’ (pronominal reading)

or ‘(the fact) that you bought *e*’ (nominalizer reading)

²⁴ As is well known, some postpositions in Korean have different forms, depending on whether they immediately follow a vowel or a consonant. Such an alternation is not found in Japanese.

²⁵ It is interesting to note that both the Toyama dialect and the Kochi dialect use *ga* for both pronominal and nominalizer uses.

As shown, (24) is ambiguous between a pronominal reading and a nominalizer reading. On the pronominal reading, (24) is an EHRC, while it looks like a so-called complex Noun Phrase (CNP)²⁶ (e.g., *the claim that you bought a book* in English) on the nominalizer reading.²⁷ The nominalizer reading is possible in (23), because Japanese allows for null objects, so that the bracketed part can be taken as a full sentence. On this interpretation, *no* may be called “keishiki-meishi” or a ‘formal noun.’ The two readings can be paraphrased with two other ‘formal nouns,’ *mono* ‘thing’ and *koto* ‘fact.’

- (25) a. [anata-ga *e* kat -ta] mono ‘the thing that you bought’
 you -NOM buy-PST thing
- b. [anata-ga *e* kat -ta] koto ‘the fact that you bought *e*’
 you -NOM buy-PST fact

If we assume that the semantic head is *pro* on both readings, the difference appears to be whether the empty element is coreferential with it (pronominal reading)²⁸ or not (nominalizer reading).

This, however, may not be the whole story. With an apparently full sentence preceding *no*, as in (26), in which *no* should only be understood as a nominalizer, the *no*-clause may be multiply ambiguous:

²⁶ CNPs are known to be similar to what Inoue (1976: 191-203) calls “giji-kankei-setsu” or ‘pseudo-relative clauses,’ such as (i), in that they do not seem to contain a gap that is coreferential with the semantic head. This supports the idea that relative clauses and sentential complements are basically the same in Japanese (e.g., Matsumoto 1989).

- (i) [sakana-o yaku] nioi ‘smell of grilling a fish’
 fish -ACC grill smell

²⁷ There is also an IHRC reading, on which *no* is taken to be a nominalizer.

²⁸ At this point, it is irrelevant whether the semantic head of the relative clause is coindexed with the empty element via a relative operator or whether there is movement involved.

- (26) [anata-ga ringo-o kat -ta] -no²⁹
 you-NOM apple-ACC buy-PST-NOMN
- ‘the fact that you bought an apple’
- ‘the place where you bought an apple’
- ‘the time when you bought an apple’
- ‘the reason why you bought an apple’
- or ‘the news that you bought an apple’

Although the most neutral reading for (26) appears to be the ‘fact’ reading, other readings are possible, given an appropriate context:

- (27) a. [Anata-ga ringo-o kat -ta] -no -wa doko desu ka?
 you -NOM apple-ACC buy-PST-NOMN-TOP where COP.POL Q
- ‘*lit.* As for the place/fact that you bought an apple, is it where?’
- ‘Where/What was the place that you bought an apple?’
- or ‘Where was it that you bought an apple?’
- b. [Anata-ga ringo-o kat -ta] -no -wa itsu desu ka?
 you -NOM apple-ACC buy-PST-NOMN-TOP when COP.POL Q
- ‘*lit.* As for the time/fact that you bought an apple, is it when?’
- ‘What was the time that you bought an apple?’
- or ‘When was it that you bought an apple?’
- c. [Anata-ga ringo-o kat -ta] -no -wa naze desu ka?
 you -NOM apple-ACC buy-PST-NOMN-TOP why COP.POL Q
- ‘*lit.* As for the fact/reason that you bought an apple, is it why?’
- ‘What was the reason that you bought an apple?’

²⁹ Japanese has neither grammatical number marking nor definiteness marking, so that *ringo* ‘apple’ here can be translated as ‘a/the apple’ or ‘(the) apples.’ For the sake of simplicity, we will only use an indefinite singular reading, unless the distinction is crucial or another reading is (more) likely from the context.

or ‘Why was it that you bought an apple?’

d. [Anata-ga ringo-o kat -ta] -no -o kiki-mashi-ta.
 you -NOM apple-ACC buy-PST-NOMN-ACC hear-COP-PST

‘*lit.* As for the fact/news that you bought an apple, (I) heard (it).’

‘(I) heard (the fact/news) that you bought an apple.’

One might note that this multiple ambiguity is a spurious one, since (27a-c) contain a cleft construction, so that these *no*-clauses are just nominalized sentences. Still, (27d) can not be just a nominalized sentence, whatever that formally refers to. What appears to be happening here is the following. There is no semantic head in these examples, so that we look for a possible antecedent in the current discourse. Failing that, we settle for a conventionally available antecedent. This is very similar to what we argued for in the process of identifying the antecedent of *pro* in NP deletion cases in Chapter 3. This can account for the fact that these nominalizer readings are felt to be like pronominal readings.³⁰ In fact, even in a clearly non-interrogative cleft construction, this rather fuzzy pronominal-nominalizer ambiguity exists:

(28) [Watashi-ga sundeiru-no]-wa Nyuu-Yooku desu.
 I -NOM live -NO -TOP New York COP.POL

‘The place in which/Where I live is New York.’ (pronominal reading?)

or ‘It is New York that I live in.’ (nominalizer reading)

The pronominal reading for (28) is acceptable even if there is no discourse antecedent;

³⁰ This is particularly so with examples like (27d), which may be felt to be awkward on a pronominal reading, since the postposition *o* appears to induce a specific reading (see 6.1.4.1.), which would be a pronominal reading in this case. Another reason for the awkwardness of (27d) may be due to the fact that such a sentence would include a formal noun like *koto* (forcing a ‘fact’ reading) instead of *no*.

the sentence can be used as part of, say, self-introduction.³¹

4.2. *No*-Clauses as Internally Headed Relative Clauses (IHRCs)

As noted earlier, Japanese has a type of *no*-clauses that we have not discussed:

- (29) Akiko-wa [Takeshi-ga obore -te i -ru -no] -o tasuke-ta.
Akiko-TOP Takeshi-NOM drown-GER be-NPT-NOMN-ACC save -PST

‘Akiko saved Takeshi, who was drowning.’

The bracketed part of (29) is called an internally headed relative clause (IHRC). It is internally headed, because the semantic head, e.g., *Takeshi* in (29), is internal to the relative. It is called a relative clause, since it is considered to be identical in meaning to the/an externally headed counterpart, as in (30).³²

- (30) Akiko-wa [obore -te i -ru Takeshi]-o tasuke-ta.
Akiko-TOP drown-GER be-NPT Takeshi -ACC save -PST

‘Akiko saved Takeshi, who was drowning.’

An IHRC is a full clause without a(n obligatory) gap and is followed by *no*, much like a CNP-type *no*-clause, which consists of *no* and a full clause before it. The clause before *no* in an IHRC appears to be at least IP, since it contains a tense element like other relatives. *No* in IHRCs is generally considered to be the nominalizer *no*, exactly like *no* in EHRCs without a verbal predicate and *no* overgenerated in EHRCs. Since we assume that *no* is D, we can take an IHRC as DP with IP in its Spec position and *pro* in its

³¹ The facts that we have seen in this subsection show that the hearer need not know the antecedent for *pro* when the parser encounters it in sentence processing. This makes Japanese somewhat different from languages like English, which has free relatives like *where I went*, *what I bought* and *why I came here*. See 5.1.1. for some discussion on free relatives and *no*-clauses.

³² As we will see in 4.3.2., there may be another type of EHRCs in Japanese.

complement position.³³

- (31) DP
 ∧
 IP ∧
 (no) *pro*

An obvious problem with this analysis is that the semantic head of an IHRC does not seem to be *pro*, unlike in other *no*-clauses. This raises at least two sets of questions:

- (32) a. How do we interpret an IHRC? How do we know what is the semantic head in an IHRC?
 b. Is an IHRC really a relative clause? How is it different from EHRCs and/or CNP-type *no*-clauses?

We will attempt to answer these questions in what follows. Needless to say, a thorough examination of IHRCs is beyond the scope of the current work.³⁴ Rather, our main aim here is to demonstrate that nothing about IHRCs affects the main argument that we have presented above.

4.2.1. Interpreting IHRCs

In the following subsections, we will examine several types of analyses proposed in the literature to explain how (especially *o*-marked) IHRCs are interpreted. We will

³³ Basilico (1996) also claims that IHRCs are DPs with IP complements.

³⁴ Kuroda (1974) is generally considered to have been the first to note that Japanese has IHRCs. Since then, especially since the mid-80's, there has been an incredible and growing number of literature on IHRCs in Japanese and other languages (see e.g., Basilico 1996; Bonneau 1992; Cole *et al.* 1978; Cole 1987; Culy 1990; Fuji 1996; Hirose 1992; Hirose and Ohori 1992; Hoshi 1995, 1995a, 1996b; Ishii 1989; Ishikawa 1998; Itô 1986; Koike, 1990, 1994d/1997; Kuroda 1975-6, 1976, 1976-7, 1992; Mihara 1994; Murasugi 1994, 1996; Odani 1997; Ohori 1991; Shimoyama 1997; Tsubomoto 1981; Uchibori 1992; Williamson 1987 and references cited therein).

note that all the analyses face some (mostly empirical) problems, but that an adverbial analysis with some modifications seems to be the most promising, since it covers the widest range of data that we are aware of.³⁵ We propose that an IHRC has the same structure as other *no*-clauses (with *pro*) and functions like an adverbial phrase (linked up with the main clause by a D like *o*, *ga* or *ni*), while there is another *pro* in the main clause, which picks its antecedent out of the discourse (most likely out of the IHRC).

4.2.1.1. LF Raising of the Semantic Head

It is clear is that an IHRC interpretation is not due purely to the *no*-clause in question. Consider (33), which is exactly the same as (29) except for the main verb:

- (33) Akiko-wa [Takeshi-ga obore -te i -ru -no] -o shittei-ru.
Akiko-TOP Takeshi-NOM drown-GER be-NPT-NOMN-ACC know-NPT

‘Akiko knows that Takeshi is drowning.’

*‘Akiko knows Takeshi, who is drowning.’

An IHRC reading, however, is impossible for the *no*-clause in (33). This appears to show that the main verb is at least partially responsible for an IHRC interpretation. One could, therefore, say that, in (29), the main verb *tasuketa* ‘saved’ does not take a clausal complement, so that it picks *Takeshi* out of the *no*-clause as the semantic head and the ‘real’ direct object of the main verb, while in (33), a clausal complement is fine, so that an IHRC reading is not invoked. As a first approximation, this appears to be on the right track.

One possible way to formalize this intuition is to say that this is due to a thematic

³⁵ We will not be concerned with technical details of the analyses that we reject, as they are mostly inadequate for purely empirical reasons.

requirement imposed upon the semantic head by the main verb. A verb like *tasuke-* ‘save’ may be thought to assign a theme or patient θ -role to its direct object. In the MP, it is not clear when and how this is to be done, or when this is to be checked. In order to interpret IHRCs properly, however, this dependency must be captured at some level of linguistic representation. A most likely level for that is LF, where one could argue that the semantic head is made available. This could be done by raising it to an appropriate position at LF (or at least after SPELL-OUT in the MP). We call this an ‘LF raising analysis.’ Itô (1986) and Watanabe (1992) may belong to this category.³⁶ A possible advantage (or disadvantage, as we will see) of this approach is that IHRCs and EHRCs could have the same or almost the same LF representations. No matter how it is formally implemented, however, such an approach may face serious problems.

As we noted elsewhere (Koike 1994d/1997), there are cases in which there are more than one possible semantic heads:

- (34) Boku-wa [Hiroko-ga Takashi-o oikaketeiru] -no -o tsukamae-ta.
 I -TOP Hiroko-NOM Takashi-ACC is.chasing-NOMN-ACC catch -PST

‘I caught (up with) Hiroko, as she was chasing Takashi.’ (preferred)

or ‘I caught (up with) Takashi, as Hiroko was chasing him.’

In (34), either *Hiroko* or *Takashi* can be the semantic head of the IHRC. A purely thematic account can not choose one or the other as the semantic head between the two. This problem might, however, be overcome by giving the intended semantic head a certain feature (e.g., a Case feature) to be checked off.

A more serious problem is that interpretations of IHRCs are affected by many factors that have nothing to do with the main verb. In (34), for instance, there is a clear

³⁶ Itô in fact proposes that the semantic head move after LF.

preference for the subject, *Hiroko*, to be the semantic head, so that the first reading is more likely (Hirose 1992), while scrambling of the object renders the second reading a preferred one (Koike 1994d/1997):

- (35) Boku-wa [Takashi-o Hiroko-ga oikaketeiru]-no -o tsukamae-ta.
 I -TOP Takashi-ACC Hiroko-NOM is.chasing-NOMN-ACC catch -PST

‘I caught (up with) Hiroko, as she was chasing Takashi.’

or ‘I caught (up with) Takashi, as Hiroko was chasing him.’ (preferred)

It is rather unlikely, but it is even possible to take both the subject and the object in the IHRC to be the semantic heads. Such a reading is forced, when the main clause contains a phrase like *futari-tomo* ‘both of the two persons’ or *ryoohoo(-tomo)* ‘both(-EMPH)’ (see below):

- (36) Boku-wa [Hiroko-ga Takashi-o oikaketeiru]-no -o futari-tomo tsukamae-ta.
 I -TOP Hiroko-NOM Takashi-ACC is.chasing-NOMN-ACC 2-NC -EMPH catch -PST

‘I caught (up with) both (of them), as Hiroko was chasing Takashi.’

This makes it extremely difficult, if not totally impossible, to adopt an LF raising analysis.

4.2.1.2. No Movement Analyses

The problems noted above may be avoided, if the semantic head does not move, but is understood as such in-situ. There are two kinds of approaches under this category: syntactically oriented ones and semantically oriented ones.

A syntactically oriented approach may involve an empty relative operator, which may move before SPELL-OUT.³⁷ Such an analysis would probably need to make use of

³⁷ Although our analyses in this work do not involve operators of any kind, many analyses of relative clauses in Japanese employ empty operators (see e.g., Ishii 1991, 1993).

coindexing or a similar mechanism, and may face a problem in accounting for examples like (36).³⁸ It is interesting to note that Baker (1996: 172) gives a very similar example like (37) and calls it a “doubly headed” relative clause:³⁹

- (37) Taroo-wa [neko-ga nezumi-o oikaketeiru]-no -o ni-hiki-tomo tsukamae-ta.
 Taro -TOP cat -NOM mouse-ACC is.chasing -NOMN-ACC two-NC-EMPH catch -PST
 ‘Taro caught both the cat and the mouse such that the cat was chasing the mouse.’

Baker (1996: 184n22) suggests that there is no operator movement in (37) (pace Bonneau 1992 and Watanabe 1992), although he mentions the possibility of “absorption” of two relative operators into a single complex relative operator, much like “absorption” in multiple *wh*-questions in many languages, which, he suggests, may only be possible in “quantificational” structures (see Srivastav 1991).⁴⁰

A semantically oriented approach, on the other hand, may take the arguments within an IHRC as variables that can be unselectively bound (e.g., Uchibori 1992). There is no need for movement under such an analysis, and IHRCs with two or more semantic heads do not pose a problem, as long as they can all be bound at the same time.

There are, however, some data that are difficult to explain under either of these analyses (or a combination of the two). Consider, for instance, the following examples from Nomura (1996 cited in Odani 1997):

- (38) a. [Kesa kao -o sotta] -no -ga yuugata-ni-wa mata nobi -te kita.
 this.morning face-ACC shaved-NOMN-NOM evening-at-TOP again grow-GER came

³⁸ Consider examples like (i), in which indices are used to mark coreferentiality:

- (i) Mary_i and Jane_j like their_{i+j} parents.

³⁹ The translation is Baker’s.

⁴⁰ Baker notes that correlative constructions in Hindi have similar structures (Srivastav 1991: 650).

‘What I shaved on my face has come out again by the evening.’

- b. [Tsuchi-o ni-meetoru-hodo hotta]-no -o ue -kara nozokikonda.
soil -ACC two-meter-about dug-NOMN-ACC top-from peeked.into

‘(I) looked down into what (I) dug about two meters in the ground.’

Although the *no*-clauses in (38) are felt to be IHRCs, there are no possible semantic heads.⁴¹ Since the analyses discussed so far all start with the assumption that an IHRC contains the semantic head, they can not account for these headless *no*-clauses, which have nothing for an operator to bind.

One might note that these *no*-clauses are very similar to the gapless *no*-clauses that we examined above. Indeed, our analysis can easily account for these cases; there is *pro* after *no* in these cases, whose antecedent is determined from the context, facial hair in (38a) and a hole in the ground in (38b). Therefore, these may not be considered IHRCs but CNP-type *no*-clauses or “pseudo-relative clauses” (Inoue 1976), so that they do not have to be accounted for by an analysis intended to handle IHRCs only, although Hoshi (1996b) considers these cases as IHRCs (see below).

Such a position, however, is only valid, if one can clearly distinguish these two cases. We doubt that that is the case. Consider (39):

- (39) a. [Nikai -de piano-o hiiteiru] -no -ga ikkai -made kikoe -te kita.
2nd.floor-LOC piano-ACC is.playing-NOMN-NOM 1st.floor-up.to be.heard-GER came

‘(The sound of) the piano that (someone) is playing on the second floor came to the first floor.’

- b.?[Nikai -de hiiteiru] piano-ga ikkai -made kikoe -te kita.
2nd.floor-LOC is.playing piano-NOM 1st.floor-up.to be.heard-GER came

‘The piano that (someone) is playing on the second floor could be heard on the

⁴¹ Examples of this type have been noted much in the literature (see e.g., Murasugi 1991).

first floor.’

The semantic head for the IHRC in (39a) appears to be the sound (of the piano), which is not mentioned anywhere in the sentence, although it may be possible to take it as the *piano*, which occurs inside the IHRC. In fact, (39b) with an EHRC with *piano* as the head noun, is not as bad as one might expect. One might note that this is due to a case of metonymic extension or the like, since a musical instrument and its sounds are closely linked in our world knowledge. We do not know, however, that a similar point can be made about other objects in the world as well. Consider (40a) and (40b), which are minimally different from (39a) and (39b):

- (40) a. [Nikai -de keeki-o yaiteiru] -no -ga ikkai -made niot -te kita.
2nd.floor-LOC cake-ACC is.baking-NOMN-NOM 1st.floor-up.to smell-GER came

‘(The smell of) the cake that (someone) is baking on the second floor came to the first floor.’

- b.?[Nikai -de yaiteiru] keeki-ga ikkai-made niot -te kita.
2nd.floor-LOC is.baking cake -NOM 1st.floor-up.to smell-GER came

‘The cake that (someone) is baking on the second floor came smelling to the first floor.’

An even more serious problem may be a case like (41) (Koike 1990):

- (41) Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o totta.
Taro -TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC picked.up

‘Taro picked up an/the apple on a plate.’

or ‘An apple being on a plate, Taro picked it up.’

or, though slightly unlikely, ‘Taro picked up a plate with an apple on it.’

As the translations show, (41) can have a reading on which the two arguments *ringo*

‘apple’ and *sara* ‘plate’ in the IHRC interact (the third reading),⁴² although the apparent semantic head “a plate with an apple on it” is not expressed as such in the IHRC. None of the analyses that we have seen so far appears to account for such a reading. There is, however, an analysis that can accommodate such a fact, an adverbial analysis.

4.2.1.3. An Adverbial Analysis

Mihara (1994) and Murasugi (1994, 1996) regard (at least) an IHRC followed by the so-called accusative marker *o* as an adverbial phrase or an adjunct complex NP.⁴³ They claim that an *o*-marked IHRC is not the direct object of the main verb, which is actually *pro*. A sentence with an IHRC under this analysis may be schematically represented as follows:

(42) ... [IHRC ... NP/DP_i ...-no]-o *pro*_i Predicate.

If we say that this *pro* need not be coindexed with the semantic head, but that it can be (and is in most cases) coreferential with it, the problem that we have just noted with regard to (41) disappears. More specifically, no syntactic mechanism of coindexing is needed to determine the antecedent of *pro*, and it is discourse binding that is at work, so that a non-linguistic antecedent for *pro* like “a plate with an apple on it” for the *pro* as the direct object in the main clause in (41) is possible.⁴⁴ This approach can account for all the three possibilities for the semantic head for the IHRC in (41), which may not be clear

⁴² Note that (41) does not have a reading on which Taro picks up both an apple and a plate but the apple is not on the plate.

⁴³ The latter name implies that there is a null argument after *no* in IHRC, as we have argued for other *no*-clauses.

⁴⁴ In other words, certain filler-gap dependencies are to be accounted for in terms of discourse binding.

from the translations given there. From the most likely to the least likely, they are: the/an apple, the/a plate with an apple on it and the/a plate. In fact, the second translation given for (41) can cover all these readings, since the *it* in it can refer to any of the three. As illustrated in (43), the Japanese counterpart of *it*, can occur overtly, albeit marginally:⁴⁵

(43) Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o pro/?*sore-o totta.
Taro -TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC that-ACC picked.up

‘An apple being on a plate, Taro picked it up.’

The fact that (43) with an overt direct object in the main clause is possible at all supports the claim that the position for it exists. Besides violating a Double *O* Constraint (see below),⁴⁶ the overt direct object in (43) is felt to be too emphatic and unnecessarily too salient,⁴⁷ which may be degrading the acceptability of the whole sentence. With slight modifications, the acceptability improves tremendously:⁴⁸

⁴⁵ Hoshi (1995: 28-31) also notes that an *o*-marked direct object like *soit(s)u-o* ‘that thing-ACC’ outside of an *o*-marked IHRC that contains the semantic head that is coreferential with it is “marginal, but not totally unacceptable.”

⁴⁶ IHRCs can be marked with other postpositions, such as *ga* (nominative) or *ni* (dative), so that the *pro* in the main clause may be marked as nominative or dative, respectively. This is what Tsubomoto (1991 cited in Hoshi 1996b) calls Case-matching phenomena, and is beyond the scope of the current discussion. Here, we merely note that *ga*-phrases can occur more than once in multiple subject constructions, and double occurrences of *ni*-phrases may be fine, as long as they do not have the same function.

⁴⁷ As we will see in 6.1.4., salience is an important feature in discourse. As far as we can see, the use of an overt pronoun is constrained with regard to discourse salience. We believe that this is the idea behind the Avoid Pronoun Principle or the like:

- (i) Avoid Pronoun Principle (Chomsky 1981):
Avoid lexical pronominals if a null pronominal is possible.

⁴⁸ Bill McClure (p.c.) notes that this might be due to the fact that there are two verbs in the main clause in (44). Note, however, that (i) below is perfect, unlike (44), which is somewhat awkward.

- (44) ?Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o sore-o tot -te tabe-ta.
Taro-TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC that-ACC pick.up-GER eat-PST

‘An apple being on a plate, Taro picked it up and ate it.’

What is so appealing about this analysis is that it can extend to non-IHRC cases like (34), repeated here with the covert/overt direct object in the main clause.⁴⁹

- (45) Akiko-wa [Takeshi-ga obore -te i -ru -no] -o pro/?*sore-o shittei-ru.
Akiko-TOP Takeshi-NOM drown-GER be-NPT-NOMN-ACC that-ACC know-NPT

‘*lit.* Akiko knows it, (the fact) that Takeshi is drowning.’

‘Akiko knows that Takeshi is drowning.’

With some modifications like the above, this analysis can potentially account for many facts that can not be explained under other analyses. One of such facts is that, as we will see in more detail, IHRCs and EHRCs are different with regard to how the embedded clause is related to the main clause, which would be obscured if we call both

-
- (i) Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o tot -te sore-o tabe-ta.
Taro-TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC pick.up-GER that-ACC eat-PST
‘An apple being on a plate, Taro picked it up and ate it.’

Moreover, (ii) with an auxiliary-like second verb is only a little awkward like (44):

- (ii) ?Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o sore-o tot -te mi-ta.
Taro-TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC that-ACC pick.up-GER try-PST
‘An apple being on a plate, Taro tried to pick it up (and he did).’

⁴⁹ Iatridou and Embick (1997) note that *pro* may not take a sentential linguistic antecedent (CP/IP) in a *pro*-drop language but that (i) from Modern Greek with a definite article before CP is fine.

- (i) An [to oti o Kostas paratise to scolio]_i pisi tin Maria oti den ine
if the that the Kostas abandoned the school convinces the Maria that not is
sovaros, *pro*_i qa pisi ke tin Dina, i opia ine poli pio sindiritiki
serious *pro* FUT convince and the Dina who is much more conservativ
apo tin Maria.
than the Maria.
‘If that Kostas quit school convinces Mary that he’s not serious, it will also
convince Dina, who is much more conservative than Mary.’

- (48) a. *Saburoo-wa Taroo-o muriyari Jiroo-o nagur-ase-ta.
 Saburo -TOP Taro-ACC forcefully Jiro-ACC hit-CAUS-PST
 ‘Saburo forcefully made Taro hit Jiro.’
- b. ?Saburoo-wa Taroo-o muriyari saka-o nobor-ase-ta.
 Saburo -TOP Taro-ACC forcefully slope-ACC go.up-CAUS-PST
 ‘Saburo forcefully made Taro go up the hill.’
- c. Saburoo-wa Taroo-o muriyari ame-no naka -o aruk-ase-ta.
 Saburo -TOP Taro-ACC forcefully rain-GEN midst-ACC walk-CAUS-PST
 ‘Saburo forcefully made Taro walk in the rain.’

Some speakers find (48c) awkward, probably due in part to the fact that all these cases have perfectly acceptable counterparts, in which *Taroo* is marked with the dative *ni* instead of *o*, but (48c) is clearly better than (48a). One possible explanation for this pattern is that these *o*-phrases have different functions and the Double *O* Constraint is not only sensitive to form but also to function.⁵³ The third type is in fact similar to adverbial *o*-phrases, which include *o*-marked IHRCs.⁵⁴

It is important to note that, according to Horie (1993), the postpositions *ga*, *o* and *ni* (dative) are used to mark adjunct clauses in Old Japanese (or Classical Japanese in his terms, which refers to the language used in the 9th through the 13th centuries, A.D.). As far as *ga* and *ni* are concerned, this may not be surprising, since one could argue that they

awkwardness that may arise from having two contiguous phrases that are similar in form (see Koike 1990). Our preliminary and cursory survey, in which we tried to control the length of the *o*-phrases as well, has shown that the distance between the two *o*-phrases matters, which suggests that the Double *O* Constraint is not a purely structural condition.

⁵³ See Koike (1990) for a similar and more general proposal with regard to multiple occurrence of *no*.

⁵⁴ Since we have not seen the original work where these facts are discussed, we do not know if these three complement types are clearly defined.

are still used as adjunct markers in Modern Japanese (MJ) (see Mihara 1994).⁵⁵ *Ga* is used as a disjunctive postposition without *no* in MJ, although it is generally considered to be different from the nominative *ga*, while *ni* is used as a disjunctive postposition along with *no*, as we will see in 4.3.3.2. We propose that these so-called structural Case-markers⁵⁶ are at least originally emphatic markers, which have developed into grammatical markers (see 6.1.4.1.). At least in the case of *o*, this can account for ambivalent behaviors that it exhibits with regard to its omission in discourse. It is often noted that *o*-drop is more common in colloquial and less formal speech, but there are cases in which exactly the reverse is true: in formal letters and formal formulaic expressions, it is considered more polite to drop *o* than to keep it. Since older forms are usually considered to be more formal and more polite, what is happening is not *o*-drop in some cases but *o*-insertion in others (see Koike 1991b for a similar proposal for the topic-marker *wa*).⁵⁷ Crucially for our current discussion, at least most of these *o*-phrases appear to be used as adverbial phrases, as in (49), which contains an *o*-phrase with *naka*

⁵⁵ Mihara (1994) notes that the *ga* in (i) can not be a structural Case-marker:

- (i) Sore-ga genkoo -wa mada deki -te i -na -i.
 that -NOM manuscript-TOP yet materialize-GER be-NEG-NPT
 ‘However, the manuscript is not done yet.’

⁵⁶ The status of the dative is controversial, and Japanese *ni* is no exception, since it behaves like a structural Case marker in some cases but not in others. A strong monosemy position would dictate that there is a single *ni*, and, if we are correct so far, this ambiguity may be due to the historical change that we are proposing.

⁵⁷ Much like what we have argued for *no*, we believe that the syntactic position for *o* always exists, so that *o*-insertion here means not suppressing *o* at PF. This may appear to undermine the distinction that we are making, but what we mean here is that suppressing *o* is the default option.

‘midst’ exactly like in the third type of *o*-marked complements that we have seen (47c):⁵⁸

- (49) Honjitsu-wa [o-isogashi-i -naka(-o)] yookoso irasshai-mashi-ta.
 today -TOP PRF-busy -NPT-midst-ACC well come.HON-POL-PST

‘*lit.* You have come well in the midst of (your) being busy today.’

‘Thank you very much for coming during your busy schedule today.’

Hoshi (1996b) proposes that there are two kinds of IHRCs: those that are similar to sentential complements marked with *tokoro* (see Tsubomoto 1981) and those that are like “pseudo-relative clauses” (Inoue 1976). We have already argued that IHRCs of the latter type (i.e., CNP-type gapless *no*-clauses) contain *pro* and explained how they can be interpreted. IHRCs of the former type are in most cases ‘real’ IHRCs in that the semantic head is clearly internal to the relative.⁵⁹ (29), repeated here as (50a), is an example of ‘real’ IHRCs, and is very similar to and (almost) identical in meaning to (50b):⁶⁰

⁵⁸ Needless to say, an important point here is that the main verb in (49) can not take an *o*-marked complement under a standard analysis. There are other cases that are similar to (49) like (ia) and (ib), which should nonetheless be distinguished from the former as well as from each other; while the *o*-marked DP is always optional, its relationship with the main verb is different and appears to involve a different type of semantic dependency in each case. We leave this issue for future research (see Koike 1995a).

- (i) a. ?Eri-wa Hiroko-o [tensai da] to omot-te i-ta.
 Eri-TOP Hiroko-ACC genius COP QUOT think-GER be-PST
 ‘Eri (had) thought that Hiroko was a genius.’
 b. Kare-wa namae-o [Tadashi-to] yuu. ‘He is Tadashi by name.’
 he -TOP name-ACC Tadashi-QUOT say

⁵⁹ There are some ambiguous cases, in which the direct object of the main clause or the semantic head of the IHRC can be either clausal (eventuality) or nominal (discourse referent) (see Tsubomoto 1981; Murasugi 1991: 107):

- (i) Taroo-wa [Hanako-ga oyoi -de iru]-no/tokoro -o mi-ta.
 Taro -TOP Hanako-NOM swim-GER be -NOMN/place-ACC see-PST
 ‘Taro saw Hanako swimming.’ or ‘Taro saw Hanako, as she was swimming.’

⁶⁰ The *tokoro* in (49b) may be called a formal noun, since it does not retain its full lexical meaning in it. Like *no*, it may also be considered a nominalizer or a complementizer

- (50) a. Akiko-wa [Takeshi-ga obore-te i -ru -no] -o tasuke-ta.
 Akiko-TOP Takeshi-NOM drown-GER be-NPT-NOMN-ACC save -PST
 ‘Akiko saved Takeshi, who was drowning.’
- b. Akiko-wa [Takeshi-ga obore-te i -ru -tokoro]-o tasuke-ta.
 Akiko-TOP Takeshi-NOM drown-GER be-NPT-place -ACC save -PST
 ‘Akiko saved Takeshi, as he was drowning.’

If (50a) and (50b) are considered to have the same internal structure, *pro* should occupy the same syntactic position that the *tokoro* does in (50b). This is exactly what we have argued for other *no*-clauses, and Hoshi (1996b) also proposes a structure that contain two empty arguments for sentences that contain an IHRC of the former type:

- (51) ... [_{NP} [_{IP} ... NP ...]-no [_N e]]-o [_{NP} e] predicate

It is of course incorrect to assume that the empty category in a ‘real’ IHRC always corresponds to *tokoro*. Consider (41), repeated here as (52a), which can not be paraphrased with *tokoro*.

- (52) a. Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o totta.
 Taro -TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC picked.up
 ‘An apple being on a plate, Taro picked it up.’
- b. *Taroo-wa [ringo-ga sara-no ue -ni aru]-tokoro-o totta.
 Taro -TOP apple-NOM dish-GEN TOP-LOC be -place -ACC picked.up
 ‘Taro picked up an apple, as it was on the plate.’

As we noted elsewhere (Koike 1990), *tokoro* can not be used here, because the relative contains a state verb.⁶¹ The use of *o*-marked *tokoro*-clauses is nonetheless very interesting, as they can be used like adverbial phrases in some cases. For instance, the

(Inoue 1976; Josephs 1976).

⁶¹ This has to do with the temporal relationship between the two eventualities represented by the main clause and the IHRC or the *tokoro*-clause. See 4.2.2.2.

formulaic expression in (49) may also be expressed with an *o*-marked *tokoro*-clause, in which an adjective, a stative predicate, is used:

- (53) Honjitsu-wa [o-isogashi-i -tokoro(?-o)] yookoso irasshai-mashi-ta.
 today -TOP PRF-busy -NPT-place -ACC well come.HON-POL-PST

‘Thank you very much for coming during your busy schedule today.’

This may indirectly support an adverbial analysis, which posits an empty category in an IHRC, although neither (49) nor (53) can be uttered with an *o*-marked *no*-clause.

4.2.1.4. An E-Type Pronoun Analysis

We have argued that the empty category involved is *pro*, both in an IHRC and in the main clause. Hoshi (1995) claims that the empty argument in an IHRC exhibits characteristics of an E-type pronoun (Evans 1980), such as the *they* in (54) (see also Shimoyama 1997):

- (54) Few congressmen admire Kennedy, and they are very junior. (Evans 1980)

An E-type pronoun is not a bound pronoun, since (54) does not mean (55) but (56).⁶²

- (55) Few congressmen are such that they admire Kennedy and are very junior.

- (56) There are few congressmen who admire Kennedy, and those who do are very junior.

Hoshi states that there are two characteristics that an E-type pronoun shares with the empty argument in an IHRC. One is the so-called ‘maximality’ effect, which refers to the fact that (55) appears to mean not just (56) but (57): the *they* in (55) appears to refer to *all* the congressmen who admire Kennedy.

⁶² An E-type pronoun is not considered a referential pronoun, either, because its likely antecedent, such as *few congressmen* in (53), is a quantified expression, which is thought to lack a referent.

- (57) There are few congressmen who admire Kennedy, and all those who do are very junior.

Although we believe that this is not entailed but only strongly implied, Hoshi claims that a sentence with an IHRC in Japanese also exhibits the ‘maximality’ effect:

- (58) John-wa [[[Mary-ga san -ko-no ringo-o muitekureta]-no] -o [e]] tabeta.
 John-TOP Mary-NOM three-NC-GEN apple-ACC peeled.for.sb-NOMN-ACC ate

‘Mary peeled three apples and John ate them all.’ (Hoshi 1995: 131)

(58) means that John ate *all* the three apples that Mary peeled (for someone), although it is possible that he ate a little bit of each of all the three apples but did not finish all of them.⁶³ Moreover, this ‘maximality’ effect is mostly due to the fact that the quantified expression *san-ko* ‘three-NC’ appears before the semantic head *ringo* ‘apple’ and is marked with *no*, which forces a set or group reading (Koike 1994a, 1994b; also see 5.1.2.). In fact, when a quantified expression occurs after the semantic head, as in (59), the ‘maximality’ effect does not necessarily obtain.

- (59) John-wa [Mary-ga ringo-o san -ko muitekureta-no -o] tabeta.
 John-TOP Mary-NOM apple-ACC three-NC peeled.for.sb-NOMN-ACC ate

‘Mary peeled three apples and John ate (some of) them.’

A ‘maximal’ reading is still preferred for (59), but the preference may not be as strong as in (58). Moreover, this ‘maximality’ effect can easily be canceled with a quantified expression in the main clause:

- (60) John-wa [Mary-ga ringo-o san -ko muitekureta-no -o] ik-ko-dake tabeta.
 John-TOP Mary-NOM apple-ACC three-NC peeled.for.sb-NOMN-ACC one-NC-only ate

‘Mary peeled three apples and John ate only one of them.’

Such a fact can be straightforwardly accounted for, if we assume that there is a null direct

⁶³ Hoshi (1995: 132) gives an example that could possibly have this reading but ignores it.

object in the main clause, as we have argued, since (60) can be taken as a case of quantifier float (see 3.4.2.) in the main clause. This will avoid violating a locality requirement on quantifier float (see Hoshi 1995, 1996a) as well as possible double quantification, which will result in a wrong interpretation for the sentence.

The other characteristic of an E-type pronoun that is also found in sentences with IHRCs in Japanese is its incompatibility with negation, as shown in (61) and (62):

(61) *No congressmen admire Kennedy, and they are very junior. (Evans 1980)

(62) *John-wa [[[Mary-ga orenji -o shibor -anakat-ta]-no] -o [e]] nomitagatteiru.
John-TOP Mary-NOM orange-ACC squeeze-NEG -PST-NOMN-ACC want.to.drink

‘Mary did not squeeze oranges, and John wants to drink the orange juice.’

(Hoshi 1995: 134)

This is somewhat puzzling, since quantifiers like *few* and *little* (cf. *a few* and *a little*) are considered to include negative meaning. If an E-type pronoun is truly incompatible with negation, why is (54) good?

It should be noted that there is a clear difference between (54) and (61). The first clause in (54) presupposes that there are some congressmen who admire Kennedy, even though the number may be very small, while that in (61) asserts that such congressmen do not exist. If we assume that the antecedent of an E-type pronoun is not a linguistic expression but an extra-linguistic referent, then the contrast between (54) and (61) follows from the fact that (61) does not have a set of extra-linguistic referents that the *they* can refer to. We have proposed a discourse-based mechanism for determining the antecedent of *pro*, and, if we are correct, then, there is no need to say that the empty category in an IHRC is an E-type pronoun. It is *pro*, and there is nothing special to say

about it.

4.2.2. IHRCs and Clause-Linking

We have claimed that an *o*-marked IHRC is an adverbial phrase, which contains a *no*-clause with *pro*. A sentence with an *o*-marked IHRC, then, may be schematically represented as (63):

(63) [(DP-TOP) [DP [DP IP [D' *no pro*]]-*o*] *pro*_{obj} Predicate]

In (63), the *o*-phrase is taken as a DP headed by *o*, which is most likely adjoined to some extended projection of VP, which may be CP or IP, depending on where the topic phrase is thought to occur. Ignoring the sentence-initial topic DP, we could instead see this as a clause-chaining construction, in which *o* may or may not be a linker.⁶⁴

(64) a. DP ∧ DP D' ∧ DP- <i>o</i> D IP/CP ∅	b. DP ∧ DP D' ∧ D IP/CP ∅
---	--

If this is correct, an IHRC is more like a nominalized sentence than a relative clause. In other words, a sentence with an *o*-marked IHRC may involve a paratactic construction. In this section, we will examine IHRCs in more detail, and note that an IHRC is neither independent from nor purely subordinate to the main clause.

⁶⁴ This may also be the case with one of the most common clause-chaining strategies in Japanese, the *te* conjunction, in which *te* could be considered a linker:

- (i) Mariko-ga pen-o otoshi-te, Keigo-ga (sore-o) hirot -ta.
 Mariko-NOM pen-ACC drop-GER Keigo-NOM that -ACC pick.up-PST
 ‘*lit.* Mariko dropping a pen, Keigo picked (it) up.’
 ‘Mariko dropped a pen, and Keigo picked it up.’

4.2.2.1. IHRCs and Subordination

Here, we examine IHRCs and note that they are not just nominalized sentences. They share much in common with EHRCs and are not totally independent of the main clause, while they are unlike sentential complements in several aspects and are less subordinate to the main clause.

Like EHRCs, IHRCs can not be marked for politeness, as shown in (65a).⁶⁵

- (65) a. *Akiko-wa [Takeshi-ga obore -te i -mas-u -no] -o tasuke-mashi-ta.
Akiko-TOP Takeshi-NOM drown-GER be-POL-NPT-NOMN-ACC save -POL -PST

‘Akiko saved Takeshi, who was drowning.’

- b. *Akiko-wa [obore -te i -mas-u Takeshi]-o tasuke-mashi-ta.
Akiko-TOP drown-GER be-POL -NPT Takeshi -ACC save -POL -PST

‘Akiko saved Takeshi, who was drowning.’

While it is not totally impossible to mark politeness in EHRCs, it is almost absolutely impossible in IHRCs. *No*-marked sentential complements are like IHRCs in this respect (66a), while politeness marking on *to*-marked sentential complements are either fine (as direct or pseudo-direct speech) (66b) or unnecessary (66c):

- (66) a. *Akiko-wa [Takeshi-ga obore -te i -mas-u -no] -o shiri -mashi-ta.
Akiko-TOP Takeshi-NOM drown-GER be-POL-NPT-NOMN-ACC get.to.know-POL -PST

‘Akiko learned that Takeshi was drowning.’

- b. Akiko-wa [Takeshi-ga obore -te i -mas-u] -to ii-mashi-ta.
Akiko-TOP Takeshi-NOM drown-GER be-POL-NPT-QUOT say-POL -PST

‘Akiko said that Takeshi was drowning.’

- c. ??Akiko-wa [Takeshi-ga obore -te i -mas-u] -to omoi-mashi-ta.
Akiko-TOP Takeshi-NOM drown-GER be-POL-NPT-QUOT think-POL -PST

⁶⁵ The main clause is also marked for politeness here.

‘Akiko thought that Takeshi was drowning.’

Since *to* is a quotative postposition, it is not surprising that the clause that precedes it is more independent than a relative clause in allowing politeness marking. In fact, typical subordination cases like (67) show that politeness marking is optional in the embedded clause:

- (67) a. [Takeshi-ga obore -te i -mashi-ta]-kara Akiko-wa tasuke-mashi-ta.
Takeshi-NOM drown-GER be-POL -PST-since Akiko-TOP save -POL -PST

‘Because Takeshi was drowning, Akiko saved him.’

- b. [Takeshi-ga obore -te i -ta]-kara Akiko-wa tasuke-mashi-ta.
Takeshi-NOM drown-GER be-PST-since Akiko-TOP save -POL -PST

‘Because Takeshi was drowning, Akiko saved him.’

Another characteristic of IHRCs that they share with EHRCs has to do with what is called *ga-no* conversion, the alternation between the postpositions *ga* and *no* in some relative clauses. While its applicability is subject to many factors, *ga-no* conversion is generally used to show that the embedded clause is a relative clause and not a sentential complement. For example, (68a) with the embedded subject marked with *no* is totally unacceptable, while (68b) and (68c) are fine.

- (68) a. Boku-wa [Hiroko-ga/*no Takashi-o oikaketeiru]-to omot-ta.
I -TOP Hiroko-NOM/GEN Takashi-ACC be.chasing-QUOT think-PST

‘I thought that Hiroko was chasing Takashi.’

- b. Boku-wa [Hiroko-no Takashi-o oikaketeiru]-no -o tsukamae-ta.
I -TOP Hiroko-GEN Takashi-ACC is.chasing -NOMN-ACC catch -PST

‘I caught (up with) Hiroko, as she was chasing Takashi.’ (preferred)

or ‘I caught (up with) Takashi, as Hiroko was chasing him.’

c. Boku-wa [Hiroko-ga /no oikaketeiru] Takashi-o tsukamae-ta.
 I -TOP Hiroko-NOM/GEN is.chasing Takashi-ACC catch -PST

‘I caught (up with) Takashi, who Hiroko was chasing.’

Yet another characteristic of an IHRC to be noted is a possible temporal dependency on its corresponding main clause. In (29), repeated here as (69), the verb in the IHRC is marked as non-past, although the event described in it occurs in the past, which would be marked in the past tense in an independent clause, as in (67).

(69) Akiko-wa [Takeshi-ga obore -te i -ru -no] -o tasuke-ta.
 Akiko-TOP Takeshi-NOM drown-GER be-NPT-NOMN-ACC save -PST

‘Akiko saved Takeshi, who was drowning.’

EHRCs show the same temporal dependency.

(70) Akiko-wa [obore -te i -ru Takeshi]-o tasuke-ta. (= 29)
 Akiko-TOP drown-GER be-NPT Takeshi -ACC save -PST

‘Akiko saved Takeshi, who was drowning.’

A relative clause can have an independent reading, which is impossible in these examples. With the relative in the past tense, the sentence is ambiguous:

(71) a. Akiko-wa [Takeshi-ga obore -te i -ta -no] -o tasuke-ta.
 Akiko-TOP Takeshi-NOM drown-GER be-PST-NOMN-ACC save -PST

‘Akiko saved Takeshi, who was/had been drowning.’

b. Akiko-wa [obore -te i -ta Takeshi]-o tasuke-ta.
 Akiko-TOP drown-GER be-PST Takeshi -ACC save -PST

‘Akiko saved Takeshi, who was/had been drowning.’

It is well known that Japanese allows for *wh*-in-situ inside a relative.⁶⁶ So, in (72a) and (72b), for example, *dare* ‘who’ is inside an EHRC, but the sentence is taken as

⁶⁶ It is rather hard to obtain a main clause reading for a *wh*-word embedded inside another subordinate clause, but we do not believe that that is a syntactic effect.

a *wh*-question and not as a yes-no question.⁶⁷

- (72) Kimi-wa [dare-o oikaketeiru] Hiroko-o tsukamae-ta no?
 you -TOP who-ACC is.chasing Hiroko-ACC catch -PST FP

‘*lit.* Did you catch (up with) Hiroko, who was chasing whom?’

‘Who was Hiroko chasing, when you caught (up with) her?’

or ‘Which Hiroko did you catch (up with) such that she was chasing who?’

This pattern is also observed with IHRCs:

- (73) a. Kimi-wa [dare-ga Takashi-o oikaketeiru] -no -o tsukamae-ta no?
 you -TOP who-NOM Takashi-ACC is.chasing-NOMN-ACC catch -PST FP

‘Who was it that you caught (up with) that was chasing Takashi?’

- b. Kimi-wa [Hiroko-ga dare-o oikaketeiru] -no -o tsukamae-ta no?
 you -TOP Hiroko-NOM who-ACC is.chasing-NOMN-ACC catch -PST FP

‘Who was it that you caught (up with) that Hiroko was chasing?’

There is one notable exception to this pattern. As shown in (75), *naze* ‘why’ can not appear in an embedded clause (see Lasnik and Saito 1984, 1992; Fukui 1988).⁶⁸

- (74) a. *?Kimi-wa [Takashi-o naze oikaketeiru] Hiroko-o tsukamae-ta no?
 you -TOP Takashi-ACC why is.chasing Hiroko-ACC catch -PST FP

‘Why is it that you caught (up with) Hiroko, who was chasing Takashi?’

- b. *?Kimi-wa [Hiroko-ga naze oikaketeiru] Takashi-o tsukamae-ta no?
 you -TOP Hiroko-NOM why is.chasing Takashi-ACC catch -PST FP

‘Why is it that you caught (up with) Takashi, who Hiroko chasing?’

⁶⁷ As the translations show, both restrictive and nonrestrictive readings are possible, although a restrictive reading is less likely with proper names as heads as in (74).

⁶⁸ Fukui (1988) claims that *naze* in a embedded clause marked with the quotative *to* can have a main clause reading, when the main clause verb is a bridge verb like *itta* ‘said.’ We agree with Izutani (1990) that such a reading is actually difficult to get. Since the main verb is always a non-bridge verb in our examples, this point is irrelevant.

(75) a.?*Kimi-wa [Hiroko-ga Takashi-o naze oikaketeiru]-no -o tsukamae-ta no?
 you -TOP Hiroko-NOM Takashi-ACC why is.chasing-NOMN-ACC catch -PST FP

b.??Kimi-wa [Hiroko-ga naze Takashi-o oikaketeiru]-no -o tsukamae-ta no?
 you -TOP Hiroko-NOM why Takashi-ACC is.chasing-NOMN-ACC catch -PST FP

‘Why is it that you caught (up with) Takashi, who Hiroko chasing?’

or ‘Why is it that you caught (up with) Hiroko, who was chasing Takashi?’

It is beyond the scope of our current discussion to examine these patterns more carefully, but an important point is that IHRCs and EHRCs behave in a very similar way, as in other cases that we have seen.

The fact that IHRCs and EHRCs are very similar points to the conclusion that they are also structurally similar. If they have the same structure, then it is plausible that an IHRC contains *pro* where the semantic head of an EHRC occurs, as we have argued.

Japanese has no grammatical future tense marking, so that a non-past marking on the verb indicates that the clause refers to a present/habitual/generic eventuality (event, state or process) or a future eventuality. Since *no*-clauses are potentially ambiguous, this makes a *no*-clause as in (76) ambiguous between a sentential complement reading and an IHRC reading, although the latter interpretation is overwhelmingly preferred.

(76) Eri-wa [gakusei-ga daigaku-de go-nin uta -u] -no -o kiita.
 Eri-TOP student-NOM college-LOC five-NC sing-NPT-NOMN-ACC heard

??‘Eri heard (the news/fact) that five students (will) sing at the college.’

or ‘Eri heard five students sing at the college.’

A more natural way to express the former reading is to mark the embedded clause with *to*, or better yet to use the nominalizer *koto*:

(77) a.?Eri-wa [gakusei-ga daigaku-de go-nin uta -u] -to kiita.
 Eri-TOP student-NOM college-LOC five-NC sing-NPT-QUOT heard

‘Eri heard that five students (will) sing at the college.’

- b. Eri-wa [gakusei-ga daigaku-de go-nin uta -u] -koto-o kiita.
Eri-TOP student-NOM college-LOC five-NC sing-NPT-fact -ACC heard

‘Eri heard (the fact) that five students (will) sing at the college.’

As we have noted, a quantifier in the main clause can be associated with the semantic head of an IHRC (Hoshi 1995, 1996a),⁶⁹ so that (78) is fine on an IHRC reading but not on a sentential complement reading:

- (78) Eri-wa [gakusei-ga daigaku-de utau]-no -o go-nin kiita.
Eri-TOP student-NOM college-LOC sing-NOMN-ACC five-NC heard

‘Eri heard five students dance at the college.’

*‘Eri heard (the news/fact) that five students (will) sing at the college.’

This again shows that an IHRC is different from a sentential complement, which is indeed the case, as illustrated in (79):

- (79) a. *Eri-wa [gakusei-ga daigaku-de uta -u] -to go-nin kiita.
Eri-TOP student-NOM college-LOC sing-NPT-QUOT five-NC heard

‘Eri heard that five students (will) sing at the college.’

- b. *Eri-wa [gakusei-ga daigaku-de uta -u] -koto-o go-nin kiita.
Eri-TOP student-NOM college-LOC sing-NPT-fact-ACC five-NC heard

‘Eri heard (the fact) that five students (will) sing at the college.’

These patterns further support our claim that there is *pro* both in an IHRC and in the main clause. (78) and (79b) have the same structure under our analysis, but the *pro* in the main clause is coreferential with the proposition on the sentential complement reading in (78) and in (79b), while it is coreferential with an argument inside the *no*-clause, i.e., *gakusei*

⁶⁹ Hoshi also notes that an object-oriented secondary depictive predicate in the main clause can be associated with the semantic head of an IHRC, which also supports the idea that there is a null object in the main clause.

‘student’ on the IHRC reading in (79).

4.2.2.2. IHRCs and Parataxis

We have shown that an IHRC is dependent on the main clause in some aspects, while it is independent from it in others. Here, we present evidence that an IHRC is like an independent sentence in the way that it relates to the main clause.

It has been claimed that there are two conditions on the temporal interpretation of IHRCs (e.g., Fuji 1996):

- (80) a. adjacency condition: The event of the IHRC must be temporally adjacent to the event of the main clause.
- b. precedence condition: The event of the IHRC must precede the event of the main clause.

We believe that these are just preferences for typical IHRCs that are similar to *tokoro*-clauses that we have seen, but interestingly Fuji (1998) notes that there are similar conditions on the relationship between two eventualities manifested in a pair of sentences that are somehow linked with what he calls the stage-level pronoun *sore*, which he glosses as ‘him^S’ in the following example:

- (81) **Ken-ga** heya -ni i -ta. Sue-wa **sore** -o turesat -ta.⁷⁰
Ken-NOM room-LOC be-PST Sue-TOP **him^S**-ACC take.away-PST
- ‘**Ken** was in the room. Sue took **him^S** away.’

Fuji (p.c.) notes that this phenomenon is almost the same as one that involves an IHRC.

- (82) Sue-wa [Ken-ga heya -ni i -ta]-no -o turesat -ta.
 Sue-TOP Ken-NOM room-LOC be-PST-NOMN-ACC take.away-PST

⁷⁰ The glosses and translation are Fuji’s, except for ‘PST,’ which is ‘Past’ in Fuji (1998). Bold type is used here to indicate an anaphoric link between *Ken* and *sore*.

‘Sue took Ken away, when he was in the room.’

The fact that (81) and (82) receive almost the same interpretation⁷¹ supports our claim that there is a null direct object in the main clause in (82) and suggests that a sentence with an IHRC is like a paratactic construction. It also appears that even in IHRC cases, the direct object may refer to the whole proposition, rather than just the semantic head, as we have argued. This is because what was taken away in (81) and (82) is not just ‘Ken’ but ‘Ken, as he was in the room (an eventuality with a salient entity, which can be taken as the semantic head of the IHRC)’⁷² which *sore* refers to in (81).⁷³

We have seen that IHRCs have much in common with EHRCs in the last subsection. If a sentence with an IHRC is paratactic, does it mean that an IHRC is unlike an EHRC in this respect? It is important to note that a sentence with an EHRC can be paratactic in some cases. In the following famous saying, for instance, only a paratactic

⁷¹ Of course, this is not always the case, since *sore* can refer back to an inanimate object as well. In (60), *heya* ‘room’ would be the only possible antecedent for *sore* on that interpretation, but such a reading is excluded due to its semantic anomaly.

⁷² Murasugi (1991: 107) observes that *no*, or more accurately its complement, *pro*, may refer to a “scene” or an “event.” This may be the case in cleft constructions. One traditional argument against equating the pronominal *no* with the nominalizer *no* is that the pronominal *no* can not have an honorific antecedent, an antecedent whose referent is shown deference by the speaker. We could say that this is because there is no honorific feature for *pro*, but (i) is fine.

(i) [Watashi-ga o -ai -shita-no *pro*]-wa sono kata desu.
I -NOM PRF-see-did -NOMN -TOP that person COP.POL
‘It is that person that I met (or had the pleasure to meet).’

This fact is often used as evidence that the pronominal *no* and the nominalizer *no* are distinct. If the *pro* in (i) does not refer to *sono kata* ‘that person (HON),’ however, this is not an exception to this sociolinguistically oriented condition. We can also avoid a possible case of backward anaphora, which seems to be dispreferred in Japanese.

⁷³ If this is correct, the kind of discourse binding that we argued for is much more local than we have led one to believe.

reading is intended:⁷⁴

- (83) I've never met a man I don't like.
 ≠ [a man I don't like] I've never met
 ≠ ~ [[a man I don't like] I've ever met]
 = ~ [ever [I met a man & I didn't like him]]⁷⁵

Similarly, a sentence with a sentential complement is not always hypotactic:

- (84) I've got a feeling that you didn't like it.
 = My feeling is that you didn't like it.
 = What I feel is that you didn't like it.
 = I feel that you didn't like it.

(84) is a presentational sentence in that the embedded clause is not presupposed, as the paraphrases show. The non-hypotactic characteristic of the sentence is also reflected in the use of the indefinite article *a* instead of the definite *the* before the noun *feeling*. It appears that it is not always easy to say that a construction is hypotactic or paratactic based on its syntactic structure, and parataxis may be much more prevalent than

⁷⁴ This example is similar to a sentence with a result clause, such as (i), which Kayne (1994b: 126-7) brackets as follows:

- (i) [[Plots by so many conspirators have been hatched] [that [the government is helpless]]]

Kayne claims that the whole sentence is headed by *that* and the sentence preceding it is in its Spec position, so that *that* can be seen as a linker in our definition. This analysis can account for the possibility of coreference between *she* and *Mary* in (ii), since the former does not c-command the latter (Kayne *ibid.*: 127):

- (ii) [She has so much money now [that Mary is the envy of all her classmates]].

⁷⁵ This is just to illustrate our point and is not meant to be an informal semantic representation.

previously thought (see Torrego and Uriagereka 1993, Varlokosta 1994, Uriagereka 1995).

Hopper and Traugott (1993: 170) propose a three-way distinction in their “cline of clause combining” instead of more common two-way distinctions, i.e., coordination vs. subordination, or parataxis vs. hypotaxis.⁷⁶

(85) *Cline of Clause Combining*

parataxis	>	hypotaxis	>	subordination
- dependent		+ dependent		+ dependent
- embedded		- embedded		+ embedded

It appears that an IHRC as a construction is neither paratactic nor subordinate, so that it might be better to call it hypotactic. This may also mean that *o* has been reanalyzed from an adjunct marker to a grammatical marker.

Although we have not examined IHRCs that are marked with other postpositions like *ga* or *ni* in this section, our general findings should extend to those cases. The Case-matching phenomena that we noted above in a footnote may mean that IHRCs in general are being reanalyzed into the main clause subject, direct object or indirect object.

4.3. *Ga-No* Conversion and Its Implications

As we have already noted, *ga* and *no* alternate in relative clauses.⁷⁷ This is called

⁷⁶ Hopper and Traugott (1993: 174) classify the Japanese clause-combining by way of *-te/-de*-marked clauses as a case of hypotaxis.

⁷⁷ Korean does not have this alternation, while the subject in Turkish relative clauses has genitive-marking (Keenan 1985). In Koike (1994d/1997), we noted that Jacalteco was another language that has genitivized subjects in relative clauses. This was based on examples given in Francisco Ordóñez’ class presentation at CUNY, Graduate Center (Spring 1993). After briefly looking over Craig (1977), however, we have not been able

ga-no conversion and is illustrated in (86) with simpler examples than we saw:

- (86) a. [Erika-ga katta] hon ‘a/the book that Erika bought’
 Erika-NOM bought book
- b. [Erika-no katta] hon
 Erika-GEN bought book

In this section, we examine *ga-no* conversion. We first note that it is most likely due to the gradual historical switch between these two postpositions. This can account for the fact that some dialects have the pronominal and nominalizer *gas*. In fact, there are other dialects, in which *ga* is used as a final particle. We then discuss *ga-no* conversion in IHRCs, which we argue can bring forth a left-headed relative clause. The resultant structure is very similar to those of the multiple genitive phrases in Chapter 3.

4.3.1. *Ga-No* Conversion and *Ga* in Some Dialects

In Old Japanese (7-10 C), *ga* was the genitive/associative and nominative case marker, while *no* was (mainly) the subject marker, as shown in (88):

- (87) karasu-no nedokoro -e iku-tote, ... (Ikeda 1975: 194-5)
 crow -NOM sleeping.place-to go -CONJ

‘the crows flying on their way to their nests’

There has been an extremely gradual switch between the two since then. In fact, the change has been so slow that it is still not completed, and *ga-no* conversion is therefore considered to be “a remnant of older Japanese” (Miyagawa 1989: 91; see Fujii 1991: 165-93; also see Koike 1990). As is expected in an ongoing historical change, the applicability of *ga-no* conversion tends to decline as the speaker gets younger (Shibatani

to find any mention of such facts. It is likely that the author misinterpreted the examples that Ordóñez included in his presentation.

1975).⁷⁸ There is also regional variation, which may explain the existence of *ga* as a pronominal, a nominalizer and/or a sentence-final particle in some dialects.

As noted in 3.2.4., some dialects of Japanese, such as the Toyama dialect and the Kochi dialect, have the pronominal *ga*. These dialects also use the particle as a nominalizer. This indirectly supports our claim that the pronominal *no* and the nominalizer *no* are one and the same. As noted earlier, OJ did not have a nominalizer particle after a clause, and we have proposed that *no* was inserted in the D position later. We could say that these dialects inserted *ga* instead of *no* in this position, when they still had similar functions. Although further research is needed to verify the plausibility of this proposal, it is interesting to note that, as also noted in 3.3.3.2., the pronominal *no* was found with a possessor in OJ. These dialects use *no* as the genitive postposition, while they insert *ga* after a *no*-phrase with a possessor, for which the pronominal *no* does not appear in the Tokyo dialect. If our proposal is on the right track, *no* was inserted in this case in the Tokyo dialect as well, but it is suppressed in the surface string, probably because of the double occurrence of *no*:

(88) Hiroshi-no no ⇔ Hiroshi-no ‘Hiroshi’s’ (the Tokyo dialect)
 Hiroshi-GEN PRN

Another piece of evidence that supports our claim is that the nominalizer *ga* in the Toyama dialect overgenerates in first language acquisition, much like the nominalizer *no* in the Tokyo dialect (see 4.1.2.).

Some dialects of Japanese even have *ga* as a (sentence-)final particle. This

⁷⁸ In this dissertation, we are rather liberal in our judgments with regard to the applicability of *ga-no* conversion, assuming that the alternation is generally possible when conditions are met, although it is known that younger generations in the Tokyo and surrounding areas, whose variety of Japanese this work mainly deals with, tend to show a low level of applicability in many cases.

includes the Toyama dialect, in which *ga* is used both as an assertion marker and as a question marker, much like the final particle *no* in the Tokyo dialect. As is the case with the final particle *no* in the Tokyo dialect, *ga* does not have to be strictly sentence-final in this dialect, as it can be followed by another final particle *ke(e)* (Masaru Inoue p.c.):⁷⁹

- (89) Moo chokko yasui-ga nai-ga-ke? (the Toyama dialect)
 more a.little cheap-PRN NEG-FP-FP

‘Isn’t there a little cheaper one?’

In the Kochi dialect, *ga* is used as a question marker, if not as an assertion marker (Takaaki Hashimoto p.c.):

- (90) a. Doko-e it -te ki -ta ga? ‘Where did you go?’
 where-to go-GER come-PST FP
 b. Dokka -e it -te ki -ta ga (ka-e)? ‘Did you go somewhere?’
 somewhere-to go-GER come-PST FP Q -FP

There are other dialects that have *ga* as a final particle. There are two that we can think of that are spoken in non-adjacent regions to Toyama or Kochi. One is the Eastern Hiroshima dialect (spoken along the eastern coastal region of Hiroshima Prefecture, which is located in Western Japan),⁸⁰ in which it appears to be used only as a strong assertion marker. The use is extremely restricted, as far as we can see, and even as an assertion marker it is more restricted in use than that in the Toyama dialect. The other dialect is the Nagoya dialect (spoken in and around the city of Nagoya in Central Japan),

⁷⁹ Most likely, *ke(e)* corresponds to *ka* (or possibly *ka-i*) and not *kke* (with a tag-like meaning) in the Tokyo dialect.

⁸⁰ This is the author’s (almost) native (but not dominant) dialect. The final particle use of *ga* may be found in adjacent dialects, too, but at this moment it is unclear how wide spread this is. What we do know is that these dialects also have *no* as the final particle, although they tend to appear as *n* even at the end of the sentence, while the final particle *no* never gets reduced to *n* in the Tokyo dialect.

which has sentence-final sequences like *da-ga-yaa* (contracted to *da-gyaa*) and *(i-adjective)-ga-yaa* (contracted to *-gyaa*) mostly used by men.⁸¹

- (91) a. Gakusei da-ga-yaa/da-gyaa. '(He/She) is a student.'
 student COP-FP-FP
- b. Akai ga-yaa/gyaa. '(It) is red.'
 red FP-FP

As far as we are aware, these dialects have neither the pronominal *ga* nor the nominalizer *ga* but only the pronominal *no* and the nominalizer *no*. We do not know, if they once had *ga* as a pronominal and/or a nominalizer but lost it or they never had it. It appears that these dialects are spoken in the areas where there have been much more contact with people from other regions than Toyama and Kochi, so that it is possible that such dialect contact has erased the possible early occurrence of *ga* or promoted the use of *no* instead.⁸²

It should be noted that the final particle *ga* in these dialects may be considered distinct from the conjunctive postposition *ga* in the Tokyo dialect, which may appear in sentence-final position, as in (92b):

- (92) a. Kore-wa dare-ga kai -ta -n desu ka? 'Who wrote this?'
 this -TOP who-NOM write-PST-NOMN COP.POL Q
- b. Watashi desu ga. 'It is me/I did, but ...'
 me COP.POL GA

There are two reasons why this should not be considered a bona fide (sentence-)final

⁸¹ Takako Katsuno (p.c.) notes that the final *yaa* can be omitted, so that *ga* can actually be sentence-final. Moreover, the sequence *(da)-ga-nee* is also possible and is mostly used by women.

⁸² Interestingly, these dialects do have the final particle *noo*, which may or may not be related to the final particle *no* in the Tokyo dialect. It is used as a question marker in the Nagoya dialect.

- (i) Omyaa-san, nani yattoru-noo? 'What are you doing?'
 you what doing -FP

particle. One is that it can not be followed by another final particle (except possibly for *ne*), which other final particles (typically) do.⁸³ For instance, it can not be followed by the final particle *-i*, as is possible in the Toyama dialect (Masaru Inoue p.c.):

- (93) Sonna -ga-i -ne.⁸⁴ 'To tell the truth, it is true.'
 like.that-GA-FP-FP

The Tokyo dialect also has the sentence-final particle *-i*, most commonly found following the informal copula *da* or the question particle *ka*:

- (94) a. Sore, hontoo-ka-i? 'Is that true?'
 that true -Q -FP
 b. Hontoo-da -i! 'It IS true!'
 true -COP-FP

Although less common, this particle is found immediately after a verb, so that it is probably incorrect to treat *da-i* and *ka-i* as single particles (see Martin 1975).⁸⁵

- (95) a. Sonna kotaa, shit-te-rai! 'I know (something [simple] like) that!'
 < Sonna koto-wa shitte-iru + (a?)i⁸⁶
 like.that thing-TOP know FP
 b. Katte-ni shiro -i! 'Do as you please! (I don't care.)'
 as.you.please do.IMP-FP

The other reason is that *ga* in the Tokyo dialect is still largely considered to be a

⁸³ This *ga* can be followed by the final particle *ne*, but *ne* can occur in phrase-final position as well, so that this is not an exception.

⁸⁴ Masaru Inoue (p.c.) notes that the final particle *ne* is different from the homophonous final particle in the Tokyo dialect, which is realized as *nee* with a contour tone (falling and raising).

⁸⁵ This use has a distinctive *shitamachi* or 'downtown' flavor to it.

⁸⁶ Examples like (95a) suggest that the particle is not just *-i* but *-ai* but the vowel /a/ gets dropped after a vowel.

conjunctive postposition, as it is felt that there is a missing clause that follows a sentence like in (95b). Such a missing clause would be most likely a question like ‘Why do you ask?’ or ‘What can I do for you?’, which is expected to be understood from the context. It is also the case, however, that one can say that this *ga* is becoming a final particle. A sentence like (95b) does not have to have prosodic cues that indicate that a clause is missing, which can be characterized among other things by no falling intonation and a prolonged vowel. This use of *ga* is conventionalized, which means that it is being turned into a final particle.

4.3.2. Left-Headed Relative Clauses

We noted elsewhere (Koike 1990) that *ga-no* conversion, when applied to an IHRC, can bring forth another reading, as shown in (96b):

- (96) a. Taroo-wa [ringo-ga sara-no ue -ni aru]-no -o totta.
Taro -TOP apple-NOM dish-GEN TOP-LOC be-NOMN-ACC picked.up

‘Taro picked up an/the apple on a plate.’

or ‘An apple being on a plate, Taro picked it up.’

or, though slightly unlikely, ‘Taro picked up a plate with an apple on it.’

- b. Taroo-wa [ringo-no sara-no ue -ni aru-no] -o totta.
Taro-TOP apple-GEN dish-GEN TOP-LOC be-NOMN-ACC picked.up

same as (a) or ‘Of apples, Taro picked up (the) one on the plate.’

The second reading of (96b) is different from the first one in that (i) the reading appears to be a contrastive and possibly a partitive one, as it is implied that there were other apples elsewhere; (ii) the IHRC has a different intonation. Japanese is a pitch accent language with a phenomenon called “downdrift,” which refers to the gradual fall in pitch

in a phonological phrase after hitting its peak (see Vance 1987: 78, 103-4; also see Selkirk and Tateishi 1988, 1991). When a pitch rises higher than otherwise expected after the peak, it appears to mean that a new phonological, and possibly syntactic, phrase is starting (see Selkirk and Tateishi 1988, 1991). For the second reading, one can detect two peaks in the relative clause. The first one occurs in the first *no*-phrase and the second one comes after it, where the main-clause topic may appear, which also seems to indicate that the first *no*-phrase is outside of the relative (Koike 1994d/1997):⁸⁷

(97) Ringo-no Taro-wa [sara-no ue -ni aru-no] -o totta.
apple-GEN Taro -TOP dish-GEN TOP-LOC be-NOMN-ACC picked.up

‘Of apples, Taro picked up (the) one on the plate.’

In the first reading, on the other hand, there is only one peak. Most likely, these two distinct intonational patterns are related to two different readings that (99b) can have.

There is some evidence that the *no*-phrase with the semantic head must not be a non-initial phrase in the *no*-clause. Consider the following examples from Koike (1994d/1997):

(98) a. Kesa [Chomsky-ga kyonen hon -o kaita]-no -o katta.
this.morning Chomsky-NOM last.year book-ACC wrote-NOMN-ACC bought

‘This morning, (I) bought a book that Chomsky wrote last year.’

b. Kesa [Chomsky-no kyonen hon -o kaita-no] -o katta.
this.morning Chomsky-GEN last.year book-ACC wrote-NOMN-ACC bought

same as (a)

or ‘This morning, (I) bought Chomsky, who wrote a book last year.’

(unlikely, but preferred)

⁸⁷ This may be an intonational pattern that involves a parenthetical, about which not much is known, to our knowledge.

c. Kesa [kyonen Chomsky-no hon -o kaita]-no -o katta.
 this.morning last.year Chomsky-GEN book-ACC wrote-NOMN-ACC bought

same as (a)

(98b) is ambiguous between two readings on which the semantic head is *hon* ‘book’ and *Chomsky*, respectively, and the latter (rather odd) reading is preferred. (98c), in which the adverbial *kyonen* ‘last year’ occupies the initial position in the embedded clause, does not have this ‘pragmatically’ strange reading (see Miyagawa 1993).

This construction is even possible with a *no*-marked direct object in the IHRC (Koike 1994d/1997):⁸⁸

(99) Boku-wa [Takashi-no Hiroko-ga oikaketeiru-no] -o tsukamae-ta.
 I -TOP Takashi-GEN Hiroko-NOM is.chasing-NOMN-ACC catch -PST

‘I caught (up with) Takashi, as Hiroko was chasing him.’

This is similar to scrambling, as in (33), repeated here as (100):

(100) Boku-wa [Takashi-o Hiroko-ga oikaketeiru]-no -o tsukamae-ta.
 I -top Takashi-ACC Hiroko-NOM is.chasing-NOMN-ACC catch -PST

‘I caught (up with) Hiroko, as she was chasing Takashi.’

or ‘I caught (up with) Takashi, as Hiroko was chasing him.’ (preferred)

A crucial difference between (99) and (100) is that (100) only (or overwhelmingly) has the reading on which *Takashi* is the semantic head of the IHRC.

We claim that an IHRC with an initial *no*-marked DP serves as a left-headed relative clause (LHRC) in that the initial DP is taken as the semantic head. This is similar to what is known as Possessor Ascension (PA) in Relational Grammar (Blake 1990:

⁸⁸ (99) may not be perfect for some speakers, probably because *Takashi* is a proper name, which resists a partitive reading.

99-103; Perlmutter and Postal 1983: 66-67).⁸⁹ PA is found in a so-called multiple subject construction in Japanese, as in (101a). Such a construction is often compared with a genitive-nominative construction as in (101b). Since it appears that *Hiroshi*, the possessor, appears to be highlighted in (101a), one could say that the possessor is raised (for focus) in (101a) but not in (101b):

- (101) a. Hiroshi-ga te -ga tsumeta-i. 'It is Hiroshi whose hands are cold.'
 Hiroshi-NOM hand-NOM cold -NPT
- b. Hiroshi-no te -ga tsumeta-i. 'Hiroshi's hands are cold.'
 Hiroshi-GEN hand-NOM cold -NPT

Embedded in an IHRC, the genitive version (102b) may be thought to involve a(nother) raising operation of a similar sort, so that it is ambiguous.

- (102) a. [Hiroshi-ga te -ga tsumetai]-no-o shikatta.
 Hiroshi-NOM hand-NOM cold -NOMN-ACC scolded
- '(I) scolded Hiroshi for having cold hands.'
- b. [Hiroshi-no te -ga tsumetai-no]-o shikatta.
 Hiroshi-GEN hand-NOM cold -NOMN-ACC scolded
- '(I) scolded Hiroshi for having cold hands.'

or '(I) scolded (him/her/etc.) for Hiroshi's hands being cold.'

We have called this LHRC reading, which happens to be the same as that for (102b), a PA reading, because *Hiroshi* is a personal name and is generally considered to have a unique referent. If we replace *Hiroshi* with a common noun, a contrast in meaning shows up:

- (103) a. [Gakusei-ga te -ga tsumetai]-no-o shikatta.
 student-NOM hand-NOM cold -NOMN-ACC scolded
- '(I) scolded the/a student for having cold hands.'

⁸⁹ It is also known as an external possession/possessor construction.

b. [Gakusei-no te -ga tsumetai-no]-o shikatta.
 student-GEN hand-NOM cold -NOMN-ACC scolded

‘(I) scolded the/a student for having cold hands.’

‘(I) scolded a student(,) who had cold hands.’ (LHRC reading)

or ‘(I) scolded (him/her/etc.) for the/a student’s hands being cold.’

(103b) has an indefinite, nonrestrictive reading, which is virtually blocked in (102b) due to the use of a personal name like *Hiroshi*. This is the LHRC reading, and has a structure, as in (104):

(104) [Hiroshi/Gakusei-no [te -ga tsumetai]-no]-o shikatta.
 Hiroshi/student-GEN hand-NOM cold -NOMN-ACC scolded

The contrast between IHRC and LHRC readings may become even sharper, if we use an individual-level predicate instead of a stage-level predicate that we have been using^{90,91}

(105) a.??[Gakusei-ga atama-ga/no warui]-no -o shikatta.
 student-NOM head-NOM/GEN bad -NOMN-ACC scolded

‘(I) scolded a student for being dumb.’

b. [Gakusei-no [atama-ga/no warui]-no] -o shikatta.
 student-NOM head-NOM/GEN bad -NOMN-ACC scolded

‘*lit.* (I) scolded a student(,) whose head is bad.’

‘(I) scolded a student(,) who was dumb.’ (LHRC reading)

As illustrated in (105a), an IHRC is generally incompatible with an individual-level predicate, due to its temporal conditions. An LHRC reading, however, is fine with an individual-level predicate, so that (105b) is acceptable on such a reading. This suggests

⁹⁰ Stage-level predicates refer to roughly temporal states and individual-level predicates more or less permanent states or properties (Kratzer 1988; Diesing 1992a, 1992b; originally due to Carlson 1977).

⁹¹ It is important to note that a non-perception verb is used in (105). Otherwise, the contrast is not very clear.

that the bracketed part in (105b) should be thought to be base-generated rather than to involve movement.

We should note here that the use of the term PA for an LHRC is misleading for two reasons. One is that *Hiroshi* may be raised both in (102a) and (102b) but to different positions, and it is better to distinguish these two kinds of movement. The other reason is that this raising operation is not only for animate possessors as has been noted for PA. In fact, these cases are very similar to what we saw in 3.4.2., such as (166), repeated here as (106):

- (106) a. hon -no aka-i -no *pro* 'a/the book that is red'
 book-GEN red-NPT-GEN
- b. [Keiko-no sedan]-no kuro -i -no *pro* 'Keiko's sedan that is black'
 Keiko-GEN sedan-GEN black-NPT-GEN

Indeed, these examples are exactly like LHRCs in that they share the same interpretive and intonational characteristics that we have noted for LHRCs. If these two involve one and the same construction, we can plausibly say a few things about these phrases:

- (107) a. The first *no* in these phrases is a linker, and it is not part of the moved DP, so that what is 'raised' is just the 'possessor.'
- b. The construction contains a DP recursion structure, as in (108). The possessor may be base-generated, but there may be a gap that is coreferential with it inside the clause before the second *no* in that case.
- c. There is *pro* after the second *no*, which appears to be coreferential with the 'possessor,' which suggests that these are like appositive phrases.

- (108)
- $$\begin{array}{c}
 \text{DP} \\
 \wedge \\
 \text{DP} \wedge \\
 \text{no DP} \\
 \wedge \\
 \text{IP} \wedge \\
 \text{no } \textit{pro}
 \end{array}$$

4.3.3. *Ga-No* Conversion and Reanalysis

As noted, *ga-no* conversion is only possible in relative clauses. The reverse is not true, and not all relative clauses can have a *no*-marked phrase instead of a *ga*-marked one, but the impossibility of *ga-no* conversion appears to mean that the clause is taken to be more like an independent clause. In fact, the alternation is not found in some constructions, such as the so-called *no-da/no-desu* construction.

4.3.3.1. The Final Particle *No* and the *No-Da/No-Desu* Construction

The sentential nominalizer *no* and the copula *da* (informal)/*desu* (formal) constitute the so-called *no-da/no-desu* construction, as shown in (109):

- (109) Miyuki-wa ima hon -o yondeiru -no da.
 Miyuki-TOP now book-ACC is.reading-NOMN COP

‘It is (the case) that Miyuki is reading a book now.’

Since the copula *da/desu* can delete, *no* may occur literally at the end of a sentence and may be called a (sentence-)final particle:

- (110) Miyuki-wa ima hon -o yondeiru -no.
 Miyuki-TOP now book-ACC is.reading-FP

‘(It is) (the case) that Miyuki is reading a book now.’

(109) and (110)⁹² appear to be truth-conditionally the same as that for (111):

(111) Miyuki-wa ima hon -o yondeiru.
Miyuki-TOP now book-ACC is.reading

‘Miyuki is reading a book now.’

We will discuss some of the differences in meaning between (109)/(110) and (111) in Chapter 6, but the construction also poses a question about its syntactic structure, as the agent DP *Miyuki* appears to be outside of the *no*-clause in (109)/(110), so that they may be schematically represented as:⁹³

(112) DP-TOP [_{IP} ...]-no da.

The agent DP can be marked with *ga*, but it does not alternate with *no*:

(113) Miyuki-ga /*no ima hon -o yondeiru -no da.
Miyuki-NOM/GEN now book-ACC is.reading-NOMN COP

‘It is (the case) that **Miyuki** is reading a book now.’

In fact, as shown, the agent DP in (113) has a focused (‘exhaustive listing’) reading only. A focused *ga*-phrase has been generally assumed to be higher in position than a non-focused (‘neutral description’) *ga*-phrase, so that the DP *Miyuki(-ga)* may not be inside the *no*-clause, either (see Koike 1995b).⁹⁴ (113), therefore, may not constitute evidence that *ga-no* conversion is impossible in the *no-da/no-desu* construction.

However, consider (114):

(114) a. Sono hon -wa [ima Miyuki-ga yondeiru -no] da.
that book-TOP now Miyuki-NOM is.reading-NOMN COP

⁹² Both (109) and (110) can have a pronominal reading (‘Miyuki is [the one that is] reading a book now.’), which appears to be an equative copular reading.

⁹³ The topic phrase is generally assumed not to occur inside an embedded phrase.

⁹⁴ These two readings may be differentiated with regard to sentential intonation and stress (Koike 1995b).

‘As for that book, it is (the case) that Miyuki is reading it now.’

or ‘As for that book, it is the one that Miyuki is reading now.’

b. Sono hon -wa [ima Miyuki-no yondeiru -no] da.
that book-TOP now Miyuki-GEN is.reading-NOMN COP

‘As for that book, it is the one that Miyuki is reading now.’

As shown in (114b) with the object DP topicalized, *ga-no* conversion obviates a non-pronominal reading, which is available for (114a). This shows that *ga-no* conversion is indeed impossible in the *no-da/no-desu* construction. This appears to indicate that the *no*-clause is not a relative clause in the construction. In fact, it is possible to state that a sequence with a ‘formal noun’ and the copula like *no-da/no-desu* is an extended predicate. For us, this means that there is no *pro* in the *no*-clause in the construction. Such a structure is neither impossible nor incompatible with what we have discussed so far. The ‘relative’ may be base-generated as the complement of D (*no*), and then raises to its Spec position:⁹⁵

(115) DP
 \wedge
 IP_i D'
 \wedge
 no *t_i*

This is exactly like one of the structures we discussed with regard to DP adjectives (see 3.3.1.). We will not pursue this option, since the *pro* analysis appears to account for more data, as we will see in the following chapters.

There are other cases that are similar to what we have seen:

(116) a. Sono hon -wa [daigakusei -ga yom-u mono] da.
 that book-TOP college.student-NOM read-NPT thing COP

⁹⁵ We ignore the copula here, which should be a head in our framework.

‘As for that book, a college student is supposed to read it.’

or ‘As for that book, it is what a college student reads.’ (pronominal reading)

b. Sono hon -wa [daigakusei -no yom-u mono] da.
that book-TOP college.student-GEN read-NPT thing COP

‘As for that book, it is what a college student reads.’ (pronominal reading)

(117) Sono-hon-wa [ima Yumi-ga /*no yon -da tokoro] da.
that book-TOP now Yumi-NOM/GEN read-PST place COP

‘As for that book, Yumi finished reading it just now.’

(neither literal nor pronominal reading)

Mono ‘thing/person’ and *tokoro* ‘place’ are nouns that are also used as ‘formal nouns,’ as in (116) and (117). In these cases, we may want to say that they are Ds, so that the bracketed parts are not ‘real’ relative clauses and have the same structure as in (115). We saw this type of reanalysis (N-to-D type shifting) in the last chapter.

4.3.3.2. Other *No*-Clauses

There are two (conjunctive) postpositions that appear to contain *no*, *noni* ‘though’ and *node* ‘because’:

(118) a. Ame-ga/*no futteita -noni, jitensha-de yattokita.
rain-NOM/GEN was.falling-though bicycle-INST came.over

‘Though it was raining, (he/she/they) came over by bike.’

b. Ame-ga/*no futteita -node, basu-de kaetta.
rain-NOM/GEN was.falling-because bus -INST returned.home

‘Because it was raining, (I) went home by bus.’

Since there are independent postpositions, *ni* (dative, locative, direction, etc.) and *de* (locative, instrument, gerundive from of the copula *da*, etc.), these postpositions look like

they are made up of *no* and *ni* and *no* and *de*, respectively.⁹⁶ As shown in (118), however, the clause that precedes either of them is incompatible with *ga-no* conversion, so that these postpositions are either unanalyzable or reanalyzed as single postpositions, much like what we have just seen.

There is some evidence that these are indeed reanalyzed postpositions. They did not exist in OJ, so that they appear to be recent innovations (see Horie 1993). Since OJ did not have *no* after a clause, this is expected, if the *no* in these postpositions is the nominalizer *no*. Interestingly, the Toyama dialect, which has the pronominal and nominalizer *ga*, also contains *ga-ni* ‘though’ and *ga-de* ‘because’ (Masaru Inoue p.c.). If the nominalizer *ga* in this dialect corresponds to *no* in the Tokyo dialect, as we have argued, then, the *no* in *noni* and *node* is the nominalizer *no*.

There are also postpositions that are similar to *noni* and *node*, i.e., *ke(re)do(-mo)* and *kara*:

- (119) a. Ame-ga futteita -ke(re)do(mo), jitensha-de yattekita.
rain-NOM was.falling-though(-EMPH) bicycle-INST came.over

‘Though it was raining, (he/she/they) came over by bike.’

- b. Ame-ga futteita -kara, basu-de kaetta.
rain-NOM was.falling-because bus -INST returned.home

‘Because it was raining, (I) went home by bus.’

We have seen earlier that relative clauses, including *no*-clauses, resist politeness marking. It appears that *noni* is almost incompatible with *desu* and *masu*, both of which mark politeness, unlike *ke(re)do(-mo)*, which can easily occur with them. Also, *node* seems to be marked in politeness much less than *kara*. This may be partly due to the fact that *noni*

⁹⁶ Alfonso (1966: 547 [vol. 1]) states that *no-de* is the *te*-form of *no desu*, while Miyagawa and Nakamura (1991) note that *node* may consist of *no* and the postposition *de*.

and *node* are felt to be more formal than *ke(re)do(-mo)* and *kara*, but it may also mean that clauses marked by *noni* or *node* are like relative clauses, which makes it likely that *noni* and *node* consist of *no* and *ni*, and *no* and *de*, respectively.

At least in the case of *noni*, the reanalyzed postposition can be distinguished from the combination of *no* and *ni*, as shown by the ambiguity of sentences like (120):

- (120) Boku-wa [Mari-ga hon -o katteiru -no] -ni *pro* deatta.
 I -TOP Mari-NOM book-ACC is.buying-NOMN-DAT ran.into

‘I ran into Mari, as she was buying a book.’ (IHRC reading; preferred)

or ‘I ran into (her/him/etc.), though Mari was buying a book.’

Interestingly, we could still say that (120) includes a null object in the main clause, as the second translation (for the reanalyzed postposition *noni*) illustrates.

A similar example can be constructed for *no-de* as well:

- (121) Boku-wa [Mari-ga e kat -te kure-ta -no]-de sono wain-o ake-ta.
 I -TOP Mari-NOM buy-GER give-PST-PRN-INST that wine-ACC open-PST

‘I opened that (bottle of) wine, because Mari bought it (for me).’

(reanalyzed *node*)

or ‘I opened that (bottle of) wine with what Mari bought (for me).’

(*no* plus the instrumental *de*)

The bracketed *no*-clause in (121) contains a null object, which can be taken to be coreferential with the main-clause object or what the speaker opened the wine with (e.g., bottle opener).

It has been claimed that *ga-no* conversion can yield a less acceptable sentence as in (122b) below. Fujita (1988 cited in Miyagawa 1989: 103–4) argues that this is because the particle is in an adjunct rather than an argument.

- (122) a. Kodomo-ga waratta toki, tonari-no heya -ni ita.⁹⁷
 child -NOM laughed when/time next -GEN room in was

‘When the child laughed, I was in the next room.’

- b.?*Kodomo-no waratta toki, tonari-no heya-ni ita.

Note that the phrase *kodomo-ga/no waratta toki* ‘when the child laughed’ should be a relative clause with a head noun *toki* ‘time’ so that *ga-no* conversion should be possible, but according to Fujita it is not. To some speakers including us, (122b) is at least marginally acceptable, but the contrast still holds. It appears that the clause does not behave like other relative clauses with regard to *ga-no* conversion.

It is interesting to note, however, that this contrast almost disappears, when the head noun *toki* ‘time’ is followed by the postposition *ni*:

- (123) a. Kodomo-ga waratta toki -ni, tonari-no heya-ni ita.
 child -NOM laughed time-at next -GEN room in was

- b.?Kodomo-no waratta toki-ni, tonari-no heya-ni ita.
 child -GEN laughed time-at next -GEN room in was

This appears to show that *toki*-clause is becoming more and more like the main clause with a conjunction *toki*, rather than a relative clause. Temporal clauses behave somewhat differently from other subordinate clauses in many languages, and Japanese *toki*-clause is no exception. It can behave adverbially (as an adjunct) without a postposition, though *ni* can follow it as in (123). The relative clause reading is forced in (124) with the topic marker *wa*, in which *ga-no* conversion is possible:

- (124) a. Kodomo-ga waratta toki(-ni)-wa tonari-no heya-ni ita.
 child -NOM laughed time-at-TOP next -GEN room in was

‘As for the time when the child laughed, I was in the next room.’

⁹⁷ The transcriptions and glosses are ours.

- b. Kodomo-no waratta toki(-ni)-wa tonari-no heya-ni ita.
 child -GEN laughed time-at-TOP next -GEN room in was

This ambiguity between a noun (or a pronoun) and a conjunction/complementizer is not limited to Japanese. Marcel den Dikken (p.c.) notes that Dutch/German temporal adverbial clauses with “after” show similar patterns:⁹⁸

- (125) a. nadat Jan aankwam, vertrok Piet (Dutch)
 after-that Jan arrived left Piet
- b. nachdem Hans ankam, fuhr Peter ab (German)
 after-that(DAT) Hans arrived went Peter off

The German example (125b) is particularly interesting in that the *dem* in *nachdem* is in the dative (*nach* is a dative Case assigner), and can not be reduced (contracted onto the preposition), so that it is a relative pronoun.

4.4. Movement and Non-Movement Analyses

In this section, we will modify our analysis of relative clauses by adopting Kayne’s (1994b) raising analysis. This involves the idea that D can take a CP complement, which we note may also applies to main clauses.

4.4.1. A Raising Analysis of Relative Clauses

Murasugi (1991) takes the nominalizer *no* as a complementizer or C (and a relative as IP). Coupled with our assumption that Japanese is head-initial, relative clauses

⁹⁸ Similarly, in Middle English, *þat* ‘that,’ which developed from Old English (OE) *þæt*, (or *so* [OE *swā*] or *as* [OE *alswā*]), followed a conjunction or a preposition (Ono 1980: 125), as illustrated in the first line of the *The Canterbury Tales* (*General Prologue*, 1):

- (i) Whan that Aprille with his shoures soote
 when that April with its showers sweet

in Japanese may be taken as CPs and not DPs, as we have argued:

- (126) CP
 ^
 IP ^
 (no) NP/DP/*pro*

If this is correct, an LHRC does not constitute a case of DP recursion, as we have argued.

Since the first *no* in an LHRC does not appear to be a nominalizer but the genitive postposition, the structure for such a clause will be represented as the following:

- (127) DP
 ^
 DP ^
 no CP
 ^
 IP ^
 no *pro*

What is interesting about this structure is that D takes CP as a complement. Although we do not believe that this structure is correct for an LHRC, we have argued elsewhere (Koike 1994d/1997) that EHRCs in Japanese are DPs with CP complements,⁹⁹ following Kayne (1994b).¹⁰⁰

Kayne (1994b) adapts Vergnaud's (1974) raising/promotion analysis of relative clauses in French and claims that D takes CP as its complement and proposes a raising analysis of EHRCs in "head-final" languages. According to him, the head NP or QP¹⁰¹

⁹⁹ The fact that D can take a CP complement may mean that CP is not a verbal but a nominal projection (pace Grimshaw 1992).

¹⁰⁰ If D and C are essentially the same, as the parallelism between sentential and nominal structures may suggest (see e.g., Szabolcsi 1994), this can be seen as a case of CP recursion. Whether such an analysis is plausible for Japanese remains to be seen, but CP recursion does not seem to be as robust as DP recursion. We leave both issues for future research.

¹⁰¹ Kayne (1994a) specifically claims that a nominal phrase that is raised is NP or QP, and not DP (but see Kayne 1994b: 158fn26), but it can be DP (Koike 1994d/1997).

inside the IP moves to Spec, CP and then the relative (IP) with the trace of the moved NP/QP inside it raises to Spec, DP, yielding the following typical “head-final” EHRC, in which D is null in Japanese:

- (128)
- $$\begin{array}{l}
 \text{DP} \\
 \wedge \\
 \text{IP}_j \wedge \\
 \text{D CP} \\
 \wedge \\
 \text{NP/QP}_i \wedge \\
 \text{C } t_j (= [\text{IP} \dots t_i \dots]_j)
 \end{array}$$

This can also be illustrated with a Japanese example with its syntactic structure:

- (129) a. [Erika-ga kai -ta] [ni -satsu-no hon]¹⁰²
 Erika-NOM write-PST two-NC -GEN book

‘(the) two books that Erika wrote’

- b. [_{DP} [_{IP} Erika-ga t_i kai-ta]_j [_D \emptyset] [_{CP} [_{DP} ni-satsu-no hon]_i [[_C \emptyset] t_j]]]

The main difference between “head-initial” languages like English and “head-final” languages is that there is no raising of IP to Spec, DP (before SPELL-OUT) in the former.

If we follow Kayne’s analysis, (130) should have the structures in (131):

- (130) a. the two books that Bill wrote
 b. the two books which Bill wrote

- (131) a. [_{DP} [_D the] [_{CP} [_{QP} two books]_i [[_C that] [_{IP} Bill wrote t_i]]]]¹⁰³

Moreover, if our analysis in the last chapter is correct, there may not be QP in Japanese or in any other language for that matter.

¹⁰² We did not discuss the internal structure of DPs with a quantifier or a numeral-plus-nominal-classifier sequence in detail in Chapter 3, but we believe that it is not very different from other cases in any crucial way. Here, we take *ni-satsu-no hon* ‘(a set of) two books’ to be a DP with *no* as the head.

¹⁰³ Although Kayne appears to treat phrases like *two books* as QPs here, he is not explicit about their internal structure.

b. [_{DP} [_D the] [_{CP} [_{DP} two books_i [which *t_i]]_i [[_C \emptyset] [_{IP} Bill wrote *t_i]]]]]**

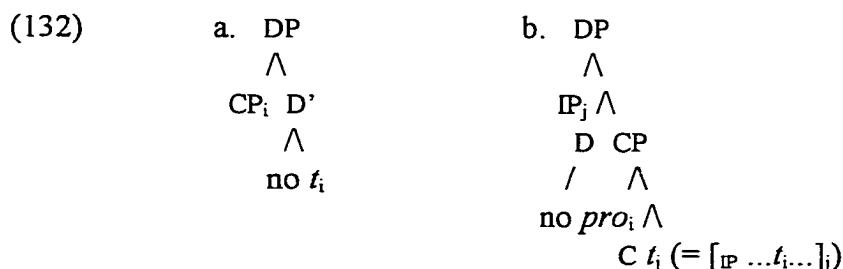
As noted in Koike (1994d/1997), this analysis faces two problems. One is that IP moves to Spec, DP with the trace of the moved head, which will not be bound, since the head is structurally lower than its trace. The other is that, if Spec, DP is an A' position,¹⁰⁴ Relativized Minimality (Rizzi 1990) would rule out the movement of IP, which skips another A' position, Spec, CP.¹⁰⁵ Our solution to these problem in Koike (1994d/1997) was to propose that this movement of IP occurs after SPELL-OUT, probably at PF, where traces need not be bound (not syntactically, at least) and Relativized Minimality is irrelevant.

Although this raising analysis may seem unnecessarily more complicated than our analysis presented earlier, it is attractive in that it can also account for the other two types of relative clauses, i.e., IHRCs and LHRCs with more or less the same structure and only leftward movement. All three types of relative clauses involve leftward PF movement of the proposition (CP/IP). In IHRCs, that is the only movement. What is raised can be CP or IP, and Japanese IHRCs do not provide any evidence for either option. At first glance, it may seem better to say that CP moves, as in (132a), but, if we want to maintain our claim that IHRCs and the EHRCs are structurally the same, maybe it is better to say that IP moves to Spec, CP. Even without Relativized Minimality, this raises a question as to why it skips Spec, CP, which should be the preferred landing site, so that the movement

¹⁰⁴ Spec, DP may (also) be an A position, since it may be a position for a base-generated topic (see 4.4.2.) and a base-generated semantic head of an LHRC.

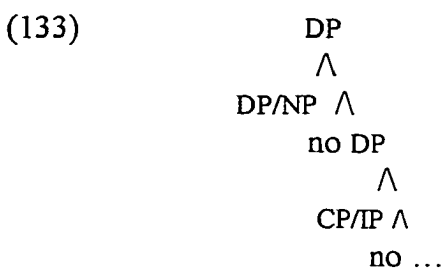
¹⁰⁵ Kayne (1994a) claims that C incorporates with D in some languages, which makes Spec, CP and Spec, DP equidistant for movement purposes (see Chomsky 1993). He states that this is not an option in a language like Japanese, which has an empty C (Kayne 1994a, 1994b).

will not violate economy principles, such as in the form of Minimal Link Condition. Short of stating that IP is base-generated in Spec, DP, we may claim that Spec, CP is occupied by *pro* by SPELL-OUT, as in (132b), so that IP may not move there, PF movement being likely to be sensitive to such facts.



In (132b), it is shown that *pro* has raised out of the IP, but it may be base-generated there. One might wonder if an empty category like *pro* can be moved, but this may be a NP/DP that is phonologically suppressed at PF. In this case, the interpretation should be that of the pronominal.

LHRCs are exactly like IHRCs in Koike (1994d/1997), except that it has an additional *no*-phrase (the semantic head and *no*) at the beginning. The semantic head may be base-generated in or moved to Spec, DP, as shown in (133):



In (133), the complement of the lower D is not specified. If the raising analysis that we have discussed is correct, this position is either occupied by the trace of CP that moved to Spec position of the lower DP, or CP with the trace of IP that moved there as its complement. Either way, it is phonologically null, so that (133) can not be distinguished

from base-generated iterated DPs, like (166) in 3.4.3.3, repeated here as (134), in which the adjectives like *aka-i* ‘(is) red’ and *kuro-i* ‘(is) black’ can now be thought to be clausal (at least IP):

- (134) a. hon -no aka-i -no *pro* ‘a/the book that is red’
 book-GEN red-NPT-GEN
- b. [Keiko-no sedan]-no kuro -i -no *pro* ‘Keiko’s sedan that is black’
 Keiko-GEN sedan-GEN black-NPT-GEN

Now, we can see that these phrases can be seen as LHRCs, as the translations indicate. This is supported by the fact that the adjectives used in these phrases are predicative, so that they may not have an autonomous reading, as we saw in 3.4.3.3.:

- (135) a.?*tomodachi-no furui-no ‘friend whose friendship is old’
 friend -GEN old -GEN (autonomous)
- b. kagu -no furui-no ‘furniture that is old’ (intersective)
 furniture-GEN old -GEN

We find exactly the same patterns with CNP-type relative clauses, which may be used as IHRCs in some cases:

- (136) a.?*tomodachi-ga furui-no ‘the (fact) that the friend is old’
 friend -NOM old -NOMN (autonomous)
- b. kagu -ga furui-no ‘the (fact) that the furniture is old’
 furniture-NOM old -NOMN

Recall that (135) can be thought to have the same interpretations as (136), since they can be *no*-clauses with *ga-no* conversion applied to them. Since D can take a CP complement, now we see the nominalizer *no* can be seen as a C: (135) and (136) could be thought to have the structure as in (137):

- (137)
- $$\begin{array}{l}
 \text{DP} \\
 \wedge \\
 \text{DP/NP } \wedge \\
 \text{ga/no CP} \\
 \wedge \\
 \text{IP } \wedge \\
 \text{no } \textit{pro}
 \end{array}$$

Although we do not endorse this analysis here, it is possible that *no* is reanalyzed into C this way. What is probably more interesting about this structure is that it appears that either the DP/NP in Spec, DP has moved out of IP or there is an empty position in IP that is coreferential with the DP/NP in Spec, DP. This may indeed be the case.

It has been often noted (e.g., Shibatani 1975) that *ga-no* conversion does not change the meaning of the relative clause. This may be true in many cases and for many people, but negation may induce a slight difference in meaning.

- (138) a. [tomodachi-no i -nai] otoko ‘a/the man who does not have any friends’
 friend -GEN be-NEG man
- b. [tomodachi-ga i -nai] otoko
 friend -NOM be-NEG man

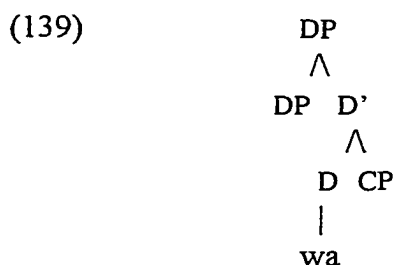
 ‘a/the man who does not have any friends (but may have acquaintances instead)’

This may be because a relative with *no* is generally felt to be more neutral than one with *ga*, which appears to have a focused (or ‘exhaustive listing’) reading. If a focused phrase is raised, (138b) can be argued to have a DP recursion structure like an LHRC, while (138a), which is supposed to represent an older form, may not.

4.4.2. Main Clauses as DPs

The structure that we have adopted in the last subsection is attractive in yet another way: we can say that the main clause is, at most à la Grimshaw (1991, 1992), DP

with a CP complement. The head of DP in the main clause may be the topic marker *wa*, which may be followed by a full clause, yielding a multiple subject construction. If structural Case-markers like *no*, *ga* and *o* are D heads, it is plausible to assume that *wa* is also a D head. It can also characterize what the sentence is about better than some feature in C, for instance. The main clause in Japanese can, therefore, have the following structure (see Kayne 1994b: 143fn3).



Positing another projection over CP is desirable in that we can now capture straightforward mapping relations between the syntactic structure and the semantic and pragmatic/discourse structures, which have been argued to have tripartite structures.¹⁰⁶

- (140) a. [_{DP} [_{CP} [_{IP}]]] (syntactic structure)
- b. [Operator [Restrictive Term [Nuclear Scope]]]
(semantic structure; see Heim 1982; Diesing 1992b)
- c. [TOPIC [FOCUS [COMMENT]]] (pragmatic/discourse structure; see Uechi 1996)¹⁰⁷

Since the structure is originally proposed for relative clauses, this proposal supports the parallelism between nominal phrases and sentential structures as well. This

¹⁰⁶ We can achieve this without positing a phrase like TopicP. We believe that such a node label is misleading, since that is a result of mixing syntax with other components of grammar. This is also true of node labels like ModP.

¹⁰⁷ If we plausibly define discourse as consisting of more than one sentence/utterance, this could not represent a discourse structure. This is going to be revised as a pragmatic (and informational) structure in 5.2.1.

is particularly an attractive proposal for Japanese, considering Kuno's (1973) classical observation that relativization and topicalization are alike in that what is relativized in a Japanese relative clause is a topic.¹⁰⁸ It has been argued that topicalization involves movement in some cases but not in others (Saito 1985), and our analysis shows that the same could be said about relativization.¹⁰⁹

An interesting aspect of the proposal is that *no* and *wa* are alike. *Wa* appears to behave as a linker, and much like *no*, it can also delete under certain conditions and seem to license complement deletion in some cases, such as in questions and suggestions (see Hinds 1980):

- (141) a. Yukiko-wa? 'What/How about Yukiko?'
 b. Tookyoo-wa? 'What/How about Tokyo?'

There is even an expression like the following:

- (142) [Tookyoo-wa Minato-ku -no Akasaka]-ni sun-de i-masu.
 Tokyo -TOP Minato-ward-GEN Akasaka-LOC live-GER be-POL

'(I) live in the Akasaka district in Minato Ward of Tokyo.'

*'As for Tokyo, '(I) live in the Akasaka district in Minato Ward.'

¹⁰⁸ Matsumoto (1991) notes that, though such an analysis explains more than a purely syntactic analysis can, it is still not sufficient.

¹⁰⁹ As noted earlier in a footnote, the Double *O* Constraint may rule out a sentence like (i):

- (i) *Kono hon_i-wa [Mary-ga John-o e_i yom-ase-ta].
 this book-TOP Mary-NOM John-ACC read-CAUS-PST
 'This book, Mary made John read it.'

This may indicate that topicalization *can* involve movement, even if the topic is not a PP (DP/NP with a postposition), because the reconstructed sentence (ii) is unavailable in the first place.

- (ii) *Mary-ga John-o kono hon -o yom-ase -ta.
 Mary-NOM John-ACC this book-ACC read-CAUS-PST
 'Mary made John read this book.'

As the bracketing and the translation show, this is not a case of topicalization.

The main clause in other languages may be DPs with CP complements at least in some case. As noted in footnote 57 in 3.3.3.1, some English speakers use sentences like (143a) instead of (143b) in speech.

(143) a. [The student that I met with yesterday] his parents came to see me today.

b. [The student that I met with yesterday]’s parents came to see me today.

Although we assumed that (143a) has a structure illustrated in (144a), it may be argued to be DP with *his* as its head and a CP complement (144b):

(144) a. [[A student that I saw yesterday] his parents] came to see me today.

b. [A student that I saw yesterday]_{[DP e [D' his parents]]} came to see me today.

Though this may not be a case of topicalization in a usual sense, it appears to be a case of existential closure and possibly one of possessor ascension. As shown in (144b), *his* may be a linker but it does not link the two sentences, so that we could posit an empty linker between them (see 5.4.3. for some discussion of empty Spec positions).

Sentences like (145) are also similar to those like (143a) and are very common in speech.

(145) [My sister] she has been very nice to me all this time.

The sentence seems to be paratactic, much like (149):

(146) That guy just walked out the store, he reminds me of the photo in the post-office window. (Hopper and Traugott 1993: 173)

In the sense that *that guy just walked out the store* functions like the “context/background” for the whole sentence, this is like a topic construction (see 5.4.3.), in which *he* appears to function as a linker.

Another language may be Dutch, in which “topicalization” does not seem to involve a linker (Zwart 1993: 254).

- (147) Jan, mag ik niet. ‘John I don’t like.’¹¹⁰
John may I not

Dutch, however, has a construction called “contrastive dislocation” (Zwart 1993: 255):

- (148) a. Jan, die mag ik niet. ‘John, I don’t like.’
John that may I not
- b. Jan, die z’n ouders ken ik niet. ‘John, I don’t know his parents.’
John that his parents know I not

In these example, *die*, which is most likely D, appears to be functioning like a linker.

This line of analysis may be interesting in that it sheds light on the status of the dative in some constructions. Consider (149):

- (149) a. Sono gakkoo-ni -wa toshokan-ga futa-tsu ar -u.
that school -DAT-TOP library -NOM two-NC exist-NPT
‘That/The school has two libraries.’
- b. Fuyumi-ni -wa oya -ga moo i -na -i.
Fuyumi-DAT-TOP parent-NOM already exist-NEG-NPT
‘Fuyumi no longer has her parents.’

These are typical existential constructions in Japanese, in which the dative *ni*, which also marks locative, much like in other languages, occur before *wa*. Interestingly, either *ni* or *wa* (but not both) can delete in these constructions, as schematically shown in (150):¹¹¹

- (150) a. DP-wa CP.
b. DP-ni CP.

¹¹⁰ Marcel den Dikken (p.c.) notes that there should not be a comma in this construction, since it does not have a pause, unlike in contrastive dislocation.

¹¹¹ This deletion can cause temporal ambiguity in sentence processing (see Koike 1991a).

Although existential constructions are very similar to possessive constructions in many languages, Japanese possessive phrases exhibit a different pattern:

- (151) a. sono gakkoo(*-ni) -no toshokan
 that school -DAT-GEN library
 ‘that/the school’s library/libraries’
- b. Fuyumi(*-ni) -no oya
 Fuyumi -DAT-GEN parent
 ‘Fuyumi’s parents’

As shown in (152), the dative *ni* may not occur before *no*:

- (152) a. DP-no(*-ni) NP/DP¹¹²
 b. *DP-ni-no NP/DP

Since *no* can follow other postpositions, it is plausible to assume that a *ni-no* sequence is filtered out at PF. (153) shows that this constraint opens up the possibility for other postpositions to occur in place of *ni* in nominal phrases:

- (153) a. Hiroshi-*to/??e/ni denwa-shi-ta. ‘(I) called up Hiroshi.’
 Hiroshi-with/to/DAT phone-do-PST
- b. Hiroshi-to /e /*ni-no denwa ‘a phone conversation with Hiroshi’
 Hiroshi-with/DIR/ to-GEN phone

Our claim that the dative postposition occurs inside the genitive phrase is supported by the following example from Walloon (Kayne 1994b: 160fn43):

- (154) C’è d-à mîne. ‘It is mine.’
 it.is of-to mine

As noted earlier, *ni* is not only a dative postposition but also a locative postposition. It is interesting to note that the OJ genitive marker, *t(s)u*, which is no longer in use except in frozen, lexicalized phrases, had a locative use as well (Martin 1987: 367).

¹¹² A *no-ni* sequence is of course possible but not in this context.

symmetrical, supporting our linker analysis.

Alfonso (1966: 1149, 1151 [vol.2]) notes that this construction generally has the form, *A(-da)-no B(-da)-no*:

(159) [Kitana-i -da -no kusa -i -da -no]-tte monku -bakari it -ta.
dirty -NPT-COP-FP smelly-NPT-COP-FP -QUOT complaint-only say-PST

‘(He/She/They) only complained, saying (it/they) was/were dirty, smelly, etc.’

This is probably the only case (at least for younger speakers), in which the predicative form of the copula *da* can precede *no*. Since it is preceded by a copula, this *no* can be taken as a final particle (see 6.1.). It may also be the only case in the Tokyo dialect, in which the predicative form of *da* can follow the predicative form of an adjective. These two facts strongly point to the conclusion that the construction with *da* is a highly idiomatic and formulaic expression, like that with *tsu*.¹¹⁵ In fact, *da-no* is listed as a chunk in some dictionaries.

Appositive constructions of the same or a similar type are quite common in Japanese especially with so-called ‘focus’ particles or emphatic particles like *mo*:

(160) [Benkyoo-suru-no -mo shi-na -i -no -mo] kimi-no jiyuu sa.
study -do -NOMN-EMPH do -NEG-NPT-NOMN-EMPH you-GEN freedom FP

‘Whether you study or not is up to you.’ (Maynard 1990: 339)

An appositive construction is also possible with *wa*, supporting the claim that *wa* and *no* are very similar:

¹¹⁵ The construction with *da* appears to be only possible in a ‘real’ quotative clause, unlike that without it.

- (161) [Atama-wa ita -i -wa nodo -wa kawa -ku -wa](-de) taihen-datta.¹¹⁶
 head -TOP sore-NPT-TOP throat-TOP get.dry-NPT-TOP -cop was.terrible

‘*lit.* The head hurting and the throat getting dry, it was terrible.’

‘What with a headache and a dry throat, it was terrible.’

This *wa* is unlike the topic marker *wa* in that the clause before it is not nominalized with *no* or another ‘formal noun’ like *koto* ‘fact.’. In this sense, it is like the final particle *wa*. However, it is sometimes written like the topic marker *wa*. *Wa* as a topic marker or a contrastive postposition is exceptional in that ignoring kanji or Chinese characters, it is one of the few cases in which the phonetic form and the written form do not match in Japanese: it is written with the kana for /ha/ and not /wa/. The final particle *wa*, on the other hand, is always written with that for /wa/, as expected. Thus, this *wa* appears to be taken to be the same as the topic marker *wa* at least by some speakers.

4.5. Summary

In this chapter, we have extended our analysis of *no* as a linker to nominalizer uses in relative clauses and similar constructions. Like the pronominal *no*, the nominalizer *no* is the head of DP with *pro* as its complement. Here, the two ways to identify *pro* that we proposed in 3.2.2. can differentiate the two uses. When there is a possible (discourse) antecedent and the complement *pro* is taken as the semantic head of the whole phrase, *no* is perceived as a pronominal. When there is no (discourse) antecedent, it is regarded as a nominalizer and its antecedent is conventionally determined. This analysis uniformly accounts for all kinds of *no*-clauses.

¹¹⁶ It is probably most natural to take this optional *-de* as a gerundive form of the copula *da* rather than a postposition marking instrumental, locative, etc., so that the whole phrase can be thought of as an adverbial clause like an *o*-marked IHRC.

CHAPTER V

FUNCTIONS OF *NO*-MARKED PHRASES/CLAUSES

No appears to be semantically empty, i.e., have no literal or referential meaning. If all linguistic forms are “meaningful,” there should be no meaningless fillers: even (seemingly) semantically empty elements are not completely arbitrary sequences of sounds and they have other functions.¹ We have seen so far that *no* has syntactic significance. This chapter focuses on its pragmatic and other local functions, while its discourse and global functions will be examined in the next chapter. More specifically, we will note that *no* functions as a presupposition-marker and discuss its other functions as a linker in this chapter. A very important point to be made in this chapter is that the purely syntactic analyses that we offered earlier are not sufficient for our case at hand, and possibly for any other case for that matter, so that our analyses so far will be modified in this chapter.

5.1. *No* as a Presupposition-Marker and *Pro*

In this section, we show that *no* uniformly serves as a presupposition-marker. Similar particles in other languages have also been argued to be presupposition-markers: Bendix (p.c.) identified *gu* in Newari as a presupposition marker at first, while Chu (1987) argues that Chinese *de* is a particle of presupposition. This is compatible with our claim that there is only one single lexical entry for *no*.

¹ Even hesitations noises are not arbitrarily chosen and have discourse functions (see Maynard 1989: 30-32).

5.1.1. The *No-Da/No-Desu* Construction and *No*-Clauses

Consider the contrast between (1a), which involves the *no-da/no-desu* construction, and (1b):²

- (1) a. [Doko-e it -ta]-n(o) desu ka?
 where-to go-PST-NOMN COP.POL Q

‘(lit. Is it [the case] that [you] went where?) Where did (you) go?’

- b. #Doko-e iki-mashi-ta ka? ‘Where did (you) go?’
 where-to go-POL -PST Q

(1a) is natural, while (1b) is felt to be at least somewhat unnatural. (1b), however, is frequently heard in Japanese language classrooms and in foreigner talk, so that it must be syntactically and semantically well-formed. We have claimed elsewhere (Koike 1994a, 1994b) that (1b) is infelicitous (marked by #) due to a lack of presupposition-marking (see Kuroda 1973). Consequently, it is ruled out in the pragmatic module. This appears to be correct, since, in order to ask “Where did you go?”, the speaker should be at least confident that the addressee³ went somewhere: such a proposition must be presupposed.⁴ If the speaker is not sure, he/she is likely to establish such a fact by asking the addressee, for example, before posing such a question, so that (1a) is odd, if it is asked totally out of the blue; instead of answering the question, the addressee might say “How do you know that I went somewhere?” or “I didn’t go anywhere.”

² *No* is very often reduced to *n* in the *no-da/no-desu* construction.

³ We avoid the term ‘hearer’ because we believe in speaker-oriented pragmatic views. The term invites the assumption that the hearer exists independently in a discourse model, while the term “addressee” suggests that there is a person that the speaker is addressing him-/herself to.

⁴ See below for our definition of presupposition.

To show that it is actually presupposition that we are dealing with, we can negate (1a) as in (2a), which will not alter the presupposition. On the other hand, (2b), the negative counterpart of (2a) is still unnatural.

- (2) a. [[Doko-e it -ta] -n ja nai] -n desu ka?
 where-to go-PST-NOMN COP+WA NEG NOMN COP.POL Q

‘*lit.* Isn’t it that (you) went where?’

‘Where isn’t it that (you) went?’ or ‘Where didn’t (you) go?’

- b. #Doko -e iki-mas-en deshi -ta ka? ‘*lit.* Didn’t (you) go where?’
 where-to go-POL-NEG COP.POL-PST Q

(2a) may seem too periphrastic, since it involves a doubly nested *no-da/no-desu* construction, while (3) may be uttered instead in the same situation.

- (3) [Doko-e ik-anakat-ta]-no desu ka?
 where-to go-NEG -PST-NOMN COP.POL Q

‘(*lit.* Is it that [you] did not go where?) Where is it that (you) didn’t go?’

There is, however, a subtle but clear difference between (2a) and (3) with regard to what the speaker demonstrates that he/she presupposes: in (3), the presupposition is that the addressee did not go anywhere.

The mildness of the unacceptability of (1b) may be expected, because pragmatic violations are often considered to be less serious than syntactic or semantic ones. This is also the case under our Relativized Modularity Hypothesis, as we noted in 2.3. Still, one might wonder why a sentence like (1b) is used at all.⁵ It is important to note that

⁵ While one may argue that the use of infelicitous sentences like (1b) in language classroom is just misguided, such a use may be related to its use in foreigner talk. It is clear that sentences like (1b) tend to be shorter than those like (1a), but the length is probably not a main factor. (Neither is the structural complexity.) What is more plausibly the case is that a native speaker feels that a pragmatic violation of this sort is not serious enough for a non-native speaker to worry about.

sentences like (1b) may be used in other cases as well, since a clear pragmatic violation often has its own functions (Koike 1994a, 1994b). Consider (4), plain/informal counterparts of (1):

- (4) a. [Doko-e it -ta] -no? ‘Where did (you) go?’
 where-to go-PST-NOMN/FP
- b. #Doko-e it-ta?
 where-to go-PST

Note that (4b) may be used in some limited cases; with a confrontational or reproachful tone, it may be used as a rhetorical question. (1b) is probably not usable because of the clash between this confrontational tone in a polite register marked by *desu*.

The contrast is not limited to *wh*-questions, and may be found in yes-no questions as well. Consider (5):

- (5) a. Kesa -wa [nani-ka tabe-ru]-n(o) desu ka?
 this.morning-TOP something eat -NPT-NOMN COP.POL Q
- ‘Are (you) going to eat something this morning?’
- b. Kesa -wa nani-ka tabe-mas-u ka?
 this.morning-TOP something eat -POL-NPT Q

Both (5a) and (5b) are fine, but they are not used in the same way. (5a) may most likely be used, for example, when the speaker knows that the addressee does not normally have breakfast but sees him/her cooking in the morning. In contrast, (5b) is a rather straightforward question for seeking information.

Assuming that the copula *desu* marks assertion (see Reynolds cited in McGloin 1986), which can not be questioned (see Stalnaker 1978), we can say that *no* functions as a presupposition-marker in (1a) (and in other examples). In the last chapter, we argued that all *no*-clauses are headed by *no* and that its complement is *pro*. We contend that this

pro is responsible for this presupposition effect.

We take presupposition to be a property of a proposition that the speaker is (expected to be) committed to support. This follows from our assumption that the idea of addressee has very little to do with the notion of presupposition, much like the idea of mutual knowledge can only be discussed in terms of what the speaker assumes to be shared with the addressee: what the addressee really knows is irrelevant. Our claim that the presupposition effect that we have seen is due to *pro* is largely based on the fact that presupposed propositions and pronominals have common characteristics. Probably the most important one is that they must have an entity to refer to. This entity may be (i) a discourse entity, an entity introduced in the current discourse, or (ii) part of the so-called shared/background knowledge, a proposition or an entity that the speaker assumes that the addressee knows. In the latter case, the speaker may be assuming wrong: the addressee may not know the content of the proposition. In some instances, the speaker may even be aware of the fact that the addressee (probably) does not know that the content of the proposition in question, in which case, an utterance that contains such a presupposed proposition has specific uses, some of which we will discuss in Chapter 6.

In the *no-da/no-desu* construction, *pro* has an antecedent outside of the discourse. This antecedent can be translated as ‘the case’ in English, both in questions like (1a) and in declarative utterances like (6):

- (6) [Kyooto-e it -ta] -n desu. ‘It is (the case) that (I) went to Kyoto.’
Kyoto -to go-PST-NOMN COP.POL

We argued in Chapter 4 that *no*-clauses, including IHRCs, are relative clauses and not nominalized sentences with no semantic heads. This may be the reason that they tend to

be factive. A so-called factive verb in Japanese (e.g., *stop*, *regret*, *realize* in English) generally takes a *no*-clause as its complement.

- (7) *Watashi-wa* *kyonen* [*tabako -o* *suu -no*] *-o* *yame-mashi-ta*.
 I -TOP last.year tobacco-ACC suck-NOMN-ACC quit -POL -PST

‘I quit smoking (tobacco) last year.’

(7) presupposes that the speaker once smoked, and the *no*-clause is factive. Although not very clear in this particular case, sentences with factive complements often look paratactic, as in the IHRC cases that we saw in the last chapter. This is clear in a cleft construction. Interestingly, (1a) can be expressed as a cleft question:⁶

- (8) [*Anata-ga* *it -ta*]-*no* *-wa* *doko* *desu* *ka?*
 you -NOM go-PST-NOMN-TOP where COP.POL Q

‘*lit.* As for the place that you went, is it where?’

‘Where was the place that you went?’ or ‘Where was it that you went?’

In (8), the bracketed part is clearly presupposed and factive.

No-clauses are similar to free relatives in languages like English. It is well known that pseudo-clefts or *wh*-clefts, which contain free relatives, sound strange without prior context in English (see Prince 1981):

- (9) [Customer opening service-encounter]

?What my friend bought here was a beautiful scarf.

⁶ Japanese is generally considered to be a prime example of a language without clearly observable syntactic *wh*-movement, but *wh*-phrases can actually be displaced on the surface to the right as in cleft questions or to the left as in scrambling. A cleft question like (8) is in fact very common in Japanese, and a non-cleft question like (1a) is only possible with a focal stress on the *wh*-word. In (i), the underlined *wh*-phrase occurs on the left of the main-clause topic phrase, so that it can be considered to be scrambled out of the *no*-clause.

- (i) *Doko -e* *anata-wa* [*it -ta*]-*n(o)* *desu* *ka?* ‘Where did you go?’
 where-to you -TOP go-PST-NOMN COP Q

This is easily accounted for, if we assume that a free relative is indeed a relative clause and is presupposed. But there are cases in which *wh*-clefts are used without previous discourse:

(10) [Professor beginning first lecture of term]

What we're going to look at this semester is the world's indifference to the Boat People.

(10), however, is not an exception, since we can say that the underlined subject is presupposed, as we expect that both the professor and the students know that they will be looking at something that semester.

One might note that the effect that we have seen is due to the fact that the subject or the topic tends to be salient (in discourse) and given (with regard to its information status). Sentences like (11) is odd, when the proposition in the subject is not presupposed (e.g., there have been reports that Carter might resign any time).

(11) [Newscaster opening evening news]

?That Carter will resign tonight has just come over the wire.

However, *what*-clauses are not always presupposed. The *what*-clauses in (12), for example, are not presupposed: in (12a) it is not necessarily the case that the addressee is going to buy the speaker something (The speaker can add, for instance, "if you are thinking of buying me something for my birthday" at the beginning of the sentence), while the addressee may not want anything particularly at the time of utterance in the case of (12b). Moreover, in (12a), the speaker does not know what the addressee will buy, and in (12b) the speaker may not know what it is that the addressee wants the most.

(12) a. Whatever you will buy for me is fine.

b. I will give you for your birthday what you want the most right now.

In (12a), the *ever* appears to be partly responsible for this non-factive, non-specific interpretation, while in (12b) the free relative is the direct object.

It is very interesting to note that the Japanese translations of these sentences do not involve a *no*-clause. (13) is a Japanese translation of (12a) and contains a relative clause with *mono* ‘thing’ as its (semantic) head.

(13) [Kimi-ga kat -te kure-ru] mono-nara nan -de -mo i -i.
 you -NOM buy-GER give-NPT thing-COND what-COP-EMPH good-NPT

‘Whatever you (will) buy for (me) is/will be fine (with me).’ (pronominal reading)

or ‘If you (will) ever buy (anything) for me, anything will be fine (with me).’

(nominalizer reading)⁷

As shown, (13) is ambiguous between the intended and preferred pronominal reading and a nominalizer reading. If we replace *mono* with *no*, as in (14), we only get a nominalizer reading.

(14) [Kimi-ga kat -te kure-ru] no -nara nan -de -mo i -i.
 you -NOM buy-GER give-NPT-NOMN-COND what-COP-EMPH good-NPT

‘If you ever buy (something) for (me), anything will be fine (with me).’

(nominalizer reading)

As illustrated in (15), a Japanese translation of (12b) is fine with both *mono* and *no*, but there is a difference, which is not clear in the translation. *Mono* does not necessarily specify the object that addressee wants the most, while the use of *no* presupposes that the speaker knows what it is.

⁷ On this nominalizer reading, the speaker’s expectation for the addressee to buy anything for the speaker is much lower than on the pronominal reading. A better translation for this reading may be ‘If it so happens that you buy me any thing (at all), anything will be fine (with me).’

- (15) [Kimi-ga ima ichiban hoshi -i] mono/no-o tanjoobi-ni age -ru yo.
 you -NOM now No.1 desirous-NPT thing/PRN-ACC birthday-on give-NPT FP

‘(I) will give you what you want the most now for your birthday.’

This pattern is not surprising, if our claim is correct that the pronominal reading of *no* obtains when it has a possible discourse antecedent. It may also account for the preference for the pronominal *no* to have a concrete reference (see 3.2.2.).

Our discussion so far may also be relevant to some cases in which *no* appears to be optional, such as in (16):

- (16) Takashi-wa [doo shi-tara i -i] (-no)-ka wakar -ana-i.
 Takashi-TOP how do-COND good-NPT-NOMN-Q understand-NEG-NPST

‘Takashi doesn’t know what to do.’

In (16), the bracketed part in the *no*-clause looks biclausal and it can be translated as ‘it will be good if (he) does what.’ As it has a modal meaning, however, we could think of the conditional *-tara* plus the main predicate *ii* ‘good’ as a reanalyzed extended predicate. In fact, (16) can be expressed with a modal auxiliary-like nominal adjective *beki-na/da* ‘should/ought to,’ as in (17).

- (17) a. Takashi-wa [[doo su -beki -na] -no -ka] wakar -ana-i.
 Takashi-TOP how do-should-COP-NOMN-Q understand-NEG-NPT

‘Takashi doesn’t know what he should do.’

- b. Takashi-wa [doo su -beki -ka] wakar -ana-i.⁸
 Takashi-TOP how do-should-Q understand-NEG-NPT

‘Takashi doesn’t know what he should do.’

What is interesting about these modal clauses is that they have presupposed and non-presupposed readings: one in which there is something Takashi can do and the other

⁸ The copular part of *beki-da/na* deletes before *ka*, much like other nominal adjectives, as we saw in 4.1.1.

in which he does not. The presupposed reading involves *no*: when the clause refers to a specific eventuality, it must be marked with *no*, as it is factive.

- (18) Takashi-wa [Erika-ga kinoo doko -ni it-ta]#(-no) -ka shir -ana-i.
Takashi-TOP Erika-NOM yesterday where-to go-PST -NOMN-Q know-NEG-NPST

‘Takashi does not know where Erika went yesterday.’

(19) shows that the event time does not matter, as long as it is clear that the eventuality is clearly specific: the speaker knows that Erika is going somewhere tomorrow.

- (19) Takashi-wa [Erika-ga ashita doko -ni ik -u]#(-no) -ka shir -ana-i.
Takashi-TOP Erika-NOM tomorrow where-to go-NPT-NOMN-Q know-NEG-NPST

‘Takashi does not know where Erika is going tomorrow.’

The same or a similar pattern is observed elsewhere. According to den Besten (1978), a literal translation of (20), which is substandard in English, is a normal way to express comparatives in Dutch.

- (20) John is smarter than what Bill is.

Japanese is similar to Dutch in this sense, but *no* appears to be optional (see Ishii 1993):

- (21) Erika-wa [Yumi-ga hashiru(-no)] -yori hayaku hashiru.
Erika-TOP Yumi-NOM run -NOMN-than fast run

‘*lit.* Erika runs faster than what Yumi runs.’

- (22) Erika-wa [Yumi-ga hashiru(-no)] -yori hayaku hashir-eru.
Erika-TOP Yumi-NOM run -NOMN-than fast run-can

‘*lit.* Erika can run faster than what Yumi runs.’

We can see that the presupposition effect is found here as well, since when it is clear that the eventuality mentioned has actually happened, *no* is obligatory:

- (23) Erika-wa [Yumi-ga hashiru#(-no)] -yori hayaku arui -ta.
Erika-TOP Yumi-NOM run -NOMN-than fast walk-PST

'lit. Erika ran faster than what Yumi runs/ran.'

5.1.2. A Kind/Type Reading and Accommodation

We have argued that *no* in a *no*-clause functions as a presupposition-marker. This can be attributed to *pro* as the complement of *no* (with or without a discourse antecedent). This can be extended to *no*-phrases like (24a), which corresponds to a genitive phrase as in (24b):

- (24) a. Keiko-no *pro* 'Keiko's'
Keiko-GEN
- b. Keiko-no kuruma/hon /yume 'Keiko's car/book/dream'
Keiko-GEN car /book/dream

However, some *no*-phrases on certain interpretations are awkward. As we saw in 3.3.1., some adjectival genitives on certain interpretations are incompatible with null complements:

- (25) a. kuro-no *pro* 'black one/kind'
- b. tada-no *pro* '*mere/?free one'
- c. ??ame-no *pro* 'rainy one'

Most lexical items before *no*, except for *tada* in the sense of 'mere' and the like, can occur before a predicative copula, exhibiting their rather morphologically free status:

- (26) a. Sono booshi-wa kuro dat-ta. 'The hat was black.'
that hat -TOP black COP-PST
- b. Sono booshi-wa tada dat-ta. 'The hat was *mere/free.'
that hat -TOP free/mere COP-PST
- c. Sono yoru -wa ame dat-ta. 'The night was rainy.'
that night-TOP rain COP-PST

In 3.3.1., we accounted for these cases by assuming that there are two kinds of adjectival genitives. One kind is exemplified by *kuro-no* ‘black,’ which is not a constituent but an NP *kuro* ‘black’ in Spec, DP and *no* as the head of DP. Since *no* is the overt head of DP, it licenses complement deletion. Moreover, *kuro* is an NP, so that it can co-occur with the predicative copula, as in (26a). *Tada-no* in the sense of ‘free’ belongs to this group. *Ame-no* ‘rainy,’ an example of the other type, is an incorporated DP modifier that occurs in Spec, DP. Since an overt *no* as the head of DP does not co-occur with it, it does not license complement deletion. *Ame* ‘rain’ is also a full-fledged noun and NP, so that it can appear before the copula, as in (26c), which literally means ‘As for the night, it (= the weather) was rain(y).’⁹ *Tada-no* in the sense of ‘mere’ is an example of this latter type. This analysis can account for almost all the patterns with a simple stipulation that there are incorporated DPs headed by *no*, which is independently needed, but there are a few problems with this analysis.

One obvious problem is that the judgment for each *no*-phrase is not just either good or bad, as our account would predict. There are four levels of acceptability for the *no*-phrases in (25): unacceptable (*), two question marks, one question mark and acceptable. This suggests that, even if our analysis is correct, there is more than what we have proposed at work.

Another problem is the status of the head D *no* with an incorporated DP. In the Tokyo dialect, two *nos* do not seem to occur contiguously.¹⁰ One could say that when

⁹ As we saw in 3.3.1., *ame-no* can have another reading, ‘of rain,’ such as in *ame-no oto* ‘the sound of rain,’ in which case *no* is the head.

¹⁰ The only apparent exception is the pronominal/nominalizer *no* followed by the genitive *no*, but since there is *pro* after the pronominal/nominalizer *no*, the two *nos* are not really contiguous, so that this is not an exception.

there are two *nos*, the head *no* can be deleted. If this deletion of the head *no*, which is in all likelihood mainly phonologically conditioned, rules out complement deletion in the Tokyo dialect, complement deletion should be possible in the Toyama and Kochi dialects, since they have the pronominal *ga* (see 3.1.2., 3.2.4. and 3.3.4.).¹¹ This prediction is not borne out:

- (27) a. *tada-no ga (pro)* ‘*mere/?free one’ (the Toyama/Kochi dialects)
 b. *ame-no ga (pro)* ‘rainy one’ (the Toyama/Kochi dialects)

The patterns in (27) are exactly the same as in the Tokyo dialect. This does not necessarily mean that our syntactic analysis was wrong, but it could not be complete.

We argue that these patterns have to do with how easy it is to accommodate a presuppositional reading for a *no*-phrase, or how easy it is to think of the antecedent for *pro*. An acceptable *no*-phrase like *Keiko-no* ‘Keiko’s’ does not only mean that there is something that belongs to Keiko but also implies that the same kind of things belong to other people as well. In this sense, presupposition can imply contrast. The use of an adjectival genitive like *kuro-no* ‘black (one/kind)’ implies that there are other referents of the same kind that are not black but of different colors. On such a reading, what is presupposed is that there is an pre-established classification based on the color of the object in question, and this is why *kuro-no* can mean ‘black kind.’ Let us name this reading a kind¹² or type reading, which could also be called a category reading. On this reading, the antecedent of *pro* is non-specific, since what is presupposed is that there is a kind of things that fits the description. In (28), for example, the bracketed part is

¹¹ Here, it does not matter whether *ga* is a D head or a pronominal as its complement.

¹² This is reminiscent of the term “kind” in the semantics literature (see Carlson 1977).

ambiguous between a kind reading and a non-kind reading. On the kind reading, the speaker may not have any particular pens in mind, except that they are black or have black ink, and the *pro* is non-specific, while on the non-kind reading, the speaker has particular pens in mind.¹³ In this sense, a non-kind reading could be called a token reading. What does not change is the presupposition that there are pens that belong to the ‘black’ category.

(28) Pen-wa [kuro -no *pro*]-o kudasai
 pen-TOP black-GEN -ACC give.IMP.POL

‘As for pens, please give me (one/some of the) black ones.’

With color terms like *kuro* ‘black,’ a kind reading is easy to get, while it is not so easy or quite difficult with *tada-no* in the sense of ‘free’ and the weather terms like *ame* ‘rain.’ This may have more to do with conventionalization than accommodation, because a classification based on the weather is probably not as common as one based on the color. Conventionalization is a general, global process for a speech community, while accommodation is an individual, local process for each situation. Conventionalization with regard to linguistic forms include lexicalization and grammaticalization, which affect the pragmatic module, while accommodation is largely a discourse phenomenon. Since conventionalization can be seen as the process for an ‘automatic’ accommodation, we could say that these two cases are due to accommodation.

The case of *tada-no* in the sense of ‘mere’ is a little different. Like *mere* and the autonomous *old* in English as well as similar adjectives in other languages, this *tada-no*

¹³ The distinction here is not that of definiteness, if we plausibly define the term with uniqueness and identifiability of the referent. The bracketed part allows for a partitive interpretation on both a kind reading and a non-kind reading.

needs a full overt nominal phrase that they can modify.¹⁴ This restriction, which is probably more semantic than syntactic, may not be overridden by a pragmatic process like accommodation.¹⁵

(29) summarizes the discussion so far:

- (29) a. *kuro-no pro* ‘black one/kind’ (easy to accommodate)
 b. *tada-no pro* ‘*mere/?free one’ (impossible/hard to accommodate)
 c. *ame-no pro* ‘rainy one’ (very hard to accommodate)

Our pragmatically oriented account can also explain the following contrast:

- (30) a. *?tsukue-no pro* ‘one of the desk’ (not very easy to accommodate)¹⁶
 desk -GEN
 b. *tsukue-no ue -no pro* ‘one on the desk’ (much easier to accommodate)
 desk -GEN top-GEN

It is important to note that a kind reading is not limited to the pronominal *no*; the bracketed part in (31), for example, can have both a kind reading and a non-kind reading.

- (31) Sono booshi-wa [*kuro -i -no*] dat-ta. ‘The hat was a black one/kind.’
 that hat -TOP black-NPT-GEN COP-PST

This gives us the following minimal pair:

- (32) a. *kuro -no pro* ‘black one/kind’
 black-GEN

¹⁴ This may mean that our syntactic account above may not be necessary for this case, since this *tada-no* must have the same syntactic status as the homophonous modifier in the Toyama and Kochi dialects. In 6.3.2., we will propose that this *tada-no* may be modal, much like the autonomous *old* in English.

¹⁵ We often seem to encounter a misguided comment that what is pragmatic should be able to make anything syntactically ill-formed or semantically anomalous felicitous and therefore usable in actual context. In fact, exactly the opposite appears to be the case, as this case at hand, which supports our Relativized Modularity Hypothesis.

¹⁶ The locative *ni* may not co-occur with *no* (see 4.4.2.), so that (a) may have a locative reading among other readings.

- b. *kuro -i -no pro* ‘black one/kind’
 black-NPT-GEN

(32a) and (32b) may appear synonymous, except that the former does not have a tense element, but there is an important difference between the two. In (32a), *kuro* ‘black’ is one of the presupposed (i.e., pre-established) color categories, while the *kuro-i* ‘is/are black’ in (32b) simply describes the color of an object. To see this contrast more clearly, consider (33), which includes two versions of an opening utterance by a customer:

- (33) *Nooto -ga kai -tai -n desu -kedo,*
 notebook-NOM buy-want-NOMN COP.POL-but

‘(I)’d like to buy a notebook, but’

- a. [*kuro -no pro*]-*wa ari -mas-u ka?* ‘do you have one in black?’
 black-GEN -TOP exist-POL -NPT Q

- b. [*kuro -i -no pro*]-*wa ari -mas-u ka?* ‘do you have a black one?’
 black-NPT-GEN -TOP exist-POL -NPT Q

(33a) is only felicitously used when the speaker assumes that there are notebooks that are in black, which may not exist. These notebooks only need to be considered ‘black’ (most likely by a manufacturer in this case), so that they could be dark gray or only partially black. Such notebooks may not please the customer who utters (33b), since here the color black is used descriptively, according to the speaker’s assessment.

This contrast is maintained, when the complement of *no* is overt:

- (34) a. *kuro -no sedan*
 black-GEN sedan

‘black sedan (one of the sedans and one of the black ones at that)’

- b. *kuro -i (*-no) sedan* ‘black sedan (a sedan which happens to be black)’
 black-NPT sedan

(34a) presupposes that the one of the colors available for sedans is black, so that it could

not be felicitously used, for instance, if there are no black sedans but the speaker paints one black.

This presupposition account can explain why the phrase in (34) is awkward.

- (35) ?aka-no hon ‘red book’
 red-GEN book

(35) is a little odd, because it is not very common to classify books according to their color, although it is not totally unheard of. The compound in (36) refers to a group of books with a red cover that contain past college entrance exam questions (and their answers).

- (36) aka-bon < aka-no hon ‘red book’
 red-GEN book

We argued in 3.3.2. that compounds that exhibit SV contain a reduced *no*. Now we can see why they tend to have a contrastive and/or kind reading, as illustrated in (58) in 3.3.2., repeated here as (37), and (38):

- (37) a. ama-gasa < ame -no kasa ‘umbrella’
 rain-GEN shade
 b. hi-gasa < hi -no kasa ‘parasol’
 sun-GEN shade
- (38) a. ama-gaki < ama + kaki ‘sweet (kind of) persimmon’
 sweet persimmon
 b. shibu-gaki < shibu + kaki ‘astringent (kind of) persimmon’
 astringent

The phonetic form of *no* may matter, as a contrastive reading is easier to get for (39a) than for (39b):

- (39) a. kawa -no kutsu b. kawa-gutsu ‘leather shoe(s)’
 leather-GEN shoe

If this is not totally due to the fact that (39b) is a compound, we could say that phonetic forms and pragmatic representations go together. This is expected, if pragmatic representations are crucial at PF.¹⁷

The distinction that we have seen above is clearer in the case of wine, since everyone knows that there are basically only three colors of wine: red, white and rosé.

- (40) a. aka-no wain ‘red wine’¹⁸
 red-GEN wine
- b. aka-i wain ‘red wine, wine that is red’
 red-NPT wine

Even though (40a) and (40b) can both be translated as ‘red wine,’ (40b) only describes the color of the wine in question and not the kind. If there is red wine that is very light in color, one might not use (40b) to refer to it, while (40a) would be fine. On the other hand, if there is rosé wine that is very dark in color, one might use (40b) but (40a) could not be used.¹⁹

An even clearer contrast is found in cases in which there should be no contrast:

- (41) a. *shiro -no yuki ‘white snow’
 white-GEN SNOW

¹⁷ This raises a very important issues with regard to the relationship between suprasegmental phonology and pragmatics/discourse. Some have argued for an independent level of linguistic representations (see e.g., Erteschik-Shir 1993; Vallduví 1992).

¹⁸ The compound *aka-wain* has the same interpretation as (42a) and not (42b).

¹⁹ Because white wine is not really white in color, (ia) is possible, while (ib) is not.

- (i) a. shiro -no wain ‘white wine’
 white-GEN wine
- b. *shiro -i wain ‘white wine’
 white-NPT wine

- b. shiro -i yuki ‘white snow’
 white-NPT snow

Since snow is inherently (considered) white, (41a) is impossible, while (41b) with a nonrestrictive relative is fine.²⁰

It should be noted that there are color terms that do not occur with an adjectival ending like *-i* and obligatorily require *no*, such as *midori* ‘green’ and *murasaki* ‘purple.’ The contrast that we have seen still holds in these cases, because there is another set of expressions that involve the morpheme *iro* ‘color,’ which appears to be able to weaken the presupposition. The contrast, however, may not be as clear, since both phrases can have a kind reading but a non-kind reading is only available to phrases with *iro*.

- (42) a. midori-iro -no kuupe ‘green coupe’
 green-color-GEN coupe
 b. midori-no kuupe ‘green (kind of) coupe’
- (43) a. murasaki-iro-no doresu ‘purple dress’
 purple-color-GEN dress
 b. murasaki-no doresu ‘purple (kind of) dress’

There is a notable exception to this set of exceptions. *Ki-iro* ‘yellow (color)’ occurs with *no*, but does not have a non-kind interpretation.²¹ This is not an exception to the whole generalization, because there is an adjective *ki-iro-i* ‘yellow-colored’ that represents a non-kind interpretation.²²

²⁰ Except in those artificial situations in which, say, snow is dyed in different colors. Note that such a situation involves a contrast.

²¹ As Bill McClure notes, this discussion also applies to *cha-iro-no* (tea + color + GEN) and *ch-iro-i* (tea + color + NPT), both of which mean ‘brown.’

²² As if this were not complicated enough, there is another complication. When phrases do not contain inherently color terms, a purely presupposed version may not exist.

- (44) a. ki -iro -no kaban 'yellow (kind of) bag'
 yellow-color-GEN bag
 b. ki-iro-i kaban 'yellow bag'

In sum, a phrase with *no* always has a kind or presupposed reading, although a morpheme like *iro* 'color' may be able to cancel the presupposition. Therefore, we can say that *no* serves as a presupposition-marker.

5.1.3. Referentiality and Presupposition

Most of the examples with *no* in the last subsection were adjectival genitives. An adjectival genitive has a non-referential NP before *no*, unlike possessive genitives, which includes an animate possessor. As we have seen, a possessive genitive may imply contrast, but a kind reading may not be easy to get:

- (45) a. Keiko-no *pro* 'Keiko's'
 Keiko-GEN
 b. Keiko-no hon 'Keiko's book'
 Keiko-GEN book

This may have to do with how a personal name is generally used. It is usually used to denote a unique specific (discourse) referent. Recall, however, that in 3.2.2. we noted Murasugi's (1991) observation that a kind reading is possible for an animate possessor (e.g., *Hanako's* 'Hanako's kind of thing' or 'a kind of thing that Hanako would do'). This reading seems adjectival in that it does not specifically refer to the 'possessor' but only picks out some characteristics that he/she has. As we noted elsewhere (Koike 1995a, 1995c), theme readings of genitives are often very similar to adjectival readings:

-
- (i) a. nezumi-iro -no seetaa 'gray sweater'
 mouse-color-GEN sweater
 b. ?nezumi-no seetaa 'gray (kind of) sweater' (OK in shoptalk)

- (46) a. neko-no hon
 cat book
 ‘a/the cat’s book(s)’ (POSS)
 ‘book(s) (written) by (a/the) cat(s)’ (AGENT)
 or ‘book(s) on/about (the) cats’ (THEME)
- b. Hiroko-no hon
 ‘Hiroko’s book(s)’ (POSS)
 ‘book(s) (written) by Hiroko’ (AGENT)
 or ‘book(s) on/about Hiroko’ (THEME)
- c. Sheekusupia-no hon
 Shakespeare
 ‘Shakespeare’s book(s)’ (POSS)
 ‘book(s) by Shakespeare’ (AGENT)
 or ‘book(s) on/about Shakespeare’ (THEME)

A careful examination of the relationships among kind, adjectival and theme readings is beyond the scope of the current work, but it appears that on a theme reading an animate possessor does not have to refer to a specific individual in the discourse. In spite of the uniqueness presupposition that comes with a personal name, (46b) could denote a book about some women named Hiroko.

Personal names are also considered to be generally definite, which may be one of the major reasons that a kind reading is difficult to obtain with them. A reading similar to a kind reading, however, is not impossible with a definite possessor. Consider English genitive phrases like (47), which are ambiguous:

- (47) [the president]’s secretary

On one reading, (47) denotes the secretary who works for a specific (most likely the current) president. On the other reading, it refers to a job title, or anybody who works for the president at any given time. We call the latter a functional reading. In (48a), the phrase is ambiguous, while in (48b) a functional reading appears to be preferred.

- (48) a. Only the president's secretary has the key.
 b. The president's secretary may not resign when the president is on vacation.

This shows that, although the phrase *the president* is definite, it does not have to refer to one particular president. Consider the Japanese translation of (48):²³

- (49) shachoo -no hisho 'the president's secretary'
 president-GEN secretary

(49) is ambiguous in the same way (47) is. This ambiguity, however, disappears, when the possessor includes a demonstrative:

- (50) [kono shachoo]-no hisho 'this president's secretary'
 this president-GEN secretary

(50) does not have a functional reading, since the demonstrative points to a specific president in the current discourse or the context at hand.²⁴

It should be noted that in this particular case there is uniqueness presupposition for the definite expression at any given time, but the referent for the expression can vary across time on a functional reading. Interestingly, a similar case is found in an LHRC:

²³ One might want to state that *the* on this reading is an expletive. If it is an expletive, it is not surprising that the possessor appears as a bare NP in Japanese.

²⁴ The discussion so far is reminiscent of the distinction that Donnellan (1966, 1978) made between referential and attributive uses of definite nominal phrases, such as the underlined phrase in (i) (see also Cole 1978; Searle 1979):

- (i) Smith's murderer is insane.

- (51) Akiko-wa [Takeshi-no obore -te i -ru -no] -o tasuke-ta.
 Akiko-TOP Takeshi-GEN drown-GER be-NPT-NOMN-ACC save -PST

‘Akiko saved Takeshi, who was drowning.’

‘Akiko saved Takeshi, when he was drowning.’

or ‘Akiko saved a Takeshi, (the) one who was drowning.’

On an LHRC reading, (51) can have a reading on which there are two or more men named Takeshi. This reading appears to be like a functional reading but is strongly dispreferred, mainly due to the uniqueness presupposition that a personal name carries. A more natural reading, however, on which there is only one man named Takeshi, can be taken as a functional reading, since Akiko saved a particular Takeshi at a particular time and in a particular situation, the one who was drowning.²⁵

The brief discussion so far does not warrant that a kind reading and a functional reading are the same, but it is clear that they are very similar. One obvious similarity is that on both readings, the phrase before *no* has a set of possible referents but the actual denotation in the extra-linguistic world is not specified. If this and possibly other similarities between the two readings are due to the presupposition-marking function of *no*, we should see its effect even with phrases that are ambiguous between referential and non-referential readings, such as (numeral) quantifier phrases. This is indeed the case.

What we call a (numeral) quantifier phrase is a sequence of a numeral and a noun classifier. For example, (52a), the original title of one of Akira Kurosawa’s masterpieces, includes a quantifier phrase, *shichi-nin* ‘seven-NC/seven people’:

- (52) a. [Shichi-nin]-no samurai b. The Seven Samurai
 seven -NC -GEN samurai

²⁵ An LHRC can have a temporally independent reading as well (see 4.2.2.1.).

As those who have seen the movie know, (52a) refers to a group of seven samurai and not any seven samurai.²⁶ Since the speaker treats them as a group, we could say that *shichi-nin* is presupposed.²⁷ This may also mean that the whole phrase is presupposed, which the English title (52b) expresses with the definite article, although the contrast between (52a) and (52b) is not that of definiteness.

Interestingly, a quantifier phrase does not always have a group interpretation, when it occurs after *no*:

- (53) a. samurai-no shichi-nin
samurai-GEN seven-NC

‘seven of the samurai’ (partitive)

‘seven (people out of those who are) samurai’

or ‘the seven, who are samurai’ (appositive)

(53) is three-way ambiguous. If the quantifier phrase is taken as non-referential, we get a partitive reading.²⁸ (53) also allows for a kind or a functional reading of *samurai*. If the

²⁶ It appears that this reading is not very strong in some cases. It may be that a genitive like *shichi-nin-no* ‘seven-NC-GEN’ is being reanalyzed into what is like a pseudo-partitive (see 3.3.3.1.). Another possibility is that this pragmatic effect is not very strong for some speakers, because it is being lost or not all uses of *no* are found in some dialects.

²⁷ This reading is not necessarily the same as a collective reading, depending on how the latter is defined. The crucial point is that the speaker sees the referents as a group, so in (i), for example, the seven samurai may not have come all at once. See also the preceding footnote.

- (i) [[Shichi-nin]-no samurai]-ga ki -ta. ‘Seven samurai came.’
seven -NC -GEN samurai-NOM come-PST

²⁸ This reading may be difficult to get for (54) (see Kawashima 1993), but when the DP/NP before *no* is clearly specific or definite, it is easy to obtain:

- (i) [[Soko-ni i -ta samurai]-no shichi-nin]-wa roonin dat-ta.
there-LOC be-PST samurai-GEN seven -NC -TOP unemployed.samurai COP-PST
‘Seven of the samurai who were there were unemployed.’

quantifier phrase is specific or definite, it has an appositive reading. There is also a reading which is like a combination of the two: *samurai* on a kind/functional reading and the quantifier phrase taken as non-referential. An important point here is that the quantifier phrase does not necessarily have a group reading in (53). As noted in 3.4.2., a quantifier phrase is found in many positions, but a group (i.e., presupposed) reading is only possible before *no*. Moreover, without *no*, we only get a kind reading:

(54) *samurai*__ *shichi-nin*
samurai seven-NC

‘seven (people out of those who are) samurai’

This supports our claim that *no* functions a presupposition-marker.

5.2. Functions of Linking

We have noted that *no* functions as a presupposition-marker. In the case of *no*-phrases/clauses, we can attribute this to the existence of *pro* in the complement position, which presupposes the existence of its referent and indicates that the whole phrase is a genitive phrase or a relative clause. What comes before *no* also seems to be presupposed, so that *no* may be a presupposition-marker in another sense. This may be because Spec, DP (and the Spec position of other functionally categories) is a preferred position for a presupposed phrase in Japanese (see Koike 1994b), as we will see. The complement position does not appear to have such a preference, so that there is asymmetry between the Spec and complement positions. This is a natural consequence of our analysis, in which *no* is a linker head of a head-initial DP. In this section, we will examine the relationship between two maximal projections that are linked by *no*.

5.2.1. The Nature of Spec Positions

As we have just noted, what comes before *no* may almost always be presupposed, because Spec, DP is a preferred position for a presupposed phrase. This may be the case with other Ds. In 4.4.2., we noted that the topic marker *wa* can be seen as a linker D head. If this is correct, the Spec position of *wa* contains a topic. Like a ‘possessor,’ a topic is generally definite and anaphoric, so that it is presupposed. An apparent counter example comes from a generic sentence:

- (55) *Kujira-wa* honyuu -doobutsu desu. ‘A whale is a mammal.’
 whale -TOP mammalian-animal COP.POL

This, however, is not an exception. The *kujira* ‘whale’ in (54) does not refer to any particular animal but to a kind, which is presupposed to exist. This kind reading is exactly like a kind reading for genitives, so that the topic in a generic sentence is also presupposed. Thus, it appears that what comes before the topic marker *wa* is always presupposed. It is interesting to note that *wa* is also a marker of contrast. Since presupposition implies contrast, as we have noted, what comes before the contrastive *wa* must be presupposed. It is, therefore, plausible to assume that the Spec position of DP headed by *wa* or *no* is a (preferred) position for a presupposed phrase.

A presupposed phrase can be base-generated in Spec, DP, or moved into it later in the derivation. In Koike (1994d/1997), we argued that IHRCs, EHRCs and LHRCs all involve leftward movement. In IHRCs and LHRCs, CP (or IP) moves to Spec, DP, while in EHRCs, the head NP/QP (or DP) moves to Spec, CP and then IP moves to Spec, DP. We used the following condition proposed by Leffel (1991) to motivate especially the

movement of propositions (IPs/CPs) at PF:

(56) If a (functional) phrase is specific, its Spec is filled.

This condition is satisfied if (i) a Spec position contains a (base-generated) [+ SPECIFIC] feature, or (ii) a specific phrase is base-generated in or moved into it.

This condition is attractive in that it may apply to other languages. In mainland Scandinavian languages, for example, the definite article appears postnominally as an enclitic, as in the Norwegian cases we saw in 3.3.3.1. Since definite nominal phrases are typically specific, this pattern can be easily derived, if we assume that a specific NP moves up to Spec, DP (at PF) in these languages.²⁹

In Koike (1994d/1997), we assumed that presupposed phrases are specific, so that this condition can motivate movement of a presupposed phrase. We have seen, however, that presupposed phrases can be non-specific as well, although in some cases a specific reading is overwhelmingly preferred, as in the following example from Koike (1994b):

(57) [aru shoojo]-no hon 'a certain girl's book' (specific reading only)
 exist girl -GEN book

It is important to note that a non-specific presupposed phrase still refers to a particular entity or proposition, so that we could modify our definition of specificity and apply the condition to all presupposed phrases.

In Koike (1994d/1997), we also discussed two discourse-oriented sets of notions to divide an utterance into two parts, with regard to movement of a specific phrase. One of them is a topic-comment or old-new information bifurcation and the other is a

²⁹ As Marcel den Dikken (p.c.) points out, the complement of such an NP does not seem to raise. This may have to do with the nature of D or a particular item to be inserted there in these languages (e.g., being a non-phrasal clitic), but we leave this issue for future research.

foreground-background contrast.³⁰ In fact, we called the movement of a specific phrase a backgrounding device. Since subordinate clauses tend to be backgrounded,³¹ it is natural to think that a relative clause is also backgrounded (see Givón 1987). This can be done by moving a backgrounded clause to a prenominal position in Japanese. This can also apply to other phrases, which derives the uniformly “head-final” order in the language.

As for the former contrast, presupposition tends to be marked as old information in discourse, and this fits nicely with the use of *wa* as a topic marker, as we have noted. In the case of EHRCs, however, it is widely assumed that they involve a focus-presupposition order like cleft constructions and *wh*-questions (see Givón 1979: 217).³² This may mean that a relative (IP) in an EHRC represents new information. Obviously, this goes against our claim that it is presupposed and backgrounded.

We argue, however, that this assumption is not (always) correct. This is because nothing in an EHRC may represent new information in a strict sense. In other words, what is focused may contain presupposed phrases. In Koike (1994d/1997), we argue that IHRCs, EHRCs and LHRCs all share the same underlying representation, so that the whole clause is presupposed. When a relative clause is the focus of the sentence, what is focused does not have to be the relative. It can be the head NP/DP. Consider the following exchange, for example:

³⁰ We take a foreground-background contrast to be one that has to do with salience from the point of view of the speaker, as he/she presents an utterance to the addressee. Foregrounded items are obviously a more important part of the message for the speaker and are presented more saliently than backgrounded items. Clearly, this idea is closely related to the idea of focus.

³¹ Even in hypotactic constructions, subordinate clauses may be foregrounded (see 5.1.1.).

³² The term “presupposition” here is different from our use of the term, and we feel that it is closer to the term “old information.”

(58) A: *Paatii-ni-wa dare-ga ki -mashi-ta ka?* ‘Who came to the party?’
 party -to-TOP who-NOM come-POL -PST Q

B: [Ken-ga eran -da kashu]-ga ki -mashi-ta.
 Ken-NOM choose-PST singer-NOM come-POL -PST

‘A/The singer that Ken had chosen came.’

The part of the answer to a *wh*-question that corresponds to the *wh*-phrase is generally considered to be the focus of the sentence. In (58), therefore, the bracketed part, i.e., the relative clause, is the focus of the sentence under most linguists’ analyses. It contains a relative (the underlined part) and the semantic head *kashu* ‘singer.’ Is there a difference between the relative and the semantic head with regard to their information status? It is important to note that Japanese relatives allow for both restrictive and non-restrictive readings. On the restrictive reading, the relative is contrastive, so that Speaker B assumes that Speaker A is aware that a singer may have come to the party. In this sense, the relative is more informationally crucial and it is more focal than the semantic head. Moreover, Speaker B must be confident that Speaker A knows that Ken chose a singer. In this sense, the relative is presupposed. On the non-restrictive reading, however, Speaker B does not think that Speaker A anticipates ‘a singer’ as a possible answer. The semantic head is the main part of the answer and is more focal in this case. The non-restrictive relative adds more information, and it may be helpful in determining the person that Speaker B refers to but it may not. The relative may be new information for Speaker A, but it is still backgrounded.

The same problem is also found for cleft constructions and *wh*-questions. For instance, the so-called *it*-clefts in English are generally considered strange without prior context, as in (59a), while (59b), which does not involve a cleft construction, is not.

(59) a. [Customer opening service-encounter]

?It was a beautiful scarf that my friend bought here.

b. [Newscaster opening evening news]

It has just come over the wire that Carter will resign tonight.

The *that*-clause in (59a) appears to represent old information, while that in (59b) does not. In fact, the *that*-clause in (59b) represents new information: this is a presentational construction (see Lambrecht 1988a; see also 6.1.1.). It is indeed possible to argue that the main clause is presupposed in (59b), since the event depicted is a likely one given the situation.

Although dividing an utterance into two parts is useful in many cases, it is not sufficient for many others. *Wh*-questions in Japanese may constitute a case that belongs to the latter group. As noted earlier in footnote 6 in 5.1.1., Japanese does not have syntactic *wh*-movement that is observable on the surface, but *wh*-phrases tend to occur near the beginning or the end of the sentence. Since *wh*-phrases are focused, we could say that such word order is created by movement. Recall that, in 4.4.2., we noted a tripartite pragmatic/discourse structure:

(60) [TOPIC [FOCUS [COMMENT]]]

Some examples to illustrate this follow:

(61) a. [Sono kurasu-wa [dare -ga [tot -te iru no]]]?
that class -TOP who-NOM take-GER be FP

‘As for that class, who is taking it?’

b. [Kimi-wa [nani-ga [hoshi -i no]]]? ‘What do you want?’
you -TOP what-NOM desirous-NPT FP

- c. [Kimi-wa [nani -o [kat -ta no]? ‘What did you buy?’
 you -TOP what-ACC buy-PST FP

(60) also applies to *wh*-cleft constructions, which we have seen, in which the “comment” part of the sentence is empty. It is important to note here that in (60), the “comment” does not refer to new information, but together with topic refers to old information. This shows clearly that a bifurcation is insufficient. Vallduví (1992: 46 and *inter alia*) instead proposes a tripartite information structure.³³ According to him, a sentence is made up of “focus” and “ground,” and ground elements are optional and comprised of “link” and “tail.” The link is a topic-like element and occurs in sentence-initial position.³⁴ (60) can now be represented as (62):

(62) [LINK [FOCUS [TAIL]]]

It is important to note that we do not mean to say that (62) is the only possible structure for a sentence, since that is clearly incorrect. Focus elements can appear in many positions and they do not have to appear right after the link. This is also true with *wh*-phrases in Japanese, which can stay in-situ. In such cases, however, focused elements normally get a focal stress, while no special stress or intonation is needed for (62), since it is a preferred, unmarked structure. This is also compatible with the idea that PF operations are stylistic and optional, and include both suprasegmental and pragmatic types.

To illustrate this point, let us consider some examples. Kroch (1989 cited in Vallduví 1992: 23) argues that long *wh*-extraction from ‘non-referential’ adjuncts, which

³³ For Vallduví, studying information structures is part of pragmatics, so this can be seen as a pragmatic structure of a sentence.

³⁴ The term is related to linker under our definition.

is argued to be ungrammatical (see Cinque 1990; Rizzi 1990), as in (63), is not ungrammatical at all.

(63) (*)How much money was John wondering whether to pay?

It is, however, awkward (pragmatically infelicitous) because the existential claim presupposed by the sentence is possible but very odd, which renders it unusable under most actual-world circumstances. This is what Vallduví (1992) calls actual-world infelicity. A literal counterpart of this sentence is slightly awkward in Japanese:

(64) ??Ken-wa [ikura harau-beki-ka doo-ka] mayot-te i-ta no?
Ken-TOP how.much pay-should-Q how-Q wonder-GER be-PST FP

‘How much was Ken wondering whether he should pay?’

The acceptability of (64) improves, when the *wh*-word *ikura* ‘how much’ receives a focal stress, as we just noted above. More importantly, there is a much more natural way of asking the same question:

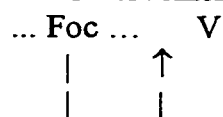
(65) [Ken-ga harau-beki-ka doo-ka mayot-te i-ta] -no-wa ikura dat-ta no?
Ken-NOM pay -should-Q how-Q wonder-GER be-PST-NO-TOP how.much COP-PST FP

‘How much was it that Ken was wondering whether he should pay?’

In (65), the ‘whether’-clause is marked as presupposed and is topicalized, which yields a topic-focus order. In this particular case, (64) and (65) are highly unlikely to be related by any movement, but in some cases and/or in some languages, a topic-focus configuration may be achieved by topicalization (topic raising) and focus raising.

It is important to note that this line of analyses may lead to a new and more adequate analysis of some phenomenon. In Koike (1994d/1997), we briefly noted and dismissed the following rightward focus movement in Turkish, which is schematized in (66) and exemplified in (67) (George and Kornfilt 1981):

(66) Focus Movement



(67) a. ??**Yazár** viski -yi iç -ti. b. Viski-yi **yazár** iç-ti.
 author whisky-ACC drink-PST

‘The author drank the whisky.’

In this construction, a focused constituent, which is in bold type in (67a) and (67b), receives an ‘unmarked’ primary sentence stress (not contrastive stress). The immediately preverbal position is a preferred position for indefinite nominal phrases in verb-final languages (Kim 1988; see Whitman 1991), as shown in the following Turkish examples from Kornfilt (1991):

(68) a. Ahmet gazete -yi oku -yor.
 Ahmet newspaper-ACC read-PRES.PROG

‘Ahmet is reading the newspaper.’

b. Ahmet (bir) gazete oku -yor.
 Ahmet a newspaper read-PRES.PROG

‘Ahmet is reading a newspaper.’

(69) a. Gazete -yi Ahmet oku -yor.
 newspaper-ACC Ahmet read-PRES.PROG

‘It is **Ahmet** who is reading the newspaper.’

b. *(Bir) gazete Ahmet oku -yor.
 a newspaper Ahmet read-PRES.PROG

Intended reading: ‘It is **Ahmet** who is reading a newspaper.’

As (69) shows, only a specific object can be scrambled in Turkish. If we are correct so far, however, (67b) and (69a) may not involve a simple case of object scrambling, since other phrases may appear (along with the direct object) in the sentence-initial position.

The focused constituent and the verbal complex may move to Spec, CP and C, respectively, and (the specific) IP moves to Spec, DP, which we called interclausal scrambling in Koike (1994d/1997). This is similar to what we have proposed for Japanese EHRCs.³⁵ Japanese is different from Turkish and many other verb-final languages in that it has a focus particle *ga*, as well as the topic marker *wa*, which are absent in Turkish. This is probably why the sentence-initial subject may not receive a focused interpretation in Turkish.

5.2.2. The Copula *No* and the Referent Particle *No*

If our claim that some functional categories are linkers is correct, one would expect the specifier and the complement of such a functional category to bear a special relationship with each other. This is natural, considering the similarity between the idea of “linker” and that of “conjunction.” It is well known that a conjunction like English *and* imposes special constraints on what can precede and follow it.³⁶ In this subsection, we will show that it is non-syntactic factors, such as referentiality, that influence the distributions and extractability of some items that are linked.

Bloch (1970: 61-62n45) claims that there are two genitive *nos*: referent particle (RP) *no*, and copula (CP) *no*, the latter of which has allomorphs, *da* and *na* (*ibid.*: 33).

³⁵ George and Kornfilt (1981) also discuss Toppling in Turkish, which is an operation to move presupposition to the right of the verb. We noted in Koike (1994d/1997) that this may be an exception to what we have seen, but it appears similar to a cleft construction and may be base-generated as such.

³⁶ In many cases, *and* conjoins two phrases of the same (syntactic) type, but obviously that is not necessary. See Progovac (1998a, 1998b) and references therein. We reserve a thorough examination of conjunctions, especially with regard to the notion of ‘linker,’ for future research.

He claims that (70) is ambiguous.

(70) *isha-no oji*³⁷
M.D.-GEN uncle

‘the/a (medical) doctor’s uncle’ (RP *no*)

‘(my) uncle(,) who is a (medical) doctor’ (CP *no*)

By now, it may be clear that the ambiguity of (70) is mainly due to that of *isha* ‘(medical) doctor’ as a referential and non-referential NP. Indeed, no copula reading is available after a referential nominal phrase (71):

(71) [sono *isha*]-no oji ‘that (medical) doctor’s uncle’ (RP *no*)’
that M.D.-GEN uncle BUT ‘*(my) uncle(,) who is that (medical) doctor’ (CP *no*)

This is true even when the preceding nominal phrase is only weakly referential.

(72) [*isha-tachi*]-no oji(-*tachi*)
M.D.-PL -GEN uncle(-PL)

‘the (medical) doctors’ uncle(s)’ (RP *no*)

‘*(my) uncle(s)(,) who is/are (medical) doctors’ (CP *no*)

The morpheme *-tachi* is not a bona fide plural marker and it merely presupposes the existence of plural entities (usually human, but also others by extension); the phrase *isha-tachi* in (72) is ambiguous, and it can refer to two or more doctors, or a specific doctor and other people who are somehow associated with him/her. In the former case, the phrase does not have to be specific or definite, though it tends to be, and in the latter it need not be specific except for the doctor.

It is also the case that a referential reading is difficult with a non-relational head noun:

³⁷ It should be noted that the word *oji* is relational, while *oji-san* with *san* ‘Mr./Mrs./Miss’ is both relational and non-relational (meaning ‘middle-aged man’).

- (73) kookoosei -no shoojo ‘??the/a high school student’s girl’ (RP *no*)
 high.school.student-GEN girl ‘girl_(,) who is a high school student’ (CP *no*)

This is most likely because a relational noun requires a possessor, and what is in Spec, DP (*no*) is most likely to be taken as one (see Koike 1995a).

These facts strongly suggest that Bloch’s claim is incorrect; it is possible to argue that these are semantic restrictions imposed upon the two *nos*, but it is difficult to see why the CP *no* is incompatible with a referential nominal phrase or why the RP *no* does not appear with a non-relational head, without resorting to explanations that are similar to ours.

It should be noted that what we have called referentiality is not specificity, although the two terms are often used interchangeably (e.g., Givón 1984: 387-435). Unlike Bloch’s claim, our analysis is compatible with *no* followed by a quantifier phrase, as in (74):

- (75) a. oji -no san -nin ‘three of the(/my) uncles’ (RP *no*)
 uncle-GEN three-NC or ‘three_(,) who are (my) uncles’ (CP *no*)
- b. [kono oji] -no san -nin ‘three of these uncles’ (RP *no*)³⁸
 this uncle-GEN three-NC BUT *‘(the) three_(,) who are these uncles’ (CP *no*)

Since a quantifier phrase can be referential and *oji* ‘uncle’ is a relational noun, a referential reading is also available for (76):

- (77) san -nin-no oji ‘the three (people)’s uncle’ (RP *no*)
 three-NC-GEN uncle or *‘uncles that are the three’ (CP *no*)

Our analysis is further supported by the fact that in Korean the genitive

³⁸ This reading is somewhat difficult to get, since there is another bracketing that is more likely as a first parse:

- (i) b. kono [oji] -no san -nin] ‘these three of the(/my) uncles’ (RP *no*)
 this uncle-GEN three-NC’ or ‘these three_(,) who are (my) uncles’ (CP *no*)

postposition *-uy* has no copula reading, as it may not be used where the so-called copula *no* would be used. Instead, what is used is the relativizer *-in* (Ogoshi 1989). This seems to mean that *-uy* is neither a linker nor the head of the whole DP, as suggested by Koike (1995d/1996), based on the absence of NP deletion in Korean and its presence in Japanese. If we accept the claim that *no* is related to the copula *da*, which may or may not be historically correct (see Hendriks 1992, 1994), the difference between Japanese and Korean is not as great as it may seem at first glance: Korean has two distinct (sets of) adnominal forms depending on whether it follows a noun or a verb, while Japanese has merged these two uses. This is most likely because of the reanalysis of adnominal forms of verbals and introduction of *no* after a clause, as we saw in 4.1.2.

Our analysis can be extended to English *of*. Abney (1987: 295-7) assumes that the nominal phrase under *of* in partitives is referential and is assigned a theta-role, while that in pseudo-partitives is predicational (or non-referential in our terms) and is not assigned a theta role. What is crucial appears to be referentiality. As shown, no extraction is possible out of pseudo-partitives.³⁹

- (78) a. [A number of the men] like anchovies. (partitives)
 b. [Of the men], [a number *t*] like anchovies.
 c. [A number *t*] were killed [of the men who like anchovies].
- (79) a. [A number of men] like anchovies . (pseudo-partitives)
 b. *[Of men], [a number *t*] like anchovies.
 c. *[A number *t*] were killed [of men who like anchovies].

³⁹ Bill McClure notes that he does not agree with some of the judgments here. For instance, (79b) is fine for him. It should be noted that the acceptable reading is a partitive reading, so that the *men* may be said to be presupposed.

Abney notes that a pseudo-partitive is very similar to a predicational DP as in (80) in that none of these *of*-phrases can be extracted, as illustrated in (81) and (82). Abney claims that extraction of *of*-phrases, which he claims are PPs, would violate the ECP, because they are assigned no theta roles.

- (80) a. a monster of a machine
 b. a fool of a lawyer
 c. a little slip of a girl
 d. a coat of wool
 e. a coat of red
- (81) a. *[Of a machine], it was [a monster *t*].
 b. *[Of a lawyer], he was [a fool *t*].
 c. *[Of a girl], she was [a little slip *t*].
 d. *[Of wool], I have [a coat *t*].
 e. *[Of red], I have [a coat *t*].
- (82) a. *[A monster *t*] was delivered [of a machine].
 b. *[A fool *t*] showed up [of a lawyer].
 c. *[A little slip *t*] came in [of a girl].
 d. *[A coat *t*] is warm [of wool].
 e. *[A coat *t*] was lost [of red].

If we assume that *of* is a linker head, an *of*-phrase consists a head and its complement DP, which do not form a constituent. Consequently, its extraction that leaves the constituent behind in the Spec position is ruled out. If *of* is reanalyzed as part of a modifier (e.g., *monster-of*) (see 3.3.3.1.), it is clear that the phrase *a monster* in (82a), for example, can

not be a constituent, either, so that (82) may not be reanalyzed as cases of leftward movement. The question now is why (78b) and (78c) are possible. It is important to note that they can be paraphrased with *out* as in (83), which is not possible with pseudo-partitives. We believe that these cases do not involve movement at all.

- (83) a. [Out of the men], [a number] like anchovies.
 b. [A number] were killed [out of the men who like anchovies].

5.2.3. Appositive Phrases

The copula reading of genitive phrases that we have seen is reminiscent of an appositive reading of *no*, as in (84):

- (84) tookyoo-no machi ‘the city of Tokyo’ (appositive) or ‘a town in Tokyo’⁴⁰
 Tokyo town

(84) is ambiguous between an appositive reading and a non-appositive reading, and an appositive reading happens to be a locative reading in this case, since what comes before *no* is a place name. This ambiguity is very similar to that between a copula reading and a referent particle reading, although it is unlikely to be due to referentiality. Similar examples from English may better illustrate the point:

- (85) a. the Italian region of Tuscany (appositive)
 b. the Italian district of/in Brooklyn (non-appositive)

Neither (85a) nor (85b) is ambiguous, but this is only because of our world knowledge. We know that Tuscany is a region in Italy, while Brooklyn is not. The difference between them is that (85b) involves a part-whole relationship, while (85a) does not. More

⁴⁰ For this interpretation, one can also say [*Tookyoo-ni ar-u*] *machi* (Tokyo-LOC exist-NPT town) ‘town that is in Tokyo.’

generally, we could say that a non-appositive reading entails a dependency between linked phrases. An appositive reading, on the hand, does not entail such a relationship: the first phrase by itself can refer to a set of entities (or propositions, eventualities or situations), but the second phrase specifies it even further. In this sense, an appositive reading is like a kind (or predicational) reading. It is interesting to note that this contrast is similar to, but not the same as, that between predicative and equative readings of BE.

(86) Mary is a teacher.

= [What Mary is] is a teacher. (predicative)⁴¹

= Mary is one of the teachers. (equative)

It is relevant at this point to note that a genitive phrase on a copula reading can be expressed without *no* in Japanese. (70), repeated here as (87), can be expressed as (88) on a copula reading, although it is somewhat unnatural in colloquial speech:

(88) *isha -no oji*
M.D.-GEN uncle

‘the/a (medical) doctor’s uncle’ (RP *no*)

‘(my) uncle(,) who is a (medical) doctor’ (CP *no*)

(89) [*isha-de aru*] oji ‘(my) uncle(,) who is a (medical) doctor’
M.D.-COP be uncle

Clearly, there is no tense specification in (88), but it does not refer to a past or future eventuality but to a present one by itself. Its temporal specification is in fact dependent on the tense of the clause it is used in. To refer to a past eventuality, the past form of the copula *da*, *dat-ta*, is used instead of *no*:

⁴¹ This sentence may be ambiguous (see Higgins 1973), but the intended interpretation here has to do with Mary’s occupation (or title).

some kind of semantic or pragmatic link between the relative and the semantic head that is seen between the topic and the rest of the sentence. The latter relationship is generally considered to be constrained by the so-called ‘aboutness’ condition: the rest of the sentence refers to a proposition that is *about* the topic.⁴³

- (93) a. Tanaka-san -wa musuko-ga daigakusei da.
Tanaka-Mr./Ms.-TOP son -NOM college.student COP

‘As for Mr./Ms. Tanaka, his/her son is a college student.’

- b. ?Sono eiga -wa Ken-ga akuyaku da.
that movie-TOP Ken-NOM evil.role COP

‘As for the movie, Ken is (playing) the evil character (in it).’

What is interesting here is that (93b) is somewhat more awkward than (93a), much like (92b) is less acceptable than (92a). This may be due to the absence of *no* in (92b) and (93b), in which it is felt to be presupposed that there is (only or at least) one evil character in the movie.⁴⁴ This is obviously harder to accommodate than the presupposition that there is a main character in a movie, so that (94) is perfect.

- (94) a. [Eri-ga shuyaku]-no eiga
Eri-NOM main.role-GEN movie

‘movie in which Eri plays the main character’

- b. [Eri-ga shuyaku]-de aru eiga
Eri-NOM main.role-COP exist movie

‘movie in which Eri plays the main character’

⁴³ These sentences involve a multiple subject construction, so that the fragments *musuko-ga daigakusei* (93a) and *Ken-ga akuyaku* (93b) are not constituent here.

⁴⁴ There is more to say about (93b), which is a sentence about a particular movie. What it implies (by itself) is that most movies have an evil character, which we know is not the case, and it asserts that in the movie in question the character is (played by) Ken. The sentence is in fact perfect when uttered after some movies and the evil characters in them were discussed.

c. Sono eiga -wa Eri-ga shuyaku da.
that movie-TOP Eri-NOM main.role COP

‘As for the movie, Eri is (playing) the main character (in it).’

As noted earlier, postnominal genitives or LHRCs involve a kind reading, so that they can be considered to involve appositive phrases. Combined with other points already made, this can account for the cases that were unexplained and better explain other cases. For example, a postnominal possessive is often awkward, but the acceptability seems to improve, as it gets longer.

(95) a. ??hon -no Ken-no *pro* ‘book that is Ken’s’
book-GEN Ken-GEN

b. ?hon -no Ken-no ootoo -no *pro*
book-GEN Ken-GEN younger.brother-GEN

‘book that is Ken’s younger brother’s’

c. hon -no Ken-no mot-te i -ru -no *pro*
book-GEN Ken-GEN hold-GER be-NPT-GEN

‘book that is what Ken has’

This could be due to a heaviness constraint, but it is unclear why that has to be the case. In (88), the length of the postnominal *no*-phrase happens to correlate with how specific the description is.⁴⁵ Since an appositive construction is one that gradually adds information, it is natural that a more specific modifier is preferred.

Sadler and Arnold (1994) notes that prenominal modification yields a single property while postnominal modification involves two separate properties. This is compatible with the general impression that the former brings forth a compound-like

⁴⁵ As we saw in 5.1.3., a genitive with an animate ‘possessor’ like *Ken-no* also has three readings (possessive, agent and theme readings), so that it is not very specific as a modifier to add information.

phrase, while the latter translates into an appositive construction. In Japanese postnominal modification, *no* is a linker of two separate properties. In (96b), for example, *yoru* ‘night’ and *ame-no pro* ‘rainy one’ are linked by *no*, but it is unacceptable, since the latter phrase is awkward by itself (89c):

- (96) a. *ame -no yoru* ‘rainy night’
rain-GEN night
- b. **yoru -no ame-no pro* ‘night that is a rainy one’
- c. ??*ame-no pro* ‘rainy one’

The same pattern is found with *tada-no* ‘mere/free’:

- (97) a. *tada -no hon* ‘a mere/free book’
mere/free-GEN book
- b. *hon-no tada-no pro* ‘a book that is a *mere/free one’
- c. *tada-no pro* ‘a *mere/free one’

Adjectives that are ambiguous also show a similar pattern. As we saw in 3.3.1., the adjective *furui* ‘old’ has an autonomous reading with an animate N head:

- (98) a. *furui tomodachi* ‘friend whose friendship is old’ (autonomous)
old friend
- b. *furui kagu* ‘old furniture’ (intersective/autonomous)
old furniture
- (99) a. ?**tomodachi-no furui-no pro* ‘friend whose friendship is old’
friend -GEN old -GEN (autonomous)
- b. *kagu -no furui-no pro* ‘furniture that is old’ (intersective)
furniture-GEN old -GEN ‘furniture that is old’ (autonomous)

The unacceptability of (99a) mirrors that of the corresponding *no*-phrase:

- (100) *furui-no pro* ‘old one (= old *friend/furniture)’
old -GEN

As we saw in 3.4.3.3., a postnominal demonstrative is awkward in Japanese:

- (101) a. *otoko-no kono pro b. kono otoko ‘this man’
 man this

A demonstrative can not stand alone in Japanese, so that the same explanation may apply to demonstratives as well:

- (102) *kono *pro* ‘this one’

An important fact to note here is that Japanese has exclusively pronominal (i.e., non-adjectival) forms like *kore* and *koitsu*, both meaning ‘this one.’ English does not have such forms, in which a demonstrative can stand alone but does not occur in postnominal position:

- (103) a. *the man this b. this man c. this (= this one)

Unlike English, Spanish allows for postnominal demonstratives:

- (104) a. el hombre este b. este hombre ‘this man’
 the man this

When two similar forms are available in a language, there usually is a difference in meaning or functions. In this case, a postnominal demonstrative appears to be more emphatic (see also the Classic Mongolian possessives in 3.4.2.). Since emphasis is not usually expressed with word order in English, we could say that a postnominal demonstrative is not available in English, because it does not have an emphatic demonstrative.

If we are correct, postnominal modifiers in so-called “head-initial” languages may be appositive. Judging from the translations, this appears to be the case in the following Modern Greek DPs (Androutsopoulou 1995):

(105) a. ena vivlio kalo ‘a good book’ or ‘a book which is good’
 a book good

b. ena kalo vivlio ‘a good book’

Contrary to what is often assumed, an appositive reading for postnominal modifiers is in fact a restrictive reading, and in languages that exhibit both prenominal and postnominal modification, postnominal modifiers are appositive and restrictive, as in Spanish (Bernstein 1993: 4), for example:⁴⁶

(106) a. las olorosas flores (nonrestrictive)
 DEF-FEM fragrant flowers

b. las flores olorosas (restrictive) ‘the fragrant flowers’
 DEF-FEM flowers fragrant

In languages like English, in which postnominal modifiers without relativization are uncommon, a prenominal modifier may be restrictive or nonrestrictive, while a (postnominal) relative is restrictive, unless there is a pause before it (and a special intonation):

(107) a. beautiful flowers (restrictive/nonrestrictive)

b. flowers that/which are beautiful (restrictive)

b. flowers, which are beautiful (nonrestrictive)

A prenominal modifier in Japanese can also be restrictive or nonrestrictive, while a postnominal one is restrictive:

(108) a. kirei-na hana (restrictive/nonrestrictive) ‘pretty flower’
 pretty flower

b. hana-no kirei-na-no pro (restrictive) ‘flower that is pretty’

This also applies to possessives, as postnominal possessives are necessarily restrictive

⁴⁶ Glosses are ours.

while prenominal possessives can be nonrestrictive (Koike 1997/1998).

- (109) a. Hiroshi-no hon (restrictive/nonrestrictive) ‘Hiroshi’s book’
 Hiroshi-GEN book
- b. ??hon-no Hiroshi-no pro (restrictive) ‘book that is Hiroshi’s’

Restrictive modifiers can be contrastive, and we can now see that this is due to the presence of *pro* in postnominal modifiers (Koike 1997/1998).

Y.-K. Kim (1997) claims that in Korean and Japanese the interpretation of a relative clause (RC) is dependent on the position of a demonstrative, which is taken to be a D head. So, for example, in (102a), *ano* ‘that’ precedes the relative clause, so that the latter receives a restrictive interpretation, while in (102b) the relative clause is followed by *ano* and is taken to be nonrestrictive.

- (110) a. **ano** [watashi-ga katta] hon (restrictive RC) ‘that book which I bought’
 that I -NOM bought book
- b. [watashi-ga katta] **ano** hon (nonrestrictive RC)
 I -NOM bought that book

These are certainly preferred interpretations, but they are only preferred interpretations and both restrictive and nonrestrictive readings are possible for both phrases. It is therefore, unfeasible to treat this contrast as a structural one. Kim notes that (110a) and (110b) are different from each other in that a restrictive relative clause as in (110a) receives a FOCAL stress, while a nonrestrictive one like in (110b) does not. Kim does not explicitly state what the nature of this FOCAL stress is, but, in the particular Japanese case at hand, stress does change the interpretation of the relative clause, which we specify here by marking a phonological phrase in bold type.

- (111) a. **ano** [**watashi-ga** katta] hon ‘that book which I bought’
 that I -NOM bought book

- b. ano [watashi-ga **katta**] hon ‘that book which I **bought**’
 that I -NOM bought book
- (112) a. [watashi-ga **katta**] ano hon ‘that book which I **bought**’
 I -NOM bought that book
- b. [watashi-ga **katta**] ano hon ‘that book which I **bought**’
 I -NOM bought that book

What is clear is that stressing a certain phrase makes it easier to regard it as contrastive, so that a restrictive interpretation is also easier to obtain. However, that is possible for all the modifiers, although it may be a little harder to stress a demonstrative than to stress a phonological phrase in a relative.

Murasugi (1991: 90) agrees with Kim (1997) with regard to this restrictiveness effect and the position of the demonstrative, but she also notes that a possessive does not have the same effect.⁴⁷

- (113) a. [kono] [_s hyoosi ga akai] hon (restrictive RC)
 this cover NOM red book
 ‘this book whose cover is red’
- b. [_s hyoosi ga akai] [kono] hon (nonrestrictive RC)
 cover NOM red this book
 ‘this book, whose cover is red’
- (114) a. [_{NP} John] no [_s hyoosi ga akai] hon (restrictive RC)
 GEN cover NOM red book
 ‘John’s book whose cover is red’
- b. [_s hyoosi ga akai] [_{NP} John] no hon (restrictive/nonrestrictive RC)
 cover NOM red GEN book
 ‘John’s book(,) whose cover is red’

⁴⁷ The glosses and bracketing are Murasugi’s.

Much like Kim, she takes these facts to be due to syntactic structures and assumes the following (Unlike Kim, Murasugi assumes that Japanese is head-final.):

- (115) a. Possessor NP can appear NP internally, say, in the NP adjoined position.
 b. Restrictive relative clauses are adjoined to NP.
 c. Non-restrictive relative clauses are adjoined to DP.
 d. The determiner-like elements are in the DP-SPEC position.

As noted earlier, however, these interpretations are not as clear-cut as what one would expect, if they are purely due to syntactic structures. Moreover, there are non-syntactic (and much more plausible) factors that can account for these patterns.

It appears that the most preferred interpretation for multiply modified nominal phrases is a nested one. The cases that we have seen can schematically be represented, as follows (Dem and Poss stand for a demonstrative and a possessive, respectively):

(116) a. [RC [Dem NP]] b. [Dem [RC NP]]

(117) a. [RC [Poss NP]] b. [Poss [RC NP]]

A nested interpretation is quite natural and easy with a DP with a possessive, but that is not the case with a demonstrative. This probably has to do with the nature of a demonstrative, which is considered to pick out a unique referent by itself,⁴⁸ so that an additional modifier, as in (108a), is likely to be thought of as redundant and thus nonrestrictive.

⁴⁸ As Marcel den Dikken (p.c.) notes, this is not always the case. At least in English, demonstratives may have a dependent reading:

- (i) Those who did not pre-register must register here.

5.3. Multiple *No*-Phrases

In this section, we examine how multiple occurrences of *no*-phrases are constrained. In doing so, we hope to offer an analysis that accounts for the unexplained cases we have seen.

As noted in 3.4.3.2., (118b), unlike (118a), is awkward.

- (118) a. Keiko-no kuro-no sedan ‘Keiko’s black sedan’
 Keiko-GEN black-GEN sedan
- b. ??kuro -no Keiko-no sedan ‘*lit.* black, Keiko’s sedan’
 black -GEN Keiko-GEN sedan

This has to do with a preference for a nested reading, which we have just noted. What this means is that the *kuro-no* ‘black’ in (118b) must be nonrestrictive. It can not, however, be nonrestrictive, since, as we noted, it is presupposed. What is presupposed is contrastive, so that it may not be nonrestrictive. A natural question that arises from this account is why this is not the case with a possessive like *Keiko-no* ‘Keiko’s’ in (118a). This suggests that there is a natural order of delimiting a referent, and a possessive is higher in the ranking than a color modifier. This is obviously the case in a language like English (see Liberman and Sproat 1992), in which ‘scrambling’ inside DP does not appear to be easily available. Moreover, a possessive does not have a non-presupposed version in Japanese, so that it must function as both restrictive and nonrestrictive, while a color modifier have such a form.

It is important to note that a conjunctive modification reading is impossible for both (118a) and (118b), so that they may not be translated as (119):

- (119) a. sedan that is Keiko’s and black
 b. sedan that is black and Keiko’s

In other words, there is no empty conjunction in (118), as an overt conjunction *to* ‘and,’ for example, may not be inserted, as in (120):

- (120) a. *[Keiko-no -to kuro -no] sedan ‘*lit.* Keiko’s and black sedan’
 Keiko-GEN-and black-GEN sedan
- b. *[kuro-no -to Keiko-no] sedan ‘*lit.* black and Keiko’s sedan’
 black-GEN-and Keiko-GEN sedan

Some unacceptable cases may be due to a thematic hierarchy, such as (121):

- (121) *Thematic Hierarchy* (Picallo 1994): Possessor > Agent/Experiencer > Theme

This can account for (147) discussed in 3.4.3.2., repeated here as (122):

- (122) a. yabanjin -no [sono toshi]-no hakai (AGENT-THEME)
 barbarian-GEN that city -GEN destruction
 ‘the barbarians’ destruction of the city’
- b. ?*[sono toshi]-no yabanjin -no hakai (THEME-AGENT)
 that city -GEN barbarian-GEN destruction

(123) is another example:

- (123) a. watashi-no kuruma-no yoyaku (AGENT-THEME) ‘my car reservation’
 me -GEN car -GEN reservation
- b. ?*kuruma-no watashi-no yoyaku (THEME-AGENT)⁴⁹

What appears to be happening in these cases is that, since *no* has no meaning, a thematic hierarchy like (121) plays a crucial role in determining the interpretation of the phrase. In fact, when a periphrastic expression like *-ni yoru* ‘by’ is used, both orders are acceptable:

- (124) a. yabanjin-ni yoru [sono toshi]-no hakai (AGENT-THEME)
 barbarian-by that city -GEN destruction
- b. [sono toshi]-no yabanjin-ni yoru hakai (THEME-AGENT)
 that city -GEN barbarian-by destruction

⁴⁹ This phrase may be acceptable with a ‘scrambled’ intonation, which further supports the claim that a thematic hierarchy is at work.

'the destruction of the/that city by the barbarians'

(125) a. ?*watashi-ni yoru kuruma-no yoyaku* (AGENT-THEME)
 me -by car -GEN reservation

b. ??*kuruma-no watashi-ni yoru yoyaku* (THEME-AGENT)

'car reservation by me'

(125) may not be perfect, because *-ni yoru* is formal and objective-sounding so that its use for the speaker is incompatible, except in a formal situation, in which it is acceptable to distance oneself.

A thematic hierarchy may apply in other languages as well. A similar pattern (head-THEME-AGENT) to the above obtains in Spanish (example from Mallén 1990):

(126) *la foto del candidato de aquel periodista*
 the picture of.the candidate of that journalist

'the picture of the candidate by that journalist'

(126) and English cases like in (127) show that what is crucial for a thematic hierarchy like (121) is not the linear order but the structural proximity of the genitives.

(127) a. two pictures of Mary of John's
 THEME POSS

b. John's two pictures of Mary
 POSS THEME

c. *Mary's two pictures of John's
 THEME POSS

Since genitives are normally prenominal in Japanese, linear order is sufficient to account for Japanese genitive constructions, for which only those readings that are compatible with a thematic hierarchy are possible with a neutral intonation:

(128) *Akiko-no Tadashi-no shashin ni-mai*
 Akiko-GEN Tadashi-GEN photo 2 -NC

- ‘two pictures of Tadashi of Akiko’s’ (POSS-THEME-head)
- ‘two pictures of Tadashi by Akiko’ (AGENT-THEME-head)
- ‘two pictures by Tadashi of Akiko’s’ (POSS-AGENT-head)
- ‘*two pictures of Akiko of Tadashi’s’ (THEME-POSS-head)
- ‘*two pictures of Akiko by Tadashi’ (THEME-AGENT-head)
- ‘*two pictures by Akiko of Tadashi’s’ (AGENT-POSS-head)

5.4. D-Linking and Presupposition

Pesetsky (1987) introduced the notion of D-linking, short for Discourse-linking, to account for apparent violations of Superiority effects in English questions with *which*. In this section, we note that the noun-modifying *which* corresponds to *dono* (*wh* + GEN) in Japanese and argue that D-linking is actually presupposition-marking. Pesetsky contends that *the hell* in English and *ittai* in Japanese are markers of aggressive non-D-linking. We argue that they are instead emphatic markers and discourse salience enhancers, as D-linking is possible in sentences with both *dono* and *ittai*. This shows that pragmatic effects are stronger than discourse effects, as expected under our Relativized Modularity Hypothesis.

5.4.1. Superiority Effects and D-linking

Superiority effects are observed in multiple *wh*-questions like (129a), in which the object *wh*-phrase is generally considered to be raised to Spec, CP but the subject *wh*-phrase stays in-situ (cf. 129b).⁵⁰

⁵⁰ For the sake of simplicity, we mainly use simple examples here, but the effects are found in long-distance *wh*-movement as well. See Pesetsky (1987) for more examples.

- (129) a. *What did who read? b. Who read what?

Pesetsky (1987) posits the following condition to capture this subject-object asymmetry:

- (130) *Superiority Condition* (Pesetsky 1987; see Chomsky 1973)

In a multiple interrogation, where a *wh*-phrase is in Comp and another is in situ, the S-Structure trace of the phrase in Comp must c-command the S-Structure position of the *wh*-in situ.

In a language like English, in which the subject tends to precede the object, Superiority effects may appear to be due to linear precedence, so that the Superiority Condition may instead be stated in the following way:

- (131) *Superiority Condition* (Williams 1994: 191):

Only the first of two *wh*-phrases can be moved.

In the MP, moreover, Superiority effects may be considered to be due to a Minimal Link Condition violation, which requires shortest moves (Chomsky 1995), since the subject is always base-generated higher than the object in a language like English.

It has been observed, however, that, when the object *wh*-phrase contains *which*, double *wh*-questions with the object *wh*-phrase in Spec, CP are perfect:

- (132) Which book did which student read?

To account for this contrast, Pesetsky (1987) proposes what he calls D(iscourse)-linking, which he characterizes as deriving “a principle of the grammar.” He claims that there are D-linked and non-D-linked *wh*-phrases, the former of which are used when the speaker and the addressee are assumed to know the set of possible answers. According to Pesetsky, non-D-linked *wh*-words are raised at LF, while D-linked *wh*-words may stay in-situ. The *which*-phrases in (132) are D-linked, so that they are interpreted in-situ (see

Pesetsky 1987).

In spite of its name, D-linking appears to be a pragmatic process, not only because of Pesetsky's use of the term but also because the noun-modifying *which* corresponds to *dono*, with the *wh*-(sub)morpheme *do* and the presupposition-marking *no*, in Japanese. D-linking is therefore better thought of as a pragmatic process to link a *wh*-phrase with possible (discourse) referents. If a D-linked *wh*-phrase is presupposed, moreover, it may be in Spec, DP, much like other presupposed materials, so that we could assume that a presupposed *wh*-phrase may vacuously raise from Spec, CP to Spec, DP at PF in English (see 4.4.2.).

One might note that *dore* 'which one' without *no* is also presupposed, but this is not because of *do*, since not all lexical items with *do* are presupposed. For example, *donna* 'what (kind of)' plus an NP/DP is normally not presupposed and *doko* 'where' does not have to be. We have proposed that *no* is a presupposition-marker, but of course this does not mean that *no* or the like to occur as the head of DP is the only way to mark presupposition or that presupposition must always be marked by morphological means. It is in fact possible to D-link most *wh*-phrases without any overt means. For example, *what* in English is ambiguous between D-linked and non-D-linked interpretations. In fact, some speakers do not find questions like (129a) unacceptable. For those speakers, *what* can be D-linked without prior context. If our proposal above is correct, these speaker can raise *what* to Spec, CP, while others can not.

5.4.2. Aggressive Non-D-linking

Pesetsky (1987) argues that phrases like *the hell* can be used with *wh*-phrases to

block a D-linked reading. In other words, *the hell* is incompatible with a D-linked *wh*-phrase, as illustrated in (133):

- (133) a. What *the hell* book did you read that in?
 b. *Which *the hell* book did you read that in? (Pesetsky's 40)

Pesetsky regards phrases like *what the hell book* as “aggressively non-D-linked” *wh*-phrases, which are not and can not be D-linked. He identifies Japanese *ittai* as a counterpart of English *the hell*:

- (134) Mary-wa John-ni *ittai nani-o* ageta-no?
 Mary-TOP John-DAT the.hell what-ACC gave -Q

‘What the hell did Mary give to John?’ (Pesetsky's 41)

While he notes that (134) is fine, he fails to note that (135) is also perfect.

- (135) Mary-wa John-ni *ittai dono hon -o* ageta-no?
 Mary-TOP John-DAT the.hell which book-ACC gave -Q

‘Which the hell book did Mary give to John?’

Pesetsky goes on to note that the Complex NP Constraint and the Adjunct Condition, as illustrated in (136) from English, do not hold in Japanese, as shown in (137), the translations of (136).

- (136) a. *What_i did Mary meet [_{NP} the man [_S who gave e_i to John]]?
 b. ?*What_i did Mary leave before John read e_i ? (Pesetsky's 38)

- (137) a. Mary-wa [_{NP}[_S John-ni *nani-o* ageta]hito-ni] atta-no?
 Mary-TOP John-DAT what-ACC gave man-DAT met -Q
 b. Mary-wa [John-ga *nani-o yomu mae-ni*] dekaketa-no? (Pesetsky's 39)
 Mary-TOP John-NOM what-ACC read before left Q

He notes, however, that adding *ittai* to (137), as in (138), makes the questions unacceptable, much like their English translations in (139), although we feel that the

unacceptability of (138), if any, is much, much milder than indicated (maybe one?).

- (138) a. *Mary-wa [_{NP}[_S John-ni *ittai nani-o* ageta] hito-ni] atta-no?
 Mary-TOP John-DAT what-ACC gave man-DAT met-Q
- b. *Mary-wa [John-ga *ittai nani-o* yomu mae-ni] dekaketa-no? (Pesetsky's 43)
 Mary-TOP John-NOM what-ACC read before left -Q
- (139) a. *Which book_i did Mary meet [_{NP} the man [_S who gave *e_i* to John]]?
 b. ?*Which book_i did Mary leave before John read *e_i*?

It is not clear from Pesetsky's glosses, but the bracketed part of (138b) involves a relative clause, in which *mae* 'fore, front' is the semantic head:

- (140) [[John-ga *ittai nani-o* yomu] mae]-ni
 John-NOM what-ACC read fore-DAT

Consequently, one possible reason for the unacceptability of (131) may be that the relative, which we argued to be presupposed, contains a non-D-linked *wh*-phrase.

If *ittai* marks an aggressively non-D-linked *wh*-phrases and *no* is a D-linker by definition, then they should be incompatible. Indeed, questions with both of them like (141) are not perfect, but the violation in question is rather mild.

- (141) a. ?Mary-wa [[John-ni *ittai dono hon -o* ageta] hito-ni] atta-no?
 Mary-TOP John-DAT which book-ACC gave man-DAT met FP
- b. ?Mary-wa [John-ga *ittai dono hon -o* yomu mae-ni] dekaketa-no?
 Mary-TOP John-NOM which book-ACC read fore-DAT left FP

It appears that effects of *ittai* as a marker of aggressively D-linked *wh*-phrases may not be as strong as Pesetsky tried to show. Moreover, we believe that such a characterization is too specific for any lexical item. *Ittai* is an emphatic marker/intensifier (discourse salience enhancer; see 6.1.4.1.), much like *in the world*, *the hell* and *at all* in English. In a normal situation, that is, if it is not used as a discourse-emphatic marker like a swear

word/expletive (like *the hell*), it works best when the speaker has no idea what may be possible answers, which is the situation of no D-linking. However, it should work equally well when the speaker has no clue which of the possible answers is the right one(s). Thus, *ittai* can be used in a D-linking context.

If our claim that *ittai* is an emphatic marker is correct, its effects are only felt in discourse, while D-linking is a pragmatic process, as we have proposed. Since they can co-occur, *ittai* can not prevent D-linking, so that discourse effect are weaker than pragmatic ones. This is expected under our Relativized Modularity Hypothesis.

5.4.3. P-linking and Pragmatic Gap-Filling

In Koike (1994b), we proposed a type of pragmatic checking called P-linking, short for presupposition-linking, instead of D-linking. This is based on the assumption that a lexical item with [+N] must be identified, where a lexical item is either a head (X⁰) or a maximal projection (XP). There are three ways to identify a lexical item:

- (142) a. syntactically (strictly locally) identified
 b. locally discourse-identified
 c. globally/pragmatically identified

The idea of identification here can be understood in two ways: (i) to find an entry in the lexicon; (ii) to find a discourse referent or better yet an extra-linguistic referent. Obviously, what is at issue is the latter type of identification. When a lexical item has a local antecedent, or what it can relate to locally, a syntactic mechanism like the Binding Theory (142a) or a non-syntactic mechanism (142b) should be able to identify it, so that the addressee would know what the lexical item refers to. When there is no local

antecedent, the lexical item must be identified by P-linking, which includes picking out a corresponding entry from the lexicon as well as finding a discourse referent and/or an extra-linguistic referent for the lexical item. The Spec position appears to be crucial for this purpose, since it appears to be empty in many cases. In Koike (1995a; see Koike 1995b), we proposed a mechanism of pragmatic gap-filling (at PF) to account for the distributions of some bare NPs in Japanese, which are thought to include an empty Spec position. We proposed that such an empty position or a gap is not really empty for the overall interpretation of the sentence, and it is linked up with an overt lexical item in the sentence or outside of it. This linking appears to be pragmatic in nature, and is most likely done at PF. This is what we called pragmatic gap-filling. This idea may be extended to the *wh*-phrases that we have discussed.

As we noted in 3.3.3.2., a demonstrative like *dono* ‘which’ may be syntactically ambiguous between the D head and a modifier in Spec, DP: a phrase like (143a) may have a structure like (143b) or (143c):

(143) a. *dono hon* ‘which book’
 which book

b. [_{DP} *dono* [_{D'} [_D (no)] [_{NP} *hon*]]]
 |
 Possessor/RC

c. [_{DP} *e* [_{D'} [_D *dono*] [_{NP} *hon*]]]
 | | _____ |
 |
 Possessor/RC

In (143b), *dono* is in Spec, DP, and it is P-linked to a linguistic expression like a possessor or a relative clause that restricts a range of extra-linguistic referents, or it may directly be linked to a set of possible extra-linguistic referents. A similar linking

mechanism may be at work in (143c), but here *dono* is only (P-)linked via the gap in Spec, DP, and we can assume that Spec-head agreement is responsible for this as well as the fact that *no* can not appear when its Spec position is not filled. We find a similar situation with a possessive, as shown in (144), in which *kare* ‘he’ refers to Takeshi:

- (144) a. *kare-no kuruma* ‘his car’
 he -GEN car
- b. [_{DP} *kare* [_{D'} [_D *no*] [_{NP} *kuruma*]]]
 |
 Takeshi
- c. [_{DP} *kare-no* [_{D'} [_D (*no*)] [_{NP} *kuruma*]]]
 |
 Takeshi-no

An advantage of this analysis is that we can now interpret the transition of *no* from a linker head to a part of the modifier in Spec, DP as a change in pragmatic linking as well as in patterns of lexical insertion, as we argued for in 3.3.3.

An interesting consequence of this line of analysis is that we may be able to provide supporting evidence for the claim that a definite article in a “head-initial” language, which normally does not have any lexical items before it, can be thought of as a linker. Take the English definite article *the*, for example. Except possibly for appositive examples like (145), there is not much evidence that it can be seen as a linker.

- (145) a. Dennis the menace b. John the Baptist

The, however, can be said to bridge two utterances (Wilson 1996a; see Wilson 1996b):

- (146) a. Jane bought a new house. The front door was blue.
 b. John flew to Italy. The plane was late.
 c. Susan sent her meal back. The steak was underdone.

As noted in Koike (1997/1998), (146a) may be paraphrased as (147):

(147) Jane bought a new house. The front door [of the (new) house (that she bought)] was blue.

Based on this, we argued in Koike (1997/1998) that there is *pro* after *the front door* in (146a):

(148) Jane bought a new house. The front door (of) *pro* was blue.

We assumed that *of* is syntactically present but phonologically null here, since its complement is covert.⁵¹ Clearly, this is not the only possibility, however, since (146a) can be paraphrased as (149) as well:

(149) Jane bought a new house. The front door [that was part of the (new) house (that she bought)] was blue.

In fact, we proposed that there are phonologically null relatives (RCs) in (150b) and (150c), as they may correspond to (150a) and (150a), respectively.

(150) a. John flew to Italy. The plane [in which he flew (to Italy)] was late.

b. John flew to Italy. The plane [_{RC} *e*] was late.

(151) a. Susan sent her meal back. The steak [that was a part of the meal] was underdone.

b. Susan sent her meal back. The steak [_{RC} *e*] was underdone.

(146a) and (146c) clearly involve a part-whole relationship, which is one of natural interpretations for two linked phrases, as we saw earlier. In Koike (1997/1998), we suggested LF raising of the relative clause to Spec, DP (*the*), which has the function of identifying the denotation of the underlined subject. Such a raising operation may

⁵¹ This means that *of* is unlike *no* and 's, which is not totally unexpected.

account for the use of a clearly marked definite phrase as a first mention, as noted as a problem in Barker (1992):

(152) Do you see that woman over there? The man I saw her with last night was the tallest guy I ever met.

Since the *her* in the second sentence in (152) is taken to be coreferential with the DP *that woman* in the first sentence, the former can be seen as a crucial element in this particular process of bridging the two sentences. If the relative in the second sentence *I saw her with last night* raises at LF to Spec, DP (*the*), we can say that Spec, DP is a crucial position for bridging and identification, much like in the examples above. More generally, we can state that adnominal modifiers (possessives, adjectives and relative clauses) may always raise overtly or covertly for interpretation, so that a definite article like *the* can also be thought to be a linker.⁵² What is raised in these cases, however, could not be a *that*-clause, since it is C', if our analysis of EHRCs in 4.4.1. is correct. The only plausible possibility, then, is that IP raises instead, which makes the LF representation of an English EHRC exactly like the PF representation of a Japanese one.⁵³

There may be another case of LF raising to Spec, DP in English. Milsark (1974 cited in Carlson 1977) notes the ambiguity of sentences like the following:

(153) Typhoons arise in this part of the Pacific.

This generic sentence can be understood to be about typhoons or about a particular part of

⁵² This can be accomplished by LF feature movement (Chomsky 1995) as well. If identification is to be primarily handled at PF, however, such feature movement may be possible before SPELL-OUT.

⁵³ This movement leaves *that* behind in English, but *that* is not interpretable at LF, so that it gets erased. If LF raising involves feature movement, this is a trivial point. If feature movement is correct for this case at hand, however, it is not clear what feature is to raise.

the Pacific. On the former reading, typhoons generally do not arise in other parts of the Pacific, while they may on the latter reading: in fact, typhoons may arise more in other parts of the Pacific on the latter reading, which is impossible for the former reading. This ambiguity is not found in Japanese, and (153) would be expressed in two different ways (Brockett 1990, 1991):

(154) a. Taiheiyoo -no kono hen-de -wa, taihuu -ga hasseisu-ru.⁵⁴
Pacific.Ocean-GEN this part-LOC-TOP typhoon-NOM occur -NPT

‘In this part of the Pacific, (in general) typhoons occur.’

b. Taihuu -wa, taiheiyoo -no kono hen-de hasseisu-ru.
typhoon-TOP Pacific.Ocean-GEN this part-LOC occur-NPT

‘Typhoons occur in this part of the Pacific.’

This can easily be accounted for, if we assume that *in this part of the Pacific* is raised at LF on the interpretation like (154a).⁵⁵

It is possible to reinterpret the cases of bridging we have seen above from a discourse binding point of view. If we keep the idea of pragmatic gap-filling and combine it with a linker analysis without LF raising, a syntactic interpretation of context-based DRT-type semantic analyses may be possible.⁵⁶ According to such an analysis, the previous discourse (as well as shared or background knowledge) can be fed

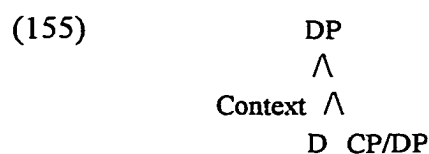
⁵⁴ The transliterations, the translations and the glosses are basically Brockett’s (1991: 79), except for a few modifications for consistency.

⁵⁵ The locative phrase may be fronted (possibly at PF) in English, too, but such a sentence is awkward without an extra phrase like an adverbial:

(i) In this part of the Pacific, typhoons arise ??(frequently/very often).

⁵⁶ DRT stands for Discourse Representation Theory (see Kamp 1981, Heim 1982, Kamp and Reyle 1993).

into in Spec, DP as the “context,” as shown in (155).⁵⁷



This “context” should include not only the previous utterances in the discourse but also what is assumed (by the speaker) to be part of the mutual knowledge between the speaker and the addressee. For discourse binding purposes, the “context” must include a flat structure (that is, if one wants to use the c-command requirement), which would enable us to treat inter-sentential (i.e., discourse) binding in almost the same manner as intra-sentential binding. Of course, the “context” can be linguistically manifested, so that it can be thought of as the “topic” in a sense or another. This analysis can support our claim in 4.4.2. that the Japanese topic marker *wa* is a linker D. It can also apply to colloquial English:

(156) That guy just walked out the store, he reminds me of the photo in the post-office window. (Hopper and Traugott 1993: 173)

In (146) from 4.4.2., repeated here as (156), the phrase *that guy just walked out the store* looks like the topic of the sentence in Spec, DP with the *he* as the linker head of the DP. This non-movement analysis is a more plausible analysis than an LF raising analysis at least for those cases in which the complement position is empty.

5.5. Summary

As a linker, *no* has no referential meaning. Pragmatically *no* behaves as a presupposition-marker. We have argued that this is because (i) *no*-phrases/clauses

⁵⁷ This is only noted but not explicitly mentioned in Koike (1997/1998).

contain *pro* in the complement position and (ii) Spec, DP favors a presupposed phrase. Since *no* has no meaning, factors such as referentiality and relationality are crucial in interpreting phrases linked by it.

CHAPTER VI
***NO*-CLAUSES IN DISCOURSE**

This chapter examines discourse functions of the final particle (FP) *no*.¹ We will show that all major discourse functions of *no* are due to its presuppositional uses and/or other general properties of the construction in question, although we do not intend to imply that there is a causal relationship involved. We will also note that *no* is used as a (discourse) modality marker, which may mean that D can be a modal head that agrees with a proposition (CP/IP) in its Spec position.

We firmly believe that discourse functions of any item or linguistic fragment can only be discerned by closely examining its uses in naturally occurring discourse. It is not, however, our purpose in this chapter to critically examine the use of the final particle *no* as compared with other final particles in the language, on some of which many studies have been already conducted. Nor is it our intention to give a clear overview of the major discourse uses of the FP *no*, or *no* in general. We will instead go over some of the claims made about the discourse functions of *no* and try to show how they can be shown to be related to its pragmatic function of marking presupposition. It turns out that many discourse functions of *no* are largely due to its presupposition-marking function, but that there are many that (also) follow from facts about (Japanese) discourse processes, some of which have to do with discourse salience. The presentational use of the *no-da/no-desu* construction may explain why the FP *no* seems to mark both positive and negative

¹ Many dialects of Japanese have an FP, *noo*. Since some FPs have allomorphs with a long vowel, such as *nee*, *saa* and *yoo*, this *noo* may be related to *no*.

politeness, for instance, while the not so very well understood notion of discourse salience may be used to account for the fact that the FP *no* appears to make the whole utterance that has it both emphatic and weak. We believe that such ambivalent behaviors of the FP *no* can be taken to be evidence that it does not have any intrinsic lexical (referential or modal) meaning of its own. The development of these discourse uses can be characterized as a process of pragmaticization, as has been argued for with regard to other formal nouns, such as *koto*.

6.1. The *No-Da/No-Desu* Construction and the Final Particle *No*

As noted in 4.2.2.1., politeness in terms of the use of the polite form *mas-* or the copula *des-* is generally not marked in relative clauses:

- (1) [hon -o yon -de ir -u/#i-masu] hito
 book-ACC read-GER be-NPT/be-POL person

Consequently, *no* in (2) is almost unambiguously the FP *no*.

- (2) a. [Achira -ni mie -masu]-no yo. 'It can be seen over there.'
 that.side-LOC be.seen-POL -FP FP
- b. [Achira desu] -no yo. 'It is over there.'²
 that.side COP.POL-FP FP

To our knowledge, this particular use of *no* is considered to be overly polite and exclusively used by some women (McGloin 1986),³ much like utterances like (3), which a tour guide in Tokyo might say:

- (3) [Achira -ni mie -masu]-no -ga Kokkai-gijidoo -de gozai -masu.
 over.there-LOC be.seen-POL -NOMN-NOM Diet -building-COP be.POL-POL

² A *da-no* sequence may be used in an appositive construction, as noted in 4.4.2.

³ Many women do not appear to have this use of *no* at all.

6.1.1. Presentational Constructions and Presupposition

We have argued that *no*-clauses are relative clauses. The so-called *no-da/no-desu* construction contains a *no*-clause, and has a function of changing the scope of the clause much like a relative clause.⁸ In verb-final languages, the primary focus of a sentence tends to fall on the main verbal complex (and its direct object). The construction instead highlights the whole clause, changing the focus of the sentence from VP to IP/CP (Koike 1995a). In simple examples like (5), Japanese shows a contrast between sentences with nominative and topic-marked DPs: the former typically highlights the whole utterance and receives a non-emphatic, ‘neutral description’ reading or athetic reading, while the latter generally has a non-emphatic, thematic reading or a categorical reading:⁹

- (5) a. Neko-ga nemut-te iru. ‘A cat is sleeping./There is a cat sleeping.’
 cat -NOM sleep-GER be (thetic judgment)
- b. Neko-wa nemut-te iru. ‘The cat is sleeping./As for the cat, it is sleeping.’
 cat -TOP sleep-GER be (categorical judgment)

When embedded in the *no-da/no-desu* construction, however, the more emphatic (i.e., ‘exhaustive listing’ and ‘contrast’) readings are equally likely:

- (6) a. [[Neko-ga **nemut-te** iru]-n(o)] desu.
 cat -NOM sleep -GER be -NOMN COP.POL
 ‘A cat is sleeping.’ (neutral description/non-emphatic)

⁸ The use of the term “scope” may be puzzling to some readers here, but the patterns we will see have to do with emphasis, which like negation can induce scope ambiguities. Much like in the case of negation, what is focused in the clause is emphasized. As we will see in 6.3.2., both emphasis and negation can be seen as modal.

⁹ According to Kuno (1973: 37-61), *wa* marks a ‘theme’ and a ‘contrast,’ while *ga* is for a ‘neutral description’ and an ‘exhaustive listing,’ when not used for objects. For the thetic-categorical distinction, see Kuroda (1972, 1992).

- b. **Neko-ga** [[nemut-te iru]-n(o)] desu.
 cat -NOM sleep -GER be -NOMN COP.POL

‘It is a cat that is sleeping.’ (exhaustive listing/emphatic)

- (7) a. **Neko-wa nemut-te iru-n(o)** desu.
 cat -TOP sleep -GER be-NOMN COP.POL

‘The cat is sleeping.’ (thematic/non-emphatic)

or ‘The cat is **sleeping**(, but ...).’

- b. **Neko-wa nemut-te iru-n(o)** desu.
 cat -TOP sleep -GER be -NOMN COP.POL

‘The cat is sleeping.’ (thematic/non-emphatic)

or ‘**The cat** is sleeping(, but ...).’ (contrast/emphatic) (preferred)

In the case of a sentence with a *ga*-marked subject, the two readings can be differentiated by intonation,¹⁰ as illustrated in (6), where the stressed word is shown in bold type. The case with sentences with a *wa*-marked topic is not as clear, and what is stressed appears to be what is in contrast. Indeed, these contrasts are obscured, when an individual-level predicate, instead of a stage-level predicate, is used:¹¹

- (8) a. **Kujira-ga** honyuu -doobutsu desu. (exhaustive listing)
 whale-NOM mammalian-animal COP.POL

‘A whale is a mammal.’

- b. **Kujira-ga** honyuu-doobutsu na -no desu. (exhaustive listing)
 whale-NOM mammalian-animal COP-NOMN COP.POL

¹⁰ As we have seen, there is a loose match between syntactic and prosodic phrasing in Japanese.

¹¹ Stage-level predicates are for roughly temporal states and individual-level predicates for more or less permanent states or properties, so that the former are used in existential and generic sentences, while the latter are found in generic sentences only (Diesing 1992a).

- (9) a. *Kujira-wa honyuu-doobutsu desu.* (generic)
 whale-TOP mammalian-animal COP.POL
- b. *Kujira-wa honyuu-doobutsu na -no desu.* (generic)
 whale-TOP mammalian-animal COP-NOMN COP.POL

An emphatic reading is the only reading for (8), while the generic sentences in (9) can have both emphatic and non-emphatic readings.¹² This appears to support Shibatani's claims (1990: 262-80) that *wa* is for an "emphatic judgment" and that since contrast is inherent in topics,¹³ there is no distinction between the two meanings of *wa* (topic, contrast) except for emphasis, which is clearer in the context of contrast.

In a discourse-initial declarative utterance, a primary use of the *no-da/no-desu* construction is presentational: an utterance presents a proposition as a piece of information to the current discourse (Koike 1994a, 1994b).¹⁴ In other words, the

¹² In Japanese, a seemingly individual-level predicate can be used in athetic sentence:

- (i) a. *Sakura-ga kirei -desu.* 'Cherry blossoms are pretty (now).'
 cherry -NOM pretty-COP.POL
- b. *Sakura-ga kirei -na -n(o) desu.*
 cherry -NOM pretty-COP-NOMN COP.POL

These sentences can be taken as generic sentences with an empty topic:

- (ii) a. *Kono kooen(-de) -wa sakura-ga kirei -desu.*
 this park -LOC-TOP cherry -NOM pretty-COP.POL
 'Cherry blossoms are pretty in this garden.'
- b. *Kono kooen(-de) -wa sakura-ga kirei -na -n(o) desu.*
 this park -LOC-TOP cherry-nom pretty-COP-NOMN COP.POL
 'It is that cherry blossoms are pretty in this garden.'

¹³ This also follows from our observation that presupposition implies contrast. As Vallduví (1992: 11) notes, contrast is "most likely a derived notion and not a primitive" (see Prince 1984).

¹⁴ The use of the term "presentational" here may be misleading. Although clearly related, it is different from the term 'presentative' in the case of *there*-insertion sentences in English (see Hetzron 1975; Sasse 1987; but see Lambrecht 1988b). The idea of a presentational use here is closer to those of Kratzer's (1988) episodic/stage-level

construction is basically the same as a sentence like (10) in that a nominal (phrase) is followed by the copula (Koike 1994a, 1994b):

- (10) Hon desu. 'It is a book/s.' or 'Here is/are a book/s.'
book COP.POL

An extension of this presentational usage is that in confirmation questions, as in (11b) and (12b): in the absence of a *wh*-word, such sentences can be echo questions (see Koike 1994a, 1994b):

- (11) a. Iki-masu ka? 'Are (you) going?'
go-POL Q
b. Iku-n(o) desu ka? 'Are (you) (really) going?'
go -NOMN COP.POL Q
- (12) a. [Watashi-ni] desu ka? '(Is it) for/to me?'
I -DAT COP.POL Q
b. [Watashi-ni na n(o)] desu ka? '(Is it) (really) for/to me?'
I -DAT COP-NOMN COP.POL Q

Another usage that is related to this is an emphatic one, which we will discuss below.

6.1.2. Backgrounding in Discourse

Kempson (1996) notes that the discourse in (13) is ambiguous with regard to the chronological order of the two events described by the two sentences.

- (13) John fell. He was pushed.

The two readings can be differentiated by a conjunction:

- (14) a. John fell, because he was pushed. (non-sequential)
b. John fell. And he was pushed. (sequential)

predicates and Kuroda's (1972, 1992)thetic statements. Sasse's term "introductory" may be useful in some situations.

This ambiguity is not observed in Japanese, (partially) thanks to *no*. (15) is awkward, not because of the null subject but mainly due to the absence of a conjunction or a conjunctive adverbial.

- (15) Takashi-wa koron-da. #Ushiro-kara os -are -ta.
Takashi-TOP fall -PST back -from push-PASS-PST

‘Takashi fell. (He) was pushed from the back.’

With a conjunctive adverbial, as in (16b), we get a sequential reading, while the *no-da/no-desu* construction can induce a non-sequential reading, as in (16a):

- (16) a. Takashi-wa koron-da. Ushiro-kara os -are -ta no da.
Takashi-TOP fall -PST back -from push-PASS-PST-NOMN COP

‘Takashi fell. (He) was pushed from the back.’

- b. Takashi-wa koron-da. Soshite, ushiro-kara os -are -ta.
Takashi-TOP fall -PST and.then back -from push-PASS-PST

‘Takashi fell. Then, (he) was pushed from the back.’

This use of the *no-da/no-desu* construction derives from the backgrounding function of a relative that was noted in 5.2.1. This is why *no* in the *no-da/no-desu* construction is sometimes called “a cohesive device in discourse” (Iwasaki 1985), and is used for explanation (Kuno 1973; Makino and Tsutsui 1986: 326-7; Teramura 1984). In fact, (16a) can be expressed with the postposition *kara* ‘from, since, because’.¹⁵

- (17) Takashi-wa koron-da. ?(Sore-wa) ushiro-kara os -are -ta -kara da?(t-ta).
Takashi-TOP fall -PST that -TOP back -from push-PASS-PST from COP-PST

‘Takashi fell. (It/That) was because (he) was pushed from the back.’

It should be noted that (18) is also possible:

¹⁵ Interestingly, the second sentence in (17) is slightly awkward in the non-past tense without a conjunctive adverbial. The same goes for the topic phrase *sore-wa* with *sore* ‘that’ as a demonstrative to refer to a proposition (see 4.2.2.2.).

- (18) Takashi-wa ushiro-kara os -are -ta -no -de, koron-da.
 Takashi-TOP back -from push-PASS-PST-NOMN-COP fall -PST

‘Takashi fell, because (he) was pushed from the back.’

(18) appears to be the result of embedding the second sentence in (16a) in the first one. If so, the conjunctive postposition *no-de* is a form of *no-da* (Alfonso 1966: 547 [vol.1]). Combined with our earlier analysis, this can account for the uses of the postposition *no-de* as compared with that of *kara*. Takahara (1990 cited in Takahara 1998), for example, characterizes *no-de* as a marker of an “objective reason” and *kara* as a marker of “subjective reason, intention, purpose, result, assertion.” If we are correct in assuming that there is *pro* in a *no-de*-clause, we can explain this fact by stating that the *pro* refers to what is presupposed not just by the speaker but also by others (in the speech community), so that a *no-de*-clause may sound more objective. As we will see, Japanese utterances tend to be quite subjective, so that the subjective nature of *kara* is probably a default characteristic. This contrast is also compatible with the general impression that *no-de* is more formal (i.e., used in a socially more formal situation, in which the speaker tends to use a more careful style) than *kara*.¹⁶ It also appears that politeness-marking *desu/masu* are used more before *kara* than before *no-de*. This is natural if a *no-de* clause involves a relative clause, as we have assumed, but it may also be tied to the fact that a *no-de*-clause is felt to be more formal than a *kara*-phrase, so that politeness-marking with it may seem

¹⁶ As noted in 4.3.3.2., our impression is that a *no-de*-clause is used much more frequently than a *kara*-phrase in formal registers. Japanese has at least two levels of registers, which we may call informal and formal, as manifested in the uses of the two forms of the copula (or an assertion marker) *da/desu*. One might want to claim that there is a higher register and a lower, more colloquial, register. Examples of the former may include (3) with the super-polite form of the copular ending, *gozai-masu*. We have seen some examples of the colloquial register in 4.3.1. with regard to the use of the FP *-i*.

d. Hiroshi-wa atsui-yoo-da/desu. 'Hiroshi looks/seems hot.'
 Hiroshi-TOP hot-YOO-COP/COP.POL

e. Hiroshi-wa atsu-soo-da/desu. (the inferential *soo-da*)²⁰
 Hiroshi-TOP hot-SOO-COP/COP.POL

'Hiroshi appears/seems hot.'

f. Hiroshi-wa [*e* atsu-i]-soo-da/desu. (the hearsay *soo-da*)
 Hiroshi-TOP hot-NPT-SOO-COP/COP.POL

'As for Hiroshi, he is hot.' or 'Hiroshi says that he is hot.'

or [Hiroshi-wa atsu-i]-soo-da/desu. (the hearsay *soo-da*)
 Hiroshi-TOP hot-NPT-SOO-COP/COP.POL

'I hear that Hiroshi is hot.'

Compared with (19a), (20a) with the speaker as the topic of the sentence, is fine:

(20) a. Watashi-wa atsui desu. 'I am hot.'
 I -TOP hot COP.POL

b. Watashi-wa atsui-no desu. 'It is (the case) that I am hot.'
 I -TOP hot-NOMN COP.POL

Needless to say, (20b) is perfectly acceptable, but because of the evidential use of *no*, this sentence sounds like the speaker is objectively speaking about him-/herself. This is probably because the *no-da/no-desu* construction has a reportive function, and (19a) is in fact acceptable in what Kuroda (1973) calls non-reportive style. This is a rather natural consequence that follow from the fact that the construction is presentational, as we have noted.

Aoki (1986) states that *no* is a "despecifying evidential" and that it is used to "minimize the speaker's involvement," or when "the speaker is convinced that for some reason what is ordinarily directly unknowable is nevertheless true." In this sense, he says

²⁰ Note the differences in inflection between the inferential *soo-da* and the hearsay *soo-da*.

- (23) a. Is it hot?
 b. Atsui desu ka? 'Is it hot (for you)?'
 hot COP.POL Q

The contrast is very clear in some situations. Suppose two persons (who are bilingual in English and Japanese) are sharing a hot-looking dish. After one tastes the dish, the other can felicitously ask (24a) or (24b), but if one has already tasted the dish, the other can not ask him/her (24a) but only (24b).

- (24) a. Isn't it hot?
 b. Atsu-ku nai-n(o) desu ka? 'Isn't it hot (for you)?'
 hot -GER NEG-NOMN COP.POL Q

This contrast appears to generally hold of evaluative predicates in Japanese, in which empathy and the speaker's point of view have been argued to be crucial (see e.g., Kuno 1987). Of course, these patterns are not limited to Japanese. Consider the following examples from Speas (1990):

- (25) a. To me, fish is tasty.
 b. To me, Jones is the best candidate.
 c.??To me, Jones will win the election.

Since winning an election is not a matter of one person's assessment, the phrase like *to me*, which forces a subjective reading, is impossible in (25c).²¹ Note, however, that this is not driven purely by world knowledge. This epistemic modality reading is possible with a predicate with a similar meaning, as in (26), where it is likely that Jones actually lost or there was no competition in the first place.

²¹ Of course, the speaker's assessment can be expressed with a more articulate expression as in (i), which behaves differently from (25c).

- (i) I think/feel/am sure that Jones will win the election.

- (26) a. To me, Jones is the winner. b. To me, Jones takes the cake.

Considering these cases, it is a natural extension of our analysis of pragmatic gap-filling to assume that a modal phrase with an experiencer DP like *to me* in English is covertly present in Japanese. One might note that this is only due to conversational implicature of some sort, since a declarative utterance very often expresses the speaker's subjective judgment under normal circumstances. The difference between English and Japanese with regard to the presence of a modal phrase like *to me*, then, can be seen as a pragmatic one. An important question is whether the modal part of the sentence should be syntactically represented. It is not uncommon to find a gap in Japanese where an overt phrase is needed in English. Positing the same or similar syntactic representations for English and Japanese makes it possible to assign similar interpretations for sentences that are used in a very similar way. This also makes the mapping between syntax and semantics/pragmatics simpler than otherwise. We proposed pragmatic gap-filling in 5.4.3., and it is in the same spirit. We will come back to the use of modality and syntactic representations in 6.3.

6.1.4. Discourse Salience

In comparison with a bare verbal form, as in (27a) or (28a), one with *no*, as in (27b) and (28b), has no more or no less referential meaning, unless *no* is taken as a pronominal.

- (27) a. Ashita gakkoo-ni iki-masu. '(I) will go to school tomorrow.'
 tomorrow school -to go -POL
- b. Ashita gakkoo-ni iku-no desu.
 tomorrow school -to go -NOMN COP.POL

to the cognitive notion of salience and is not meant to be closely tied to what is informationally highlighted.

When there is something extra in a sentence, it seems to behave mainly in two ways: making a sentence or a part thereof weaker in meaning (hedging/de-emphasizing)²³ or stronger in meaning (intensifying/emphasizing)²⁴ (see Kinjo 1992).²⁵ From a pragmatic point of view, what is being weakened or strengthened here is not the meaning of the sentence itself but the speech act/illocutionary force that is associated with it. The crucial contrast here is that between propositional and modal meanings. More broadly speaking, we could say that it is a contrast between transactional and interactional meanings (see Brown and Yule 1983). The extra material that is used as a hedge/intensifier can thus be seen as part of the modal component of the sentence.

6.1.4.1. Intensifying

One of the uses of the *no-da/no-desu* construction is emphatic.

- (30) a. Yumi-wa nani -mo shir -ana-i. ‘Yumi doesn’t know anything.’
 Yumi-TOP what-EMPH know-NEG-NPT
- b. Yumi-wa nani -mo shir -ana-i -no da.
 Yumi-TOP what-EMPH know-NEG-NPT-NOMN COP
- ‘Yumi (really) doesn’t know anything.’

²³ Labov and Fanshel (1977) note that an extra material can be a ‘mitigator.’

²⁴ In discussing reduplication, Lakoff and Johnson (1980: 128) state that “MORE OF FORM stands for MORE OF CONTENT.”

²⁵ On minimalist assumptions, lexical items may not be marked as emphasizees or hedges in the lexicon, since that is a notion only expressible with regard to discourse. Of course, the real mental lexicon may contain more than purely lexical information and may include among other things the frequency of an entry as an emphasizee, etc.

The confirmation questions that we saw in 6.1.1. may also be seen as emphatic questions.

As we suggested in 4.2.1.3., it appears that Japanese structural postpositions are historically emphatic markers (Shibatani 1990: 205; see Miyagawa 1989: 199-246 on *o*), as Old Japanese did not always have those postpositions that can be called structural Case-markers in Modern Japanese (i.e., *ga*, *no*, *o*). The case-markers *ga* and *o* as well as the topic marker *wa* can still be deleted:

- (31) a. Ame(-ga) futte i-masu yo. ‘It’s raining (now).’
rain -NOM fall be-POL FP
- b. Tanaka-san (-wa) kyoo hon(-o) san-satsu kai-mashi-ta yo.
Tanaka-Mr./Ms.-TOP today book-ACC three-NC buy-POL -PST FP
- ‘(I am telling you that) Mr./Ms. Tanaka bought three books today.’

Among these, *wa* is especially like a focus particle, or what we may call discourse salience enhancer like *ittai* and *the hell* (5.4.2.), in that it can also appear after bare temporal adverbials like *kyoo* ‘today’ or quantifier phrase like *san-satsu* ‘three-NC’ (in negative contexts).

It has been argued that so-called case-marker deletion in Japanese is only possible when the Case can be syntactically or thematically recovered, or when there is abstract Case-marking (under direct head government) (Saito 1985). It is commonly assumed that it is impossible in embedded clauses, but examples like (32a) clearly show that that is incorrect. Moreover, when you do have *ga* or *no* as in (32b), the embedded subject DP may receive an emphatic interpretation:

- (32) a. [o- tenki_ ii] hi ‘(a) fine/sunny day’ (a song title)
PRF-weather good day
- b. [o- tenki -ga /no ii] hi ‘(a) fine/sunny day’ (more emphatic)
PRF-weather-NOM/GEN good day

Although they seem to have lost much of their emphatic force (semantic weakening) in Modern Japanese, overt structural Case-markers in Japanese and other languages may still be emphatic in a sense. In fact, overt morphological marking of the direct object tends to show various semantic effects (Diesing 1992b: 147fn37). For instance, Turkish accusative marker is well known for exhibiting specificity effects (Enç 1991; but see Kennelly 1996), while Japanese accusative *o* may mark specificity in some cases (K. Noguchi 1998). Makino and Tsutsui (1986: 25) note that *o* often drops in declarative sentences if the nominal phrase is not under focus (more frequently in questions). This explains why non-specific indefinite nominal phrases do not usually take *o*, and when it does, it is a rather marked option.

- (33) Nani-ka(?-o) kai-mashi-ta ka? ‘Did you buy something?’
 what Q ACC buy-POL -PST Q

These facts support our analysis that treat (structural, i.e., semantically empty) postpositions as emphatic markers and Ds, the presence/absence of which is crucial at PF. If some overt Ds are emphasis markers, the behaviors of Japanese *sono* ‘that’ as a (pseudo- or semi-)anaphoric marker may be thought to derive from its status as an emphatic D (see 3.3.3.1.):²⁶

- (34) anata-no sono yasashisa
 you -GEN the kindness

‘your (own) kindness (kind nature)’ or ‘that kindness of yours’

The presence and absence of some Ds in some languages are clearly governed by non-structural factors. Let us look at multiple determiner constructions in Modern Greek

²⁶ This claim may be extended to *own* in English, as in (i):

- (i) John (only) like his own books.

again (Androutsopoulou 1995):

- (35) a. to meghalo ghermaniko piano ‘the big German piano’
 the big German piano
- b. to meghalo to ghermaniko piano
- c. to meghalo to ghermaniko to piano
- d. to ghermaniko (to) piano *(to) meghalo
- e. (to) piano *(to) meghalo *(to) ghermaniko

Adapting Stowell’s (1989, 1991) idea that DPs may be either referential or predicative, let us assume that the most external determiner is referential while internal determiners are either referential or predicative (Tredinnick 1992).²⁷ Predicative Ds and referential Ds delete under different conditions, and this may account for the patterns in (35), although we have to leave detailed discussion for other occasions. At least, we could say that Japanese structural Case-markers are external Ds under this view, and they are referential Ds. Consequently, it appears that the deletion of referential Ds is subject to pragmatic and discourse factors, such as referentiality, specificity and discourse salience.

6.1.4.2. Hedging

The *no-da/no-desu* construction can also make the utterance indirect. In this sense, it can be considered a formality marker as well as a (negative) politeness marker.

²⁷ Although Delsing (1993: 142-5) notes that Northern Swedish exhibits a double indefinite construction, it appears that indefinite articles can not be predicative in general, as in Modern Greek, in which they only occur in the initial position (Androutsopoulou 1994):

- (i) a. ena kalo (*ena) vivlio ‘a good book’
 a good a book
- b. *ena vivlio ena kalo
 a book a good

6.1.4.2.1. Indirectness

A predicate clause with *no* is longer (i.e., has more lexical items in it) than one without it, and it tends to be more indirect (see Kunihiro 1984): the longer a sentence is, the more indirect it tends to get:

- (36) a. Stop smoking!
 b. Will you stop smoking?
 c. Will you please stop smoking?

Indirect expressions are typically used in a face-threatening act (FTA) (Brown and Levinson 1978/1987), like orders, requests, and suggestions, as in (36).

It is not clear, however, whether there is a universal direct causal link between the indirectness and the length of a sentence. Some alternations in English, for example, create longer surface strings (see Hopper and Traugott 1993: 39 on conventionalization and language change). Dative alternation is one such case. However, dative alternation always seems to create a difference in information/discourse structure.

- (37) a. Mary sent John the book. (focus on *the book*)
 b. Mary sent the book to John. (focus on *John*)

In the case of conative alternation (Levin 1993: 41-42), there is a difference in the way the act described is (stated to be) performed.

- (38) a. Paula hit the fence. b. Paula hit at the fence.

In a sense, the action in (38b) is somewhat more indirectly stated than that in (38a). Unlike (37), the contrast in (38) is minimal in that the difference between (38a) and (38b) is the absence and existence of the preposition *at*. Taken literally, the idea of Numeration

‘(e.g., mother to a child) Don’t go anywhere with a stranger, OK?’

This use, especially without the copula is frequently found in caretaker-speech (see Cook 1990). We will return to why this may be the case.

Nominal(ized) imperatives are hedged imperatives, as the speaker is not directing the action specifically to the addressee; the source and the direction of the imperatives are not clearly stated in the utterance. Pragmatically, it can also be intensification, since it could be implied that the obligation to obey the order comes from the (often unknown) authority, or social norm, so that it can be used for persuasion (McGloin 1980).

Indirect imperatives in Japanese involve a *no*-clause, which contains *pro*. The question is what this *pro* refers to in these cases. It does not have a discourse antecedent, so that its antecedent must be conventionally determined. More specifically, indirect imperatives have a ‘be supposed to’ meaning, so that it is likely that the *pro* refers to a conventionally known fact. The external obligation reading that we have noted appears to come from this interpretation of *pro*.

One might wonder if Japanese indirect imperatives are really imperatives, except for the fact that they are used as imperatives. Somewhat like ‘normal’ imperatives, they have an aspectual restriction.

(41) a. (Kimi-wa/ga) sono hon -o yomu-no da.
you-TOP/NOM that book-ACC read-NOMN COP

‘(You) are (supposed) to read the book.’

b. (Kimi-wa/ga) sono hon-o yon -de iru-no da.
you-TOP/NOM that book-ACC read-GER be-NOMN COP

‘*(You) are (supposed) to be reading the book.’

‘It is that you are reading the book.’

The verb in the construction normally can not be in progressive aspect, as (41b) can only be used as an imperative utterance in a special situation, such as in stage directions. The situation is not unlike in English:

- (42) a. *Be reading that book.
 b. *Don't be reading that book.

(42b) may be used in limited situations, and the negative version of impersonal imperatives can be used in Japanese, too:

- (43) Waratteru-n ja nai yo. 'Don't be laughing.'
 laughing -NOMN COP+WA NEG FP

Nominalized imperatives are also found in colloquial Tamil (Annamalai and Ramanujan n.d. cited in Brown and Levinson 1987: 208-9), which are politer than imperatives:

- (44) a. Nii poo!³⁰ 'You go!'
 b. Nii pooratu. '(lit. Your going.) You should go.'
 (45) a. Ate nii ceyyu. 'You do it!'
 b. Ate nii ceyratu. '(lit. Your doing it.) You should do it.'

In fact, a nominalized form in general appears to be politer in colloquial Tamil:

- (46) a. Ite yaar connaanka? 'Who said this?'
 b. Ite yaar connatu? '(lit. Whose saying of this?) Who said this?'

6.1.4.2.2. Politeness and Formality

It appears to be cross-linguistically true that the more indirect a sentence is the politer it tends to be. As Blum-Kulka (1987) notes, however, indirectness and politeness

³⁰ No glosses are given in Brown and Levinson (*loc.cit.*).

are not necessarily linked, and the distinction between conventional and unconventional (or conversational) indirectness may be crucial in this connection. As we have noted, referentially or transactionally redundant items can make a sentence more indirect, and what is considered to be redundant may be at least partially determined by convention. In (47), the underlined fragments are redundant, considering that they are all information-seeking utterances. Which of the utterances in (47), except for (47a), is politer than the others is not easy to say, since word order, choice of words in the redundant part and the use of a modal, among others, all contribute to it.

- (47) a. Where is the nearest subway station?
 b. Do you know where the nearest subway station is?
 c. Where is the nearest subway station, do you know?
 d. May I ask where the nearest subway station is?
 e. I was wondering if you could tell me where the nearest station is.

What is clear is that (47a) may not be too impolite, considering that the question seems to be innocuous and common in English-speaking cultures, when prefaced by an “Excuse me,” in spite of the fact that it is usually used in addressing to a stranger. This may not be the case for a question like (48a), depending on who the addressee is.

- (48) a. How old are you?
 b. May I ask how old you are?

Asking (48a) is potentially an FTA, so that the use of the underlined fragment in (48b) is hedging, and this is a case of negative politeness (Brown and Levinson 1978/1987).

It is clear that discourse salience is closely related to the notion of iconicity. Haiman (1985: 151) specifically notes the correlation between politeness and the length

of the message: “[t]he more polite the register, the longer the message.”

The use of *no* as a hedge³¹ may make a sentence with *no* negatively politer than one without it.³² Consider the contrast in (49):

- (49) a. Doo shi-ta-n(o) desu ka? ‘What(’s) happened?’
 how do-PST-NOMN COP.POL Q
- b. Doo shi-mashi-ta (ka)? ‘What’s the matter?’³³
 how do -POL -pst Q

Koike (1994a) claims that (49b), a typical first utterance by a medical doctor on your first visit, represents a decontextualized style of talk, which may be related to Kuroda’s non-reportive style and is not unlike teacher talk and foreigner talk. This pragmatic violation, in which the speaker refuses/fails to encode the presupposition, appears to have a sociolinguistic effect in a situation where it is normally the case that something is wrong (e.g., as a doctor’s utterance): (49b) is less indirect and felt to be politer than (49a) in not assuming that something is wrong and allowing for an answer that nothing (much) is wrong. A typical discourse-initial utterance for a doctor in English is also indirect.

(50) What seems to be the problem?

But at the same time, (49b) may seem impolite for not immediately reacting to the situation at hand. Thus, politeness and indirectness may not always go together.

³¹ Labov and Fanshel (1977) note that extra materials in the sentence can mark politeness, since they can be ‘mitigators.’

³² Politeness and honorification must be distinguished for Japanese. While the former is used to show respect to only the addressee, honorification in Japanese can be used to show respect or deference to someone else discussed in the current discourse (see Shibatani 1990: 374-80).

³³ The so-called question marker *ka* is optional in *wh*-questions. It is harder and less natural to do without it in (49a).

Ikegami (1991) notes that Japanese speakers often prefer vague expressions. For instance, (51) is often used even when the speaker wants exactly two apples at a store.

- (52) Futa-tsu-hodo kudasai. ‘Please give me two or so.’³⁴
two -NC -about give.POL.IMP

Ikegami says that this “seems to sound less peremptory” than saying just ‘two.’ In fact, *hodo* here is used as a hedge, and (46) is felt to be definitely (negatively) politer than a sentence without it. It is important to note that we do not intend to claim that hedged expressions tend to be politer than otherwise in all languages. Hedging is used for politeness here, because a request is an FTA, so that indirectness by hedging often translates into politeness in requests. A similar point can be made for suggestions:

- (53) a. O -cha-de -mo nomi-mase-n ka?
PRF-tea-COP-EMPH drink-POL -NEG Q

‘Wouldn’t you like to drink some tea or something (with me)?’ (politer)

- b. O -cha_ nomi-mase-n ka?
PRF-tea drink-POL -NEG Q

‘Wouldn’t you like to drink some tea (with me)?’

- c. O -cha-o nomi-mase-n ka?
PRF-tea-ACC drink-POL -NEG Q

‘Wouldn’t you like to drink (specifically) some tea (with me)?’

(53a) is felt to be politer than (53b) and (53c) in that the speaker appears to be giving the addressee options (see R. Lakoff 1975). Interestingly, after the addressee accepts the suggestion (53a), the speaker and the addressee often end up drinking coffee or juice. This is often taken by some native speakers to mean either that the word *o-cha* ‘(Japanese green) tea’ has come to mean soft drinks in general or that the expression is a formulaic

³⁴ The segmentation, glosses and translation for (52) and (53) below are ours.

one to suggest talking over a (soft) drink, or both. These claims may be correct, but the use of *de-mo* as a hedge³⁵ is clearly as important a factor as these, since drinking anything but tea after the addressee accepts the suggestion (53c), in which *o* is a D that takes a specific phrase in its Spec position (see 6.1.4.1.), is somewhat odd. The *o* in (53c) appears to mark specificity, but from a discourse point of view, it is also an emphatic marker, and this correlation is exactly like that for *no*.

Using a hedge, such as *hodo* and *de-mo*, as a ‘mitigator’ of an FTA like requests, suggestions and orders is behind many polite expressions. This can be accomplished with the *no-da/no-desu* construction as well:³⁶

- (54) a. Ashita yasumi -ta -i -n(o) desu kedo.
tomorrow rest/take.off-want-NPT -NOMN COP.POL but

‘(I)’d like to take a day off tomorrow, but ...’

- b. Ima sugu ki -te hoshi -i -n(o) da kedo.
now immediately come-GER desirous-NPT -NOMN COP but

‘(I) want (you) to come (here) right away.’

There are two very important uses of polite expressions that are often overlooked. One is to show that the speaker is linguistically sophisticated and by inference of a good social status. The other, which is intricately but probably not directly related to the former, is to distance others from the speaker, which is primarily used for showing deference but also for avoiding rapport with the addressee. This is indeed the case in the

³⁵ Although *de-mo* may be reanalyzed as a single postposition in a case like this, it is most likely a form of the copula *da* and the postposition *mo*. Since discourse salience is a discourse notion, it may not matter in discourse if *de-mo* is a single lexical item or not, so that we may plausibly call *de-mo* a hedge.

³⁶ In many cases, the construction is not sufficient for the mitigating effects needed for the situation, so that another hedge, such as *kedo* ‘but,’ is also used, as in these examples.

use of the politeness strategies in Japanese, in which honorifics are used to talk to strangers in most cases, since that is clearly an FTA in the Japanese society, and negative politeness is preferred in such instances in the Japanese culture. In this sense, polite expressions are somehow detached from the speaker, which is also a feature of sentences with *no*, as we have noted above in the case of *no* as an evidential.

When a sentence is more indirect, it tends to be more formal. A sentence with the *no-da/no-desu* construction may seem more formal than one without it, but, if so, that is probably due to the *pro* in the *no*-clause. As we have just noted, the *pro* refers to a presupposed fact, and the assumed objectivity of the proposition in the Spec position of *no* may be the main cause of the formality of the construction (see above). If a sentence with *no* is considered to be polite, that may make it sound more formal as well, since a polite expression is mostly used in a formal situation.

It is interesting that Brown and Levinson (1987 : 207-9) notes that in English and colloquial Tamil (see 6.1.4.2.1.), negative politeness, or formality, correlates with “nouniness” (see Ross 1973): the more “nouny” an expression is, the more formal it is:

(55) a. You performed well on the examinations and we were favourably impressed.

(less formal)

b. Your performing well on the examinations impressed us favourably.

c. Your good performance on the examinations impressed us favourably.

(more formal)

(56) a. ... and that impressed us favourably. (less formal)

b. ... was impressive to us.

c. ... made a favourable impression on us. (more formal)

They speculate that this is because the more “nouny” an expression is, the more removed the speaker is from the action depicted in the sentence.

6.2. Social Indexicals and Information Management

Some linguistic features are used to index (or signal) social contexts rather than to mark just referential or grammatical meaning that the items may conventionally convey. These are called (social) indexicals (Jakobson 1960; Lyons 1977; Morris 1946; Ochs 1989a; Peirce 1931-58; Silverstein 1976). Cook (1990) argues that the FP *no* is an indexical that indexes group authority for knowledge.³⁷ We discuss this and other sociolinguistically oriented characterizations of discourse functions of *no* in this section.³⁸

6.2.1. Authority For Knowledge

One important idea to adopt in this section is to regard a proposition as information. Consequently, communication can be seen as information sharing or transaction. Important features of communication then include where the information comes from and how it is conveyed, which we have already touched upon.

Kamio (1979) introduced the notion of the “territory of information” to account for the uses of *ne*-type FPs³⁹ and indirect extended predicates in Japanese. According to Kamio, information belongs to either the speaker’s or someone else’s territory and this is

³⁷ From this point of view, we could regard the copulas *da/desu* as social indexicals, instead of stating that they are used in different registers or styles.

³⁸ *No* could be considered a speech marker (see Scherer and Giles 1979) in some cases.

³⁹ The FP *ne* is generally used for confirmation. An expression that has the closest function to it in languages that are familiar to many readers may be a tag, such as English ..., *is(n't) it?*, ..., *right?*, and French ..., *n'est-ce pas?*. Clearly, both the FP *ne* and tags are used as hedges from a discourse salience point of view.

encoded in the linguistic form. As noted, *no*-clauses include *pro*, which indicates that the information represented by the proposition in the clause is presupposed. Presuppositions are generally considered to belong to the speaker, but we have widened the use of the term so that they can refer to what is conventionally presupposed. This gives us two main sources for the information conveyed by a *no*-clause. One is the speaker and the other is the what establishes conventions, i.e., the (speech) community or the society. The information may come from the speaker or it may be seen as coming from somewhere else. In the latter case, it is what has already been established in the current or prior discourse,⁴⁰ or else the addressee must assume that it is a known fact in the community that he/she belongs to. It is difficult to challenge socially shared knowledge, or common sense, and the non-challengeability of *no*-utterances, utterances that (almost) end with the FP *no* (see Cook 1990), can easily be attributed to this fact.

In connection to this latter idea, the notion of authority for knowledge becomes crucial. Since an utterance is never accepted without authority (Du Bois 1986), conveying information by asserting a proposition is to claim authority for the knowledge represented in it. The notion of territory of information can be subsumed under the notion of the authority for knowledge (see Cook 1990), and we can now see the distinction that we made with regard to the source of information as one between group authority⁴¹ and individual authority.

As we noted earlier, the FP *no* appears to be used frequently in caretaker-speech

⁴⁰ It is common among Japanese people to resume a conversation after a long interval. In fact, it is often considered customary to start with where they left off at their last meeting.

⁴¹ Since the speaker is necessarily a part of the group in question, he/she still has authority in this case, but he/she has inherited the authority from it.

in the form of indirect imperatives. By now it should be clear that such a construction is used to inform the addressee of part of social/common knowledge as to how things should be done. The *pro* in such a construction refers to a proposition that is understood or is supposed to be in the permanent storage as a member of the community. This claim may be supported by the fact that *no*-utterances used this way have a potentially patronizing tone attached to it.

6.2.2. Gender, Power and Solidarity

Makino and Tsutsui (1986: 48) state that the FP *no* can be a female question marker: “In informal female speech the sentence-final *n(o) desu ka* becomes *no* spoken with rising intonation. In this use *no* is almost a female question marker.”⁴² In her very small corpus of conversations between a married couple, Ueno (1994) found both interrogative and declarative uses of the FP *no* in both the wife’s and the husband’s speech. The distinction that she made between these two uses appears to be based on an intonational difference (rising vs. falling). The husband used *no* less frequently (47 times) than the wife did (84 times), but he used the interrogative *no* more frequently (82.98%: 39 times) than the declarative *no* (17.02%: 8 times), while the wife showed little difference in usage between them (45.24% and 54.76%, or 38 and 46 times, respectively). We feel that this result seems to more correctly reflect the usage of the FP *no* by men and women than Makino and Tsutsui’s (impressionistic) comment: the

⁴² The FP *no* is often glossed as a question marker, and it appears to function as such in the “plain” speech register. This use is also found with other ‘formal nouns’ that are used as FPs (e.g., *wake* ‘reason’). The sequence of *no ka*, with the so-called question-marker *ka* (but see footnote 36 in 3.3.1.), as an utterance-final form is limited to written or formal registers and is virtually impossible in colloquial registers.

interrogative FP *no* is in fact used by both men and women. Ueno does not appear to have counted the reduced form of *no*, *n*, which occurs very frequently before the copula *da* (or *desu*). Since the *no-da* sequence is probably used more by men than women, it is not entirely clear if Ueno's findings are truly due to the gender difference, as generally perceived.⁴³

The preceding discussion raises at least two questions:

- (57) a. Why is the FP *no* used more by women than by men?⁴⁴
 b. Why is the FP *no* used so often by men in questions?

West and Zimmerman (1985) note that women tend to use more fillers and intensifiers than men. This may be true in Japanese as well. If what West and Zimmerman mean by fillers includes hedges, then their claim is compatible with the use of the FP *no* by women, since we have proposed that *no* be seen as a hedge or an intensifier. Unfortunately, this still does not explain why it is used more by women.

We have noted that, when a sentence is more indirect or formal (for different reasons), it tends to be more (negatively) polite. Such an expression appears to be more favored by women than by men in most speech communities. One possible explanation for this is that those with less power tend to be more negatively polite and women tend to

⁴³ The *no-desu* sequence is used both by men and women and may not exhibit much cross-gender difference in usage, but Ueno's data are from a married couple's conversations, in which such a polite form is very unlikely to be used.

⁴⁴ We have noted some similarities between the topic marker *wa* and *no*, both of which we argue to be Ds. Interestingly, they are both (arguably) used as FPs and appear to be used more or almost exclusively by women (see McGloin 1986). It should be noted that the FP *wa* has two versions: one with raising intonation and the other with falling intonation. The FP *wa* with falling intonation is also used by men. Both kinds of the FP *wa* are different from the topic marker *wa* in that, when preceded by a clause, the latter must have *no* (or another 'formal noun') before it in MJ.

have less power in most societies. If this is correct, we could say that at least the declarative *no* can be seen as a negative power marker.

It should be noted, however, that it is probably not a good idea to directly associate gender with power (or a lack thereof), as much research in gender and language in the past twenty-five years or so has shown (see Henley and Kramarae 1991 for a review). There are other factors to be considered, and we believe that use of a linguistic form or expression depends on the actual (linguistic and extra-linguistic) situation in which it is used. Age, for instance, is definitely a crucial factor in the Japanese society in relation to power and politeness in many situations. Even though men are generally *perceived*⁴⁵ to have more power than women in the Japanese society,⁴⁶ younger men have less power than older women in many situations and we would expect them to behave as such. Also younger females may use fewer instances of what may be considered negative power markers like the declarative *no* among peers. Although we do not know how true these generalizations actually are, younger men appear to use the FP *no* more often than older men, which may be one of the main reasons that Makino and Tsutsui and we disagree.

There is another aspect to power that we should not ignore. Recalling our discussion from the previous subsection, possession of knowledge, especially what is generally considered to be socially essential knowledge, is likely to be tied to power.

⁴⁵ It should be noted that here what is perceived is relevant and not what actually is the case.

⁴⁶ It is true that Japan lags behind most so-called developed countries in having women in socially visible positions of high status, but in many households the wife controls the financial matters and makes crucial decisions in children's education and it is not correct to say that women always have less power than men.

However, sharing knowledge as an act (usually as a speech act) is not necessarily one of flaunting power. It can be seen as a friendly and/or nurturing act to make the addressee feel like he/she belongs to the same group as the speaker. In this connection, it has been noted that the FP *no* expresses positive politeness (McGloin 1983 cited in Cook 1990). Sharing information can be thus seen as an act for (group) cohesion, solidarity and rapport. McGloin (1986) notes that *no* serves to establish and maintain rapport with the addressee. Cook (1990) argues that *no* “is a tool that is used to maintain group harmony,” and she sees this as one of the reasons that the FP *no* is associated with women’s speech.

Our answer to the second question is as follows. Men use the FP *no* as a question marker more than as an FP in declarative sentences, because men like to assert the proposition but the copula *da* is not available in a question in plain/informal register,⁴⁷ while in declarative sentences it is available and there are also other ways to (strongly) assert the propositions, such as use of other FPs like *zo* and *ze*, which are exclusively used by men in colloquial speech. This means that the interrogative *no* is probably not used more frequently by men than by women, and indeed in Ueno’s study cited above, the raw numbers of occurrences of the interrogative *no* are almost the same for both the husband (39 times) and the wife (38 times). Since men use the declarative *no* much less frequently, however, over all women end up using the FP *no* more frequently than men. If we also count the number of times men use the *n(o)-da* ending, the difference between men and women may turn out to be even smaller than shown in Ueno’s study.⁴⁸

⁴⁷ The sequence *no-da ka* (or *no ka da*) may not be used in (the main clause) sentence-final position at all, probably because assertion (*da*) and question (*ka*) are not compatible with each other. It is, however, possible in embedded clause, in which *ka* is does not have an interrogative force.

⁴⁸ Terao and Zimmerman (1999) note that the use of sentence endings in Japanese is

As for the fact that men tend to favor strong assertion more than women, we should be careful not to attribute this directly to power. It is equally, if not much more, likely that this is due to the fact that strong assertion may be considered too unsophisticated, or more appropriately speaking, too untactful (or worse, too uncouth) for a woman to use. A proposition, once strongly asserted, is difficult to take back. It is much like flaunting the speaker's confidence in the presupposition in question. Generally, a woman may not like such a straightforward tactic as a part of her communication style. This appears to be the case in the Japanese society, in which even in a friendly situation, an adult woman often speaks to a female acquaintance of more or less the same age and social status much more politely than a man would to a male acquaintance of the more or less the same age and social status, especially when they did not meet each other before graduating from college or high school. Although this may not be true in all social classes and regions, there is an idea that it is safer to be overly polite than not very polite, which is perhaps not unrelated to the Japanese preference for negative politeness over positive politeness.⁴⁹ One could say that women are socialized to be politer than men in the Japanese society. This fact, however, may not be directly tied to any type of power relationship between the speaker and the addressee. The pragmatically less assertive style of women is not necessarily less assertive in discourse.

affected by the sex of the interlocutor: female speakers use less forms that are understood to be strongly feminine and male speakers use more of those forms, when addressing the opposite sex. This can be seen as accommodation of some sort, but it affects both female and male speakers so that it does not undermine our claims here.

⁴⁹ It is our impression that adult women in the Japanese society may have a harder time making true friends after the age of, say, 25 or so, than men. This is of course related to the fact that many Japanese women do not have full-time jobs, through which they may have a better chance of meeting another female that may be compatible with them, and they do not get to meet many other women than are outside of their family and neighbors.

It is perfectly possible to sound very assertive using a typically female, pragmatically less assertive, style, without the use of the copula *da*. For example, it is difficult to say that (58a) and (58b) are intrinsically different with regard to their assertive power:

- (58) a. Sore-wa dame -da-yo. ‘That is no-good.’ (typically male)
 that -TOP no-good-COP-FP
- b. Sore-wa dame -yo. ‘That is no-good.’ (typically female)
 that -TOP no-good-FP

No-clauses can refer to actions that are conventionally done or not done in the speech community. We have noted that this characteristic of *no*-clauses makes them sound detached from the speaker. As we noted in 6.1.4.2.1., the source of obligation in the case of the imperative use does not come from the speaker, but from the community including the speaker. Such an imperative is politer than an imperative without a hedger. We find this to be analogous to the fact that the use of a first person plural pronoun tends to be more politer and more formal than that of a first person singular pronoun.⁵⁰

- (59) a. We believe/know that ... (more formal)
- b. I believe/know that ... (less formal)

(59a) is more objective-sounding than (59b). It is probably because in (59a) the belief or knowledge is attributed not just to the speaker, thus making the utterance less subjective. In a sense, the use of a first person plural pronoun in (59a) also obscures the source of the responsibility for the belief or knowledge. In this sense, (59a) is more like a passive with no agent specified (60) than (59b):

- (60) It is believed/well-known that ...

⁵⁰ As we noted earlier, a “nouny” version of (59) is even more formal:

- (i) a. It is our belief that ... (more formal)
 b. It is my belief that ... (formal)

6.3. Modality and Affect

The use of the FP *no* that we have seen indicates that it can be seen as a modality marker: it is used in sentences with imperative force, and has an evidential (epistemic modality) function. Since *no* is not an inherently modal particle and its modal uses are only manifested in certain discourse situations, it should be seen as a discourse modality marker. Following the traditional distinction between the dictum and the modus, we define modality as what is outside of the proposition in general. Under this definition, the FP *no* is a modality marker.⁵¹

6.3.1. Modality and Discourse

We take most, if not all, Japanese FPs including *no* to be modal particles. In her generative study of Japanese sentence particles, Uyeno (1971) argues that the “sentence particles,” or sentence-final particles, *wa*, *zo*, *ze*, *sa*, *yo*, *ne* “with its variants” *ne(e)*, *na* and *na(a)* (48), “are derived from the underlying performative verb in the logical form with the interaction of presuppositions” (139). She demonstrates that the performative verbs STATE, ORDER, ASK and SUGGEST can explain occurrences of these particles.

An alternative to such an analysis is to posit a modal operator, possibly for each sentence type, based on the mood (indicative, subjunctive, and imperative) of the clause, the function (declarative, interrogative and imperative) of the sentence, or the speech act performed by the utterance. Kayne (1991) posits a sentence-initial empty modal for some sentences in Italian (see also Bolinger 1977: 183-99). Rivero and Terzi (1995) propose

⁵¹ Modality is very often grammaticalized in many languages (see Palmer 1986), and if we have been correct so far, the case of *no* involves a process of pragmaticization.

that C contains a modal operator. More pragmatically oriented accounts loosely based on the idea of sentence types according to speech acts are also possible (see McCawley 1989), and they may be more closely related to Uyeno's analysis.

The discussion so far is compatible with the idea that the modal part of the sentence tends to appear at or close to the periphery of the sentence. This appears to be the case in many languages. For example, modal adverbs, such as *tabun* 'perhaps' and *zannen-nagara* 'regrettably,' appear at the beginning of the sentence as well as after the topic in Japanese. Modal adverbs are sentential adverbs in English and differ from manner adverbs: Ernst (1987) notes that epistemic and (pure) manner adverbs⁵² exhibit different patterns.

- (61) a. Undoubtedly, the contest is rigged.
 b. *The contest is rigged undoubtedly.⁵³
- (62) a. *Loudly, you must blow the trumpet.
 b. You must blow the trumpet loudly.

Since some modal adverbials appear to be clausal (e.g., *to tell you the truth*, *to be honest*, *zannen-na koto-ni* 'regrettably' in Japanese), the behavior of such French adverbs as *heureusement* 'happily, fortunately' (Rochette 1990) is quite interesting:

- (63) a. Heureusement que Marie viendra demain.
 fortunately that Marie come.FUT tomorrow
- b. Heureusement Marie viendra demain.
 fortunately Marie come.FUT tomorrow

⁵² Ernst notes that manner adverbs do not constitute a class of lexical items. Therefore, (pure) manner adverbs here refer to those adverbs that only allow manner readings and not modal readings.

⁵³ This sentence can be saved, if one inserts a pause before *undoubtedly* and pronounce the sentence with a certain intonation, which forces a sentential adverb reading.

- c. *Heureusement Marie viendra -t-elle demain. (no complex inversion)⁵⁴
 fortunately Marie come.FUT-T-she tomorrow

‘Fortunately, Marie will come tomorrow.’

(63c) shows that a complex inversion is impossible with this adverb. However complex inversions are to be analyzed, therefore, it appears that the adverb is outside of the main clause (CP).⁵⁵

This recalls the use of hedged performatives (G. Lakoff 1972) in English:

- (64) a. I wonder what that’s all about? [sic] (“?” in the original text)
 b. I guess Sam is not as good as I thought he was.
 c. I suppose/guess/think that Harry is coming. (G. Lakoff 1972)

It is interesting to note that these hedged performatives can appear sentence-finally.⁵⁶

- (65) a. What’s that all about, I wonder?
 b. Sam is not as good as I thought he was, I guess.
 c. Harry is coming, I suppose/guess/think.

This word order can be derived from that in (64) by raising the embedded clause.

Some languages, such as German (Abraham 1991) and Norwegian (Andvik 1992), are known to have modal/discourse particles. They are like fillers or (sentential) adverbials in that they tend not to have stress or inflect. They also typically have

⁵⁴ The /t/ in the sequence *viendra-t-elle* is an epenthetic consonant.

⁵⁵ It is not entirely clear at this moment, if this also applies to modal auxiliaries in languages like English, which tend to occur in a position between the subject (or the topic) and the main verb, much like sentential adverbs and modal particles in languages like German and Norwegian:

- (i) a. It may be that Sue came here.
 b. Sue may have come here.

⁵⁶ This is called *slifting* (Ross 1971; Green 1976).

(near-)homophones with non-modal meaning, which are often distinguished by phonological cues. The following German examples are from Bayer (1991) with his glosses and translations:

- (66) a. Bist du krank? ‘Are you ill?’
 are you ill
- b. Bist du etwa krank? ‘I hope you are not ill.’
 ?
- (67) a. Kommt rein! ‘Come in!’
- b. Kommt nur rein!
 ?
- (i) spoken with a friendly tone:
 ‘Please come in.’
- (ii) spoken with a threatening tone:
 ‘Just dare to come in (...Then you’ll see what will happen).’
- c. Kommt schon rein!
 ?
- (i) spoken with a friendly tone:
 ‘Just come in.’
- (ii) spoken with a harsh tone:
 ‘Come in (... I can’t avoid it anyway).’

In (67), *nur* ‘only’ and *schon* ‘already’ are used as modal particles. The corresponding scalar particles in English do not have the same distributions:⁵⁷

- (68) a. *Come only in!

⁵⁷ As Bayer notes in a footnote, however, *already* does have a (possibly) modal use:

- (i) Come in already!

b. *Come already in!

Many of these characteristics are shared with discourse markers in English⁵⁸: they are parenthetical, like interjections or adverbials in that they do not inflect and many of them have literal uses that are different from uses as discourse markers. Stubbs (1983) discusses *well*, (sentence) adverbials (e.g., *firstly*, *finally*, *furthermore*, *admittedly*, *frankly*, *fortunately*) and *please*. Schiffrin analyzes *oh*, *well*, *and*, *but*, *or*, *so*, *because*, *now*, *then*, *y'know* and *I mean*. It should be noted that (almost) none of these words or phrases are exclusively discourse markers. In fact, some modality markers are also discourse markers, but many discourse markers are not modality markers in a narrow sense. The uses of these words as discourse markers appear to be derived, much like many, if not most, modal particles. Since Japanese *no* has a backgrounding use for discourse cohesion, as we saw above, it can be considered a discourse marker as well.

No, however, appears to be different from both modal particles and discourse markers in other languages, since its syntactic distribution is severely restricted. Moreover, even from a purely non-structural and functional point of view, *no* can not be seen as an adverbial, since it forces a morphological alternation for the morpheme that precedes it, as we have seen:

- (68) a. Sono hana -wa kirei -da. 'The flower is pretty.'
 that flower-TOP pretty-COP

⁵⁸ Schiffrin (1987: 31) operationally defines the term (discourse) "markers" as "sequentially dependent elements which bracket units of talk" (emphasis not added). Our definition of discourse markers is broader; discourse markers are elements in discourse that mark/point to the organization of discourse (i.e., discourse structure) and/or discourse content (i.e., what is going on in discourse). Many terms have been used for a wide and varied group of discourse markers and the like (see Takahara 1998 for some of them).

- b. [Sono hana -ga kirei -na -no] -wa shitteiru.
 that flower-NOM pretty-COP-NOMN-TOP know

‘I know that the flower is pretty.’

In spite of this difference, there is an important similarity between *no* on the one hand and modal particles and discourse markers on the other. Unlike the latter group of particles, the FP *no* has an apparent non-modal and grammatical homophone (the linker/enclitic *no*). We contend that they are one and the same, and the FP uses can be said to be derived for pragmatic/discourse purposes, or in this case, modality/affect. This is what we have called a (synchronic and/or diachronic) process of pragmaticization, and now we can extend this idea to modal particles and discourse markers in general.

6.3.2. DP as a Modal Projection and the Affect Criterion

The discussion in the previous subsection raises the possibility that the distinction between the modality and the proposition is structurally manifested. We claim that this is indeed the case. More specifically, there is a (set of) maximal projection(s) of modality that dominates those that represent a (pure) proposition. The null hypothesis along this line is to assume that such a structural configuration is obtained at or by LF, if not at SPELL-OUT, so that a modal phrase (or possibly a modal feature or features of a phrase) may be raised to satisfy this condition. We propose that DP can be a modal projection in this sense, which may motivate local movement of the proposition (CP/IP) to Spec, DP.

In order to cover a wider range of cases than traditionally modal ones, we propose to use the term “affect” in addition to modality. We may then extend this condition to apply to such cases as *wh*-fronting/raising (not just *wh*-movement; see 5.2.1.),

Neg-raising, focus movement, emphatic fronting (see Koike and Bhattacharjya 1992 and Koike 1992 for the possible relationship between emphasis and modality), scrambling and even QR (Quantifier Raising). This certainly goes against traditional and/or standard analyses of at least some of these operations, but this may be a promising approach to unify many cases of unbounded dependencies or mismatch between word order and meaning.

The term “affect” is used both in (discourse) pragmatics and in syntax. In (discourse) pragmatics, Ochs (1989b) defines “affect” as “expressed emotional dispositions or ‘the expressive and experiential part of emotion,’” which are conveyed with the uses of prosody, phonological variation, morphological particles, affixes, pronominal systems, quantifiers, emphatics, hedges, adverbs, verb voice, tense/aspect systems, modals, word order, dislocated constructions, parallel structures and repetition (see Ochs and Schieffelin 1989). In syntax, it is used as in affectedness of Patient (transitivity), affectedness (see e.g., Grimshaw 1990: 93-4) and the principle Affect α (Lasnik and Saito 1984), which includes Move, deletion and insertion. More relevant to our idea of “affect” is the use of the term “affect(ive)” by Klima (1964), which refers to the variety of mostly negative elements in a sentence that affect English word order. Besides negation (see Givón 1984: 336; Koike and Bhattacharjya 1992), affective elements seem to include a question marker, tense/aspect (see Inoue [1976: 248-9] on Japanese *ta*) and *wh*-words. Since affective elements often yield scope ambiguities, it is reasonable to assume that affective elements are operators that take scope over proposition and bound variables. Following analyses of such elements in the recent literature, we could postulate the “Affect/Modality Criterion” as a well-formedness

condition that motivates raising of affective elements to fulfill Spec-head agreement and correct scope interpretations, along the lines of the Wh-Criterion (Rizzi 1991), the Neg Criterion (Haegeman and Zanuttini 1991; Haegeman 1992) and the Operator Criterion (Drubig 1994):

(69) *Affect/Modality Criterion:*

- a. An affective/modal phrase (XP) must be in a Spec-head configuration with a head (X^o) that is marked with an affective/modal feature.
- b. An affective/modal feature in a head (X^o) must be checked off by an affective/modal phrase (XP) in its Spec position.

Our Affect/Modality Criterion may apply in DP, since we assume that *no* is an affective/modal D.⁵⁹

(70)

$$\begin{array}{c}
 \text{DP} \\
 \wedge \\
 \text{Spec D}' \\
 / \quad \wedge \\
 \text{AFF-phrases D CP/DP} \\
 [+ \text{AFF}]
 \end{array}$$

This analysis can account for multiple occurrences of FPs in Japanese as cases of DP recursion and not CP recursion (see Browning 1996, Watanabe 1992).⁶⁰ It is important to note that there are condition on the order in which Japanese FPs can occur.

⁵⁹ Since we have characterized affect and modality as mostly discourse-related notions in this chapter, our Affect/Modality Conditions apply can be said to apply at PF. Such a treatment, however, fails to capture the insight behind other criteria, which are to apply at LF, since we can only have conditions for PF and LF in the MP. We leave this issue for future research.

⁶⁰ While DP recursion appears to be rather robust, if we are correct, CP recursion appears to be much less so. If CP can be the complement of D, as we have argued for in 4.4.1., however, CP recursion may be taken as a case of DP with a CP complement. If this is correct, D may be the only functional category that iterates.

- (71) a. DP/CP-*yo-ne*.
 b. *DP/CP-*ne-yo*.

Since the copulas *da/desu* only occur before an FP, we could treat them as Ds.

- (72) a. DP/CP-*da/desu*-*yo-ne*.
 b. *DP/CP-*da/desu*-*ne-yo*.

Similarly, the so-called double modal constructions in some varieties of English may be considered to be cases of DP recursion.

- (73) I might could/should/can go.

Extending this line of analysis, we may want to treat some obligatorily prenominal *no*-phrases as modal modifiers:

- (74) a. *tada-no* *gakusei* 'a mere student'
 mere *student*
 b. *hon-no* *san-satsu* 'as few as three volumes (of books)'
 just *three-NC*

6.4. Summary

In this chapter, we have examined the discourse functions of the FP *no*, and argued that they derive from its structure and *pro* inside the *no*-clause. Assuming that the FP *no* is a modality marker, we have regarded DP (*no*) as a modal projection, and proposed an LF condition for such DPs.

CHAPTER VII

CONCLUSIONS

In this final chapter, we summarize the main points of the dissertation. We will also discuss some issues that remain and propose some suggestions for future research.

The main question that we posed at the beginning of the thesis was if the case of *no* represents monosemy. We have argued that that is indeed the case, and most of the dissertation was devoted to show that this is not only possible but also plausible. Our analysis is based on the assumptions that Japanese is (underlyingly) Spec-initial and head-initial and that the genitive *no* is a linker head D. The complement of *no* can be *pro*, in which case it is taken as a pronominal when the corresponding Spec position contains a non-clausal projection like NP or DP. Behaviors of *no* in descriptive genitives and facts about the phenomenon called “rendaku” or sequential voicing, however, suggest that it is not always a linker, and we have argued that there is a gradual historical transition of *no* as a linker (1a) to an enclitic as a part of the modifier in Spec, DP (1b):

- (1) a. [_{DP} NP/DP [_{D'} no NP/DP/*pro*]] b. [_{DP} [_{DP} NP/DP-no] [_{D'} \emptyset NP/DP/**pro*]]

We argued that even in the latter case there is a covert *no* as the head of DP. The transition, therefore, is quite minimal and it is a matter of lexical insertion.

The same transition appears to be found in clausal cases, in which *no* may not appear after a tensed relative (2a), unless the relative (IP) includes no verbal and/or its complement is null (*pro*), as in (2b), because only an overt *no* can license *pro* in the complement position.

- (2) a. [_{DP} [_{DP} IP] [_{D'} \emptyset NP/DP/**pro*]] b. [_{DP} IP [_{D'} no NP/DP/*pro*]]

When its complement is null, *no* can be taken as either a pronominal or a nominalizer.

We have proposed that the null complement is also *pro* in these cases, whose antecedent may or may not be in the (current) discourse, as in nominal cases. When the (possible) antecedent of *pro* is in the discourse, *no* is taken as a pronominal, and it is interpreted as a nominalizer otherwise. This analysis can uniformly account for all kinds of *no*-clauses, as we have seen.

Pragmatically, *no* always appears to involve a presuppositional reading, which supports our claim that *no* is a linker D. When the complement is null, this presuppositional reading can be attributed to the null complement *pro*, but Spec, DP independently seems to be a preferred position for a presupposed material in Japanese. (Since the nominalizer *no* is relatively new, this pragmatic use of *no* may be new. We need to study the uses of *no* in Old Japanese carefully to see if that is indeed the case.) The (apparent) ambiguity of *no* as a referent particle and a copula particle (Bloch 1970) can also be accounted for without positing two kinds of *no* under our linker analysis.

The nominalizer *no* with a null complement (frequently as a part of the *no-da/no-desu* construction) is often reanalyzed as a (sentence-)final particle via a process of pragmaticization. The final particle *no* acquires affective/modal meanings in the process and derive many discourse functions of *no*.

To our knowledge, this is the first (major) work to incorporate the traditional idea of linker into a formal study. In their review of Taylor (1996), Barker and Polinsky (1998) note that such an approach may be promising for English's. They note that possessive markers turn into linkers in many languages. Considering the English and

Norwegian cases, and possibly the Japanese case with the demonstrative *sono* ‘that,’ this may not be as implausible as it might seem at first.

The function of *no* as a linker may put it in the same category as agreement markers, which are considered to be [- INTERPRETABLE] in that they do not have any significance at a level like LF. Although we have not provided formal semantic treatment of *no*, it suffices to note that, in spite of the two syntactic positions that it can occupy, we do not know of any reasons to give two distinct semantic analyses for *no* depending on its syntactic position. From both syntactic and semantic points of view, a promising approach is to take the historical transition between the two positions as a type of grammaticalization, or more specifically, N-to-D reanalysis or type shifting/lifting, as we noted.

This type of analysis may be extended to other so-called formal nouns, such as *koto*, *mono* and *tokoro*, as well as the pronominal *ga* in the Toyama and Kochi dialects. These may generally be seen as examples of the grammaticalization of a common noun into a formal noun as a functional item. Since *no* and *ga* do not stand alone in the first place, this type of grammaticalization has nothing to do with the loss of morphological independence, as often noted. The seemingly semi-lexical status of such formal nouns may not be purely due to any syntactic operations. See von Stechow (1995) for an attempt in formal semantics to formalize the idea of grammaticalization.

It is interesting to note that this process of grammaticalization is often followed by a process of pragmaticization from a functional or semi-lexical item to a discourse particle. This appears to be the case not just with *no* but also with formal nouns.

Our syntactic interpretation of the notion “linker” is that it is a mediator of two

maximal projections. This idea is in fact much broader than it appears at first, so that a linker also mediates adjunction. This also means that a small clause always has a head and that multiple adjunction to DP is structurally DP recursion. This analysis clearly goes against many analyses of DP, but its simplicity can dispense with other kinds of nominal functional projections, such as QP, NumP and GenP. It is also consonant with our Relativized Modularity Hypothesis, in that semantically oriented features are not represented in syntax.

We did not carefully examine the internal structure of DPs with quantifiers and noun classifiers in this dissertation, as we assumed that it is basically the same as that of other DPs. The semi-lexical nature of noun classifiers, however, suggests that they may be regarded as heads (NCP stands for Noun Classifier Phrase), as in (3a):

- (3) a. NCP (or DP)
 \wedge
 ni \wedge
 satsu hon
- b. ni-satsu-no hon ‘two (volumes of) books’
 two-NC-GEN book

Typologically speaking, this is not an implausible claim, since classifiers and determiners are similar in other languages, such as Cantonese (Simpson 1997), which is quite different from Mandarin Chinese in this respect (see Pacioni 1998). They also occur more than once in DP in some languages, so that multiple classifier constructions, such as those in Thai (Simpson 1997), may be seen as cases of DP recursion with the classifier as the head D. With complement raising (i.e., raising of the head NP) followed by raising the whole NCP (or DP), (3a) can derive (3b). This is remnant movement and is allowed in our framework, but (3b) can also be base-generated. It remains to be seen if either

analysis is the correct one, or they are both on the right track.

Since our main focus was on the Japanese *no*, the applicability of our linker analysis to other functional items that appear to be linkers awaits future research. For example, the postpositions *ga*, *o* and *wa* in Japanese, as well as the three Ds in English, i.e., *'s*, *of* and *the*, and their differences need to be further investigated. Demonstrative, definite articles, agreement markers, expletives and conjunctions can be seen as Ds as well, and they need to be explored with regard to the idea of a linker. An important question that we have not posed is how they are to be distinguished in the lexicon.

We have argued that *no* as a D can be syntactically present but phonologically reduced or null and that the absence or presence of D is crucial at PF. We have seen that this is true with other Ds in Japanese and some Ds in other languages. We still do not know much about what happens between SPELL-OUT and PF, and we have only opened up some possible paths to follow to explore some possibilities. Our claim is compatible with Haspelmath's (1999) recent claim that economic motivations may be behind the absence of the definite article in the presence of a possessive in many languages of the world. This is also a rich area to explore.

We did not discuss it explicitly, but the dissertation is partly about the notion of modification. Much recent work on DegP in English, such as Corver (1997), refers to this notion. We have questioned the usefulness of the maximal projection DegP for Japanese in 4.1.1., but certainly more research in this area will be welcome.

One important theoretical point in this work has been that empty categories are much more common than previously thought in linguistic representations. However, their distributions are restricted and well motivated. We have argued that there are two kinds

of *pro* and two kinds of presupposition: discourse-bound and non-discourse-bound. We have further claimed that the distinction between the pronominal *no* and the nominalizer *no* is due to these two uses. Discourse binding is a still not well understood process, and much more needs to be discovered. Such research should have far-reaching consequences in how we should view discourse processes as interactional processes and what role the notion of presupposition plays in it.

As we noted at the beginning of Chapter 6, the uses of *no* as a (sentence-)final particle should be examined by looking at it in naturally occurring discourse. Especially, the use of the *no-da/no-desu* construction and the FP *no* in presentational utterances and backgrounding contexts should be further investigated. In fact, many issues touched upon in Chapter 6 require more rigorous and thorough research. The notion of discourse salience constitutes one such issue, which also appears to play an important role in many dependencies, such as pronominal binding and floating quantifiers.

If we have been correct, *no* occurs in both nominal and sentential structures. This raises many questions about the parallelism between the sentential structure and the nominal structure, which has been generally assumed, especially since Chomsky (1970). For instance, is a structural case assigned to a sentence as well as to a nominal phrase (see the Case Resistance Principle of Stowell 1981)? Can a sentence/clause be definite and/or specific like an argument, as our discussions in this work may have suggested? If there are functional categories in the nominal system, is there IP in DP? As far as the last question is concerned, we have not even discussed the internal structure of Japanese IP and how it may be derived. Adopting Kayne's (1994b) antisymmetry hypothesis means that we need a new analysis of even a simple SOV order in IP. See Nakajima (1999) and

Honda (1999) for their analyses of Japanese. They appear to be more interested in showing the validity of the antisymmetry hypothesis than we are, but it should be noted that most of our analyses in this work would be impossible or very difficult under the assumption that Japanese is head-final, so that this dissertation also provides support for the hypothesis.

Nominal and sentential structures can be distinguished by their categorial features: nominal and verbal. Some of our discussions in this work has effectively denied the existence of the mixed categories A [+N, +V] and P [-N, -V], but the nominal and verbal features do play an important role in our analyses. For example, the absence of *no* in relative clauses is shown to be only after a verbal relative. We have also argued that *no* can take an obviously nominal complement like DP, NP and *pro* as well as CP. Does this mean that CP is really nominal? Should we really attribute to *no* that its complement is always nominal? This also raises a similar question about other linkers, such as *wa*.

Since we started out this dissertation with our intention to study interactions among linguistic components, it may be appropriate to finish it with some words about our Relativized Modularity Hypothesis and the MP. The hypothesis and the consequences that we derived from it are certainly compatible with much of what we have seen, but it is fundamentally incompatible with the MP. Since *no* is semantically empty, we do not have much to say about the semantic module, but it is a crucial module in this connection. The role that LF plays in the MP is relevant to the semantic module, and the relationship between LF and PF is an important issue to work on to understand how the semantic and pragmatic modules interact with each other. One of the issues in this connection is the usefulness of our Affect/Modality Criterion in the MP.

AFTERWORD

“This is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.”
— the former British Prime Minister, Winston Churchill (November 10, 1942)

Haraguchi (1991: 221fn) confesses that he left the “Conclusion” to his book in the pre-publication draft form blank except for the following Zen-like footnote:

The conclusion of this work is obvious, and it goes almost without saying: *mu* (無), or “nothing or filled with everything.” I believe that this can be best expressed by a few blank pages. Of course, the reader is free to fill in these pages, as he/she sees fit. “The rest is silence.”

This passage is reminiscent of the Japanese saying “*Iwa-nu-ga hana*. (‘say-NEG-NOM + flower’; a sentence without *no* in the subject position, as one would expect in a frozen expression like proverbs and axioms, which should reflect older patterns; see 4.1.2.),” which I take the liberty of translating into ‘Having it left unsaid would be the beauty of it.’ The main idea behind such a saying appears to be consonant with some of the Buddhist and the Taoist tenets, and defies the standard Western rational view. Obviously, there is a cultural clash here, and indeed, Haraguchi notes that an anonymous reviewer found his conclusion “anti-climatic and thus unacceptable.”

My transition from Honolulu, Hawai’i to Manhattan was not only a change of place but also of pace and quality. I have often been baffled by how little people seem to understand what I could implicitly assume. Such an occasion has been a challenge for me, when I had to face my own limitations with regard to how well I can express myself. I have written a conclusion, but, unlike Haraguchi, I still wanted to use a few pages to

‘situate’ myself for those readers with whom I have yet to have the chance to do so in person. Those readers who know me personally may think that I am being a little unsophisticated, but I hope that they will indulge me in this short passage.

During the years I spent in New York, the world has seen many changes in political and social order, just as in my life. Academically, the place of linguistics in my mental atlas has shifted considerably (and more than once or twice), though my main foci have remained more or less the same. This has to do with the change that I have undergone in terms of what I regard linguistics is and should be among academic disciplines as well as within my own interests. Some things resist even a slight change — the Japanese political system used to come to mind — and some of my interests die hard. The particle *no* by all means represents one of them. To study it meant to formalize my native intuition as a linguist. In so doing, I believe I have explained some of the characteristics that Japanese shares with other languages. Working on this dissertation has made me realize over and over again that there are no red herrings in the academic sea: I always find new insights when I was working on a seemingly unrelated matter. There are no real garden paths in academic endeavors indeed, only if one is enlightened enough.

It is rather difficult to live in this City without being politically and socially aware, though it may be equally easy to become numb. For many people, becoming an activist is not a viable option, and how can you choose only one issue, when nothing seems to work? Moreover, I believe that one can think of what he/she can do for others only after figuring out what he/she can do for him-/herself. In this sense, this dissertation has been written for myself and my benefits before it could be of any use to others. I have learned

so much in the process of completing this dissertation, and it is always nice to find out that your initially outrageous-sounding hunches turn out to be on the right track. Since I have inherited the national trait of perfectionism as a Japanese and there is the idea that a dissertation is considered to be a touchstone in some sense, it is difficult to indulge myself in self-congratulation, but this is no time to be captious; at least, I feel that I have begun to understand what I have always wanted to find out about: language.

I believe that this work as a whole is original but inevitably somewhat incomplete, although I am certain that I have successfully answered the main research question that I set out to answer. I regard this dissertation as a progress report rather than a finished product, especially with regard to many proposals that I have made: many issues require further investigation. To put it differently, this is a starting point rather than a finished work, as a dissertation should be. I have been unable to pose some of the more interesting questions and had to confine some of the basic issues in footnotes in order to be consistent. It is frustrating to have to leave out so much of the work that I have already done for this research. Lyn Ohira, however, told me that the best dissertation has its best parts taken out, and, if she is correct, I may have done a relatively fine job in that regard. Most of the discussions in this work are there because of their relevance to the main questions. It was a conscious decision on my part to organize the dissertation this way, but such an organization inevitably caused related topics to appear in many different places. It is unfortunate that some, if not many, proposals may seem half-baked, but most of them are in fact much better worked out than I must have the reader believe. These proposals are there, partly because it is my sincere hope that, by introducing new sets of data and ideas into the field, other linguists will examine them with me. Josef Bayer

facetiously said that, if I keep on studying *no*, maybe I will be known as Dr. *No* some day, but I hope that the reader has been convinced that I have outlined the whole picture instead of providing sketchy details about particular data. If so, I would think that I have been successful, since, as the saying goes, all's well that ends well. And remember (though this saying is sometimes taken negatively):

The Best Is Yet to Come.

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