Diachrony in Clause Linkage and Related Issues

By

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The study of clause linkage, despite its importance in the grammar-discourse interface, has obtained due attention only recently (cf. Foley and Van Valin 1984; Haiman and Thompson 1988). The present study (i) examines the framework for the analysis of clause linkage, and (ii) explores the tendencies in, and motivations for, diachronic processes undergone by some selected clause linkage constructions in Japanese. In Part I, 'Theoretical Background', a framework for discussion is laid out and theoretical issues to be dealt with are formulated. Clause linkage constructions can be analyzed in terms of two parameters, namely the structural level of linkage (1.1) and the nature of dependency (1.2). The major claim to be established, detailed in 1.3, is that form and meaning are closely interwoven in the historical development of clause linkage, whose path is typicaly from lower to higher clause integration.

In Part II, 'Clause Linkage in Japanese', the syntax and semantics of clause linkage constructions in Japanese are investigated. After an overview in 2.1, the varieties of major clause linking devices in Modern Japanese are described in 2.2 Chapters 2.3-2.5 form the core of this study. In 2.3, claims will be made, with evidence from operator scope and discourse functions, that 'switch reference' functions of the conjunctive particles TE and BA in Old Japanese (as argued in Akiba 1977) indeed arise from the degree of clause

integration they embody. In 2.4, syntactic changes that occurred to NO- and TOKORO-complements in Old and Middle Japanese are examined, focusing on the status of head-internal relatives. In 2.5, the rise of 'versatile verbs' or grammaticized complex predications (cf. Matisoff 1969) in Japanese are discussed. It is shown that semantic shift drags the advancement of clause integration, evidenced by the occurrence of valency mismatches. In addition, 2.6 briefly discusses sentential connectives and 2.7 presents a few cross-linguistic issues for future investigation. The achievement of these goals is hoped to contribute to our understanding of the complexities of clause linkage phenomena and serve as a reference material for typologically-minded linguists.

To All My Yesterdays

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Glossing Conventions

Romanization of examples from Modern Japanese is phonemic, basically following *Kunrei*-system. Examples from Old, Middle and Pre-Modern Japanese are transliterated. Long vowels are represented by doubling, e.g. roodoo 'labor', because, first, Japanese is a mora-counting language, and second, this convention is sometimes useful for the purpose of segmentation. However, proper names and book titles in bibliography are transcribed phonetically using *Hepburn*-system, after the common practice. Thus in Modern Japanese, si [ʃi], ti [tʃi], and tu [tsɯ] in *Kunrei*-system correspond to shi, chi, and tsu in *Hepburn*-system respectively.

Interlinears are given according to the following conventions: (i) function words are glossed in capitals (linkage markers are treated as primitives, so they are also in capitals); (ii) when a single word in one language corresponds to more than one word in the other, dots are used instead of spaces, e.g. *ani*='elder.brother'; (iii) elements that are not grammatically realized in the original sentence, e.g. subject NPs, are put in the parentheses in the English translation. When examples are cited from elsewhere, they are in principle reproduced with only minor regularizations. Special glosses for examples from languages other than Japanese (e.g. Turkish, Kanite, Hittite, etc.) are given in footnotes.

Abbreviations that are used throughout this study are as follows. When case markers serve non-canonical functions, they are glossed PRT (=particle).

ABL(ative)	BEN(efactive)
ACC(usative)	CAUS(ative)

CLF(=classifier)
COMP(lementizer)
DAT(ive)
DS(=different subject)
EMPH(atic)
EVID(ential)
GEN(itive)
INST(rumental)
LINK(age)
LOC(ative)
MOD(ality)
NEG(ative)
NOM(inative)
NZ(=nominalizer)
PASS(ive)
PERF(ective)
PL(ural)
POL(ite)
PRE(fix)
PRED(ication)
PRT(=particle)
Q(uestion)
SPON(taneous)
SS(=same subject)
STAT(ive)
TOP(ic)
VOL(itional)

Verbal inflection in Japanese is summarized below, using the consonant-stem verb *sak-* 'bloom'. The basic structure of the desinence is V-alternating vowel-affixation. Only Old and Modern Japanese paradigms are given, since Middle and Pre-Modern Japanese paradigms represent transitional stages, and the following serves our present purpose.

Old Japanese

Mizen-kee ('irrealis form'): *sak-a-*; e.g. *sak-a-ba*=conditional; *sak-a-zu*=negation; *sak-a-mu*=suppositional

Ren'yoo-kee ('linking form'): *sak-i-*; e.g. *sak-i-te*=participial, clause chaining; *sak-i-keri*=evidential (remote / hearsay)

Syuusi-kee ('final form'); *sak-u#* (sentence-final)

Rentai-kee ('noun-modifying form'): *sak-ku N* (relative clause)

Izen-kee ('perfective form'): *sak-e*; e.g. *sak-e-domo*=concessive; *sak-e-ba*=sequential

Meeree-kee ('imperative form'): *sak-e#* (sentence-final)

Modern Japanese

Mizen-kee ('irrealis form'): A-grade: *sak-a-* ; e.g. *sak-a-nai*=negation; *sak-a-seru*=causative; O-grade: *sak-o-* ; *sak-o-o*=volitional

Ren'yoo-kee ('linking form'): *sa(k)-i-* ; e.g. *saki-masu*=polite; *sa-i-te*= participial, clause chaining; *sa-i-ta*=past

Syuusi-kee ('final form'): *sak-u#* (sentence-final)

Rentai-kee ('noun-modifying form'): *sak-u N* (relative clause)

Katee-kee ('conditional form'): *sak-e-* ; e.g. *sak-e-ba*=conditional/sequential

Meeree-kee ('imperative form'): *sak-e#* (sentence-final)

Below, Bernard Bloch's system of Modern Japanese verbal inflection is summarized for comparison, using the same verb.

Indicative: Non-past: *saku#*; Past: *saita*

Presumptive: Non-past: *sakoo*; Past: *saitaroo*

Imperative: *sake#*

Hypothetical: Provisional: *sakeba*; Conditional: *saitara*

Participial: Infinitive: *saki*; Gerund: *saite*; Alternative: *saitari*

0. Introduction

The study of clause linkage, despite its importance, has obtained due attention only recently (cf. Foley and Van Valin 1984; Haiman and Thompson 1988). Since natural discourse is seldom a mere juxtaposition of simple sentences, the investigation of how idea units are combined into a whole via grammatical means is highly significant for our understanding of grammar and discourse. The present study (i) examines the framework for the analysis of clause linkage, and (ii) explores the tendencies in, and motivations for, diachronic processes undergone by some selected clause linkage constructions in Japanese. The major claim I aim to establish is that form and meaning are closely interwoven in the historical development of clause linkage, whose path is typically from lower or looser to higher or stronger clause integration. The achievement of these goals, I believe, will contribute much to our understanding of the complexities of clause linkage phenomena. In the introduction that follows, I will discuss some of the key concepts which unify the threads that run through this study, and then give an outline of the entire discussion.

0.1 Some philosophical remarks

The rationale for studying clause linkage is simple and clear: all natural languages are equipped with structural devices for encoding the relation between predications, though differences may exist with respect to the degree of formal elaboration that each language accommodates. Whether this is a significant observation is, of course, challengeable. But the present study

assumes it is significant, for complex constructions exhibit a wide range of structural and semantic intricacies involving anaphors, operators, and various conceptual ramifications, which any grammatical theory must take good care of. This granted, there still can be, and in fact are, several branching points in approaching the phenomena under investigation, and I will discuss some of them below in order to clarify my general theoretical outlook.

The primary branching point for linguistic theory is the distinction between *formal* vs. *natural* conceptions of grammar. The former is, sociologically at least, represented by GB and its offshoots, and the latter by linguists of different circles that may be labeled functional-typological. The contrast between formalist and naturalist approaches to grammar have been characterized in many different ways, which I do not repeat here (e.g. Newmeyer 1983: Ch. 4; Givón 1983: Chs. 1-2; Foley and Van Valin 1984: Ch. 1; Wierzbicka 1988: 'Introduction'). The various features of the formalist conception of grammar ultimately derive from its autonomy doctrine, which maintains that language is autonomous, therefore linguistic analysis must be autonomous.

The naturalist conception of grammar, on the other hand, is characterized by its rejection of the autonomy doctrine. The key concept here is *motivation* (cf. Haiman 1980, 1983a, 1985a, among others). Observationally, it is a truism that language does not exist in a vacuum, but natural syntax takes this fact as significant and tries to establish a tie between the linguistic system and external factors. Functionalism may best be construed as denoting the study of the covariance between internal and external factors of language (cf. Silverstein 1976, 1981; Hempel 1965). Within natural syntax, two branching points, or more precisely continua of theoretical stances, can be identified (for

a survey of the varieties of functional grammar, cf. Nichols 1984b), which I will discuss in turn.

First, notionally at least, there is a difference in orientation between psychological and sociological approaches. Of course, this division is artificial given that language is precisely what mediates between ideation and interaction. Linguists may differ, however, with respect to the ontological interpretation of functional correlates such as 'agency' or 'topicality'. For example, topicality may be interpreted as reflecting some aspects of mental representation (say figure-ground distinction), or as something that is established through negotiation in conversation. Yet in this study, I prefer to be neutral as regards the ontological grounding of functional correlates, although it is certainly among our future tasks that are worth undertaking. What I consider necessary at present is a preliminary to it, that is, to ascertain the utility of the current stock of functional notions.

Second, there is a continuum of stances from conservative to radical. At one end, the notion of structure is taken to be fairly stable and rule-governed. At the other, grammar is seen as always-already in flux, and syntax is something like momentary crystallization of discourse functions. This latter position, named *emergent grammar* (Hopper 1987), holds that edifice-like structure in classical metaphysics is epiphenomenal, and that grammar in reality embodies various competing motivations (cf. Du Bois 1985). While functionalists are interested in how the structure of language is molded to meet semantic/pragmatic requirements, a linguistic expression must realize multiple functions that need not be always harmonious. This is where the flux arises, and grammatical structure according to this view is indeed a millisecond snapshot of the ever-mutating system.

Admittedly, radical functionalism thus conceived sounds unfamiliar, but it indeed becomes meaningful when we look at language as a historical product. Since language is always in the process of change, it is no unnatural assumption that it consists partially of emergent structures and partially of relics of the past. In this study, I take a moderate position, assuming that grammar forms--at least locally--structures that have constancy to be studied. But, crucially, this constancy results from various competing motivations that have shaped linguistic form through time. To understand the synchronic system in non-autonomous terms is to understand how the local structures are motivated. Functional motivation in this sense inherently involves diachrony, because it is the primary source of systematicity. This is what I have in mind when I talk about *grammaticization*, and this study addresses the question of what form-meaning correlations are at work in the formation of clause linkage constructions.

0.2. Outline of study

The present study consists of two main parts, one for theory and the other for analysis. While my perspective is typologically oriented, I will not pursue typological generalizations as such. Rather, I hope to contribute to the typological study of clause linkage by offering an in-depth case study on Japanese. In Part 1, 'Theoretical Background', I will lay out the framework for discussion and formulate the theoretical issues to be dealt with. The first two chapters are devoted to the examination of analytic concepts for investigating clause linkage based on Role and Reference Grammar (RRG) as articulated by Foley and Van Valin (1984) and Van Valin (1991ms). There, I will review some of the previous approaches and findings and attempt a synthesis. The key question upon which I will concentrate in the theory part is thus:

(A) What are the possible types of clause linkage and which parameters are there to define them?

I will discuss, following the RRG framework, this issue in terms of two parameters, namely the structural level of linkage (1.1) and the nature of dependency (1.2). The data for illustration will be drawn from English and Japanese plus a few others.

As I stated at the beginning of this introduction, the biggest concern throughout this study is to demonstrate the form-meaning correlation in grammar as manifested in complex constructions. I will detail this issue in 1.3, formulated as follows:

(B) In which way do structural and semantic hierarchies correlate? Which grammatical features are sensitive to the tightness of the semantic relation in a given construction?

From a diachronic perspective, the following question is posed as an extension of (B):

(C) What are the general tendencies in the grammaticization of clause linkage and the rise of polyfunctionality?

To this I will posit the hypothesis that clause linkage constructions tend to undergo changes from lower to higher clause integration, both structurally and semantically. In 1.3, this point will be elaborated in terms of the theoretical concepts given in the previous chapters.

In Part 2, 'Clause Linkage in Japanese', I will investigate syntax and semantics of clause linkage constructions in Japanese. After an overview in 2.1, I will describe the varieties--in form and function--of major clause linking devices in Modern Japanese in 2.2. There, I will apply a set of syntactic tests to those linkage markers, and show that morpho-syntactic properties of clause linkage constructions exhibit impressive covariance. Also, I hope that this chapter will serve as succinct reference on Japanese clause linkage for typologically-minded linguists.

The three chapters that follow constitute the very core of this study, which together validate the hypotheses given in the theory part. These chapters are answers to questions (B) and (C), which, I believe, support the naturalist (=functional-typological) commitment stated above.

Chapter 2.3 will focus on the reference tracking function of two linkage markers TE and BA in Old and Middle Japanese. Claims will be made, with evidence from the interpretation of modality and discourse functions, that the apparent 'switch reference' function of these markers (as argued in Akiba 1977) arises from the degree of clause integration they embody. Further, it will be argued that the weakening of the subject-switching function with BA toward late Middle Japanese is driven by the tightening of semantic relation between the linked clauses.

Chapter 2.4 will take up two constructions which I call 'nominal head' linkage, i.e. NO- and TOKORO-complements. The focus will also be put on their reference tracking functions. I will examine the changes that affected them in Old and Middle Japanese, especially the status of head-internal relatives or their analogs marked by NO and TOKORO. Through the analysis of the chiasma-like paths of development these constructions took, I will elaborate on what it is for a clause linkage construction to undergo tightening of linkage.

Chapter 2.5 will illustrate a very clear case of advancing clause integration, namely the rise of complex predications with semi-auxiliary functions. After a survey of such grammaticized verbs in Modern Japanese, I will concentrate on the historical development of some of them. It will be shown that the semantic shift precedes and thus pulls the advancement of clause integration, with evidence from the occurrence of complex predication involving valency mismatch.

In addition to these chapters, 2.6 will discuss the combining of full sentences. Since sentential connectives by definition fall out of the domain of *clause* linkage proper, I will focus on borderline cases, especially the development of sentential connectives out of clause linking devices. The next and

last chapter of the analysis part, 2.7, will be for brief cross-linguistic observations. My primary purpose there is not so much to propose typological generalizations as to present issues that I find worth pursuing for future research on the typology of clause linkage.

Finally, in Part 3, 'Concluding Remarks', I will summarize the achievements of the present study and discuss future prospects.

0.3. The data

The data on Modern Japanese (ModJ, 20C) will be mostly introspective. Both when giving 'canonical' examples (i.e. *John hit the ball* type) and when probing into the details of syntactic phenomena (where examples are bound to be more or less artificial), I will draw upon my intuition. Contemporary Japanese exhibits a great diversity of registers, depending on sex, class, age, situation, and more. My speech represents the educated young male Tokyo dialect, with two reservations: (i) there are a few discernible varieties of 'Tokyo dialect', and mine is closest to Yamanote dialect (=middle class, which was formed in the uptowns early in this century), and (ii) my speech, along with others, is polyglossic in the sense that I have more than one sub-register. However, I consider textual material useful too, since even a cursory examination of a text lessens the risk of overlooking the obvious. In the survey chapters (2.1-2.2), where the exposition is supposed to be exhaustive, I will take a casual look at some textual data, including novels, magazines, TV programs, and anything that somebody who happens to be next to me utters. Thus textual data will be used as a kind of augment to the introspection-based description and analysis.

The diachronic data on Japanese will be, of course, limited to the written medium, but I try to choose texts that are relatively close to the spoken register of each period (the gap between spoken and written registers became more discernible in Pre-Modern Japanese). The genre will be limited only to narrative prose, because I am most interested in the tracking of participants and the way activities are encoded, which are among the most basic functions of language. This is indeed the procedure adopted by previous functional analyses. Even so, the style of each text I will examine differs

unmistakably, depending on the subject matter and the background of the author. In this respect, we face the difficulty that Anglicists need not, who are in possession of *Anglo-Saxon Chronicles* and various translations of the Bible. The texts I mainly use are as follows, with brief descriptions (the dates are all no more than approximate).

Old Japanese (OJ, 8-11C). The earliest substantial attestation of Japanese is found in *Kojiki*, *Nihon Shoki*, and *Man'youshu*, the last of which may be referred to occasionally in this study. During the period these texts were written, the syllabary was not invented yet, and consequently Chinese characters are used for native Japanese words (including function words). The influence of Chinese was considerable in various ways, in terms of diction, phraseology, and motifs of oral traditions. The influence on syntax, however, was far smaller because of the radically different typological characters between Japanese and Chinese. Dialectal variation was already great in OJ, although we have ready access only to the dialect in the western part where Nara and Kyoto, the capitals, were. The texts I will mainly use are *Taketori Monogatari* (> *Taketori*, late 9-early 10C) and *Genji Monogatari* (> *Genji*, early 11C). The former is short and is written in a relatively plain style, while the latter is a *roman-fleuve* which consists of 56 books. Its style is extremely elaborate with rich imageries. I will use Book Two and Book Three for analysis. Book One is not used because it is a kind of prologue and the narrative becomes more story-like in the second book.

Middle Japanese (MJ, 12-16C). Due to the continuous spread of Buddhism since the OJ period, the Buddhist diction is conspicuous. Late MJ (15-16C) is considered to be the foundation of ModJ, and many features that are the direct roots of ModJ are found in the texts of this period. The bourgeoisie became fairly influential toward the end of MJ, and partly due to

the wars that continued over a century, the social hierarchy was greatly shaken. The primary texts I will use include *Heike Monogatari* (> *Heike*, mid-13C), and *Otogi Zousi* (> *Otogi*, 15-16C). *Heike* is a great saga of the rise and fall of two opposing clans, Genji and Heike, consisting of 13 books. The Buddhist philosophy of 'mutability' (or 'transitionality') is pervasive throughout the story. I have chosen Book Five, where the narrative becomes truly dynamic, with uprisings and battles. *Otogi* is a collection of 23 stories in a relatively plain style. Its subject matter differs from courtly romance to folktales and religious stories. I have chosen 'Shuten Douji', the last and among the longest story in the collection, plus some shorter ones with folkloristic themes whose main purport is telling stories rather than, say, inculcating religious lessons. In addition, I will occasionally use *Amakusaban Isopo Monogatari* (> *Isopo*, late-16C), which was written by Portuguese missionaries in mid-16C, and is very close to the spoken register of the period.

Pre-Modern Japanese (Pre-ModJ, 17-19C). This period consists of centuries of exceptional stability and is characterized by the expanding power of the bourgeoisie and developing domestic transportation. Printing became very widespread in this period, so we can find texts of various registers. Also, due to the establishment of a written canon, the discrepancy between the spoken and the written registers became very large during the period. Although the capital continued to be Kyoto, Edo (=modern Tokyo) became another center of politics, economy, and culture. In the analysis that follows, I will mainly refer to Yuzawa (1936, 1954) for data, along with various reference materials. This decision is justified on the grounds that most of the phenomena I will examine belong to OJ and MJ, so data from Pre-ModJ is used as a kind of follow-up to the main body of analysis.

1. Theoretical Background

In this part I will follow Role and Reference Grammar (RRG, cf. Foley and Van Valin 1984; Van Valin 1991ms), and lay out the foundation for the analysis. In 1.1 and 1.2, I will examine parameters for the typology of clause linkage, mainly drawing upon English and Japanese examples. In 1.3, I will give consideration to the correlates of the tightness of linkage, both structurally and semantically. There, hypotheses to be examined in the analysis part will be outlined.

1.1. The layer of linkage

What is clause linkage? First of all, a maximally broad definition of clause linkage may be the concatenation of an expansion of V at any level: $(V^n)^*$, or X-L-Y, where X and Y stand for clause-like units ($=V^n$; n indicates the structural level) and L stands for the linkage--both structural and semantic--between X and Y (I am provisionally assuming that the sentence is headed by V). Of course this is still an elusive definition and consequently the first question to be asked is:

(A) What are the possible types of clause linkage and which parameters are necessary to define them?

Based on the scheme X-L-Y, we can posit two fundamental parameters. One is the structural level of the linked units (=X and Y) and the other is the nature of the relation between them (=L). In what follows, I will discuss them

in that order. On this topic, various scholars have offered original proposals, with different degrees of sophistication, such as: Andersson (1975), Grimes (1975), Longacre (1976, 1983), Givón (1980, 1990), Haiman and Thompson (1984), Foley and Van Valin (1984), Shopen (1985), Lehmann (1988), Croft (1991). Below I will proceed centripetally, i.e. by primarily following the RRG framework and referring to the other approaches when relevant. Detailed comparisons will be made with Haiman and Thompson (1984) and Lehmann (1988).

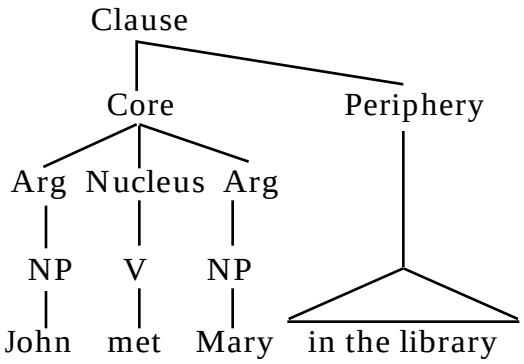
In RRG, three layers of linkage, or *junctures* are distinguished, namely nucleus, core, and clause. The nucleus is the predicate in the Russellian sense (=propositional function), not in the Platonic sense (=proposition minus subject); the core is the nucleus plus obligatory arguments; the clause is the core plus the peripheral or non-obligatory adjuncts, such as spatio-temporal expressions. These notions are essentially motivated by the semantics of the clause, and their representation is not reducible to other notations of phrase structure (for example, X-bar schemes). Thus example (1) has roughly the structure (2) (**Nu**=nucleus; **Co**=core; **Cl**=clause; **Pe**=periphery):[1]

(1) John met Mary in the library.

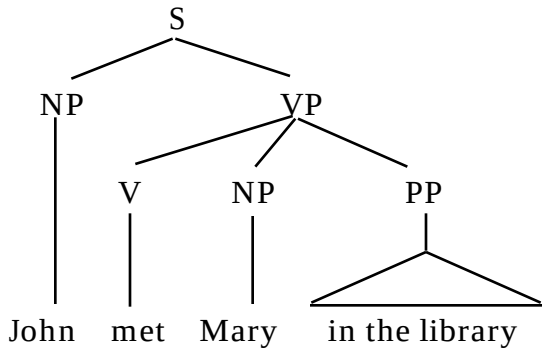
(2) **Cl** [**Co** [John **Nu** [met] Mary] **Pe** [in the library]]

Here *met* is the nuclear predication, and takes two arguments, namely *John* and *Mary*, to the effect of forming the core, which in turn carries with it the adjunct phrase *in the library*. Compare this analysis with the classical phrase structure notation (as in e.g. Chomsky 1957; Kimball 1973):

(3) Layered structure



(4) Classical phrase structure



Note that (3) does not have a VP node, while (4) lacks anything that corresponds to the core in the RRG notation. These differences have important theoretical consequences, some of which we will see in the course of discussion.[2]

The term *clause linkage* now denotes the linking of units at any of such layers as nucleus, core, and clause. In addition, the combining of full sentences is also taken up in this study. Below are the illustrations of these four types of linkage in Japanese (in Foley and Van Valin 1984, the term *peripheral juncture* is used, but here I adopt *clausal juncture* instead, after Van Valin 1991ms):

(5) Nuclear juncture

Miti-ni kuruma-o tome-te-oi-ta.

street-DAT car-ACC park-TE-put-PAST

'(I) kept the car parked on the street,' lit. '(I) park-put the car on the street.'

(6) Core juncture

Heya-de razio-o kake-te suugaku-o benkyoo.si-ta.

room-LOC radio-ACC play-TE math-ACC study-PAST

'(I) played the radio and studied math in my room.' or 'Playing the radio, (I) studied math in my room.'

(7) Clausal juncture

Tosyokan-de suugaku-o benkyoo.si-te.iru-to soto-de rarii-ga hazimat-ta.

library-LOC math-ACC study-STAT-TO outside-LOC rally-NOM start-PAST

'As (I) was studying math in the library, (they) started a rally outside.'

(8) Sentential juncture

Tosyokan-de suugaku-o benkyoo.si-te.i-ta. Suruto soto-de rarii-ga hazimat-ta.

library-LOC math-ACC study-STAT-PAST then outside-LOC rally-NOM start-PAST

'(I) was studying math in the library. Then (they) started a rally outside.'

Schematically, the structures of (5)-(8) are represented as follows:

(9) **S**[**Cl** [**Pe** [Loc] **Co** [Arg **Nu**$_1$ [V]+ **Nu**$_2$ [V]]]]

(10) **S**[**Cl** [**Pe** [Loc] **Co**$_1$ [Arg **Nu** [V]]+ **Co**$_2$ [Arg **Nu** [V]]]]

(11) **S**[**Cl**$_1$ [**Pe** [Loc] **Co** [Arg **Nu** [V]]]+**Cl**$_2$ [**Pe** [Loc] **Co** [Arg **Nu** [V]]]]

(12) **S**$_1$[**Cl** [**Pe** [Loc] **Co** [Arg **Nu** [V]]]]+**S**$_2$[**Cl** [**Pe** [Loc] **Co** [Arg **Nu** [V]]]]

In nuclear juncture, which involves the combining of predicates, all the arguments are obligatorily shared, as long as the linkage does not involve embedding. The linked units in (5), *tome* 'park' (citation form *tomeru*) and *oi* 'put' (citation form *oku*) together form one complex predicate, so the result is analogous to a simple sentence.

In core juncture, argument sharing is also obligatory, but not all the arguments need be shared. As (6) illustrates, the shared argument which is constructionally required may be the subject, or as (13)-(14) show, the 'pivot', i.e. the argument occurring at the juncture point of the linked clauses:

(13) English

I persuaded John to see the doctor.

(14) Chinese (from Hansell 1987)

Ta jiao wo xie zi.

3sg teach 1sg write character

'S/he teaches me to write.'

Here, *John* in (13) and *wo* in (14) are the shared argument in each construction. Unlike in (6), these NPs are at the same time the object of the upper clause and the subject of the lower clause. Another point to be noted about (6) is that the locational phrase, *heya-de*, 'in the room' is a periphery to the linked core, and modifies both *razio-o kake*, 'play the radio' and *suugaku-o benkyoo.si*, 'study math'.

In clausal juncture, on the other hand, there is no such constraint on the way the argument structure is realized, and the two clauses in (7) have different subjects and objects. Also, the linked clauses have separate locational phrases, unlike (6). Sentential juncture of (8) has basically the same content, but there is no syntactic connection between the two clauses. Instead, the semantic relation between the clauses, namely temporal sequence, is more explicitly realized by the sentence-initial connective *suruto* which is not morphologically bound to the preceding sentence.[3] In this way, one aspect of clause integration can be captured by the following hierarchy. The order is from lower to higher integration.

(15) (Sentence) > Clause> Core > Nucleus

Sentence, by definition, is not a unit of clause linkage as such, hence is in parentheses.

One big advantage of the layered representation of clause structure as in (3) is that it is semantically motivated and configuration-independent. Hence it is highly suited to analyzing the form-meaning correlation and can explain a wide range of phenomena when combined with other concepts of RRG. It is equally applicable to different types of languages, whether VPs are

grammaticized (as in English) or not (as in Lakhota). Notice that the distinction between core and periphery cannot be captured by the classical phrase structure notation, where there is an initial branching between the subject NP and the rest, i.e. VP. In an important way, this turns out to be counter-intuitive when we examine the working of, for example, operators in clause structure. Note that, crucially, operators such as modals and negation apply to propositions (with or without qualificational phrases). Here, the NP-VP distinction virtually plays no role in the semantic structure of the clause, and what matters is whether a given operator applies to a bare proposition (=core) or a whole including qualificational phrases (=clause). The layered representation of the clause, on the other hand, can capture this difference without any extra stipulations.

The relative scope of operators, upon a closer look, shows extensive correlation with the layer of linkage. This point is systematically formulated in RRG, where the relation between operators and juncture types are defined in the following way (cf. Foley and Van Valin 1984: Ch. 5.3):

(16) The relative order and scope of operators:

Nucleus

Aspect

Directionals

Core

Modality (=deontic modality)

Internal negation

Clause

Status (=epistemic modality & external negation)

Tense

Evidentials

Illocutionary force

This template is claimed to be universal, and in essence makes two important predictions, which will be discussed in turn.

The first prediction that derives from (16) is that the linear order of operators with respect to the main predicate is to a large extent fixed across languages. For example, aspect is placed closer to the predicate than tense is, which is a fairly widely recognized fact. The notion of 'relevance' independently developed in Bybee (1985: 25-26) based on 50 languages also points to the same tendency, partly summarized in (17). Here, morphemes are arranged in the order of distributional closeness to the verb root ('>' means that the element on the left hand tends to occur closer to the verb):

(17) Aspect > Tense > Mood > Person

In addition, markers of valence and voice may possibly come closer to the main verb than aspect. This is understandable since they are not operators that modify the predicate, but markers for building the argument structure itself, and hence more central to the predicate.

The fundamental motivation for the linear order of operators is that the semantic relevance of operators to the predicate is reflected in their relative closeness to the main predicate, captured in terms of the layer of linkage. To take tense and aspect for example, their relative order reflects their semantics in that aspect modifies activity irrespective of the external temporal relation, while tense anchors the whole proposition in a specific setting. A simple and partial illustration can be obtained from the order of

auxiliaries in English. Compare example (18) with the identification of operators in it, as shown in (19):

(18) Cressida may not be fooling around with Troilus any more.

(19) (Illocutionary force)-Tense-Status-Internal negation-Aspect-V

English does not realize all the operators in (16) uniquely. Illocutionary force is realized by the position of the auxiliary, hence in parentheses. The auxiliary *may* realizes both tense and status. Negation is uniquely realized, but aspect is realized by *be* and the affix *-ing*.

Japanese also seems to behave well with respect to the linear order of operators. See the following example:

(20) Sakuban-wa oki-te.i-rare-nakat-ta-n-desu-ka?
last.night-TOP wake.up-STAT-MOD-NEG-PAST-PRT-PRED-Q
'Weren't (you) able to stay awake last night?'

Here the subpart of the template (16) manifests itself in *te.i-rare-nakat-ta-n-desu-ka* (STAT-MOD-NEG-PAST-PRT-PRED-Q), as in the following:

(21) V-Aspect-Modality-Internal negation-Tense-Illocutionary force

Note that this is a mirror image of the English example as in (19), but the relative closeness of the operators to the verb is essentially the same, which is precisely the prediction of (16). The slot for the stative marker *te.i* (citation form *te.iru*) can be filled by such forms as *V-te.iku/kuru* (*iku*='go'; *kuru*=

'come') which also modify Aktionsart (also cf. *oku* in (5)). Of course, it is debatable whether *te.iru* can be seen as a genuine operator, because it is, along with other 'aspect' and 'directional' markers, a predicate in itself (*te.iru* < TE as a linkage marker plus *iru* meaning 'stay'). Likewise, modality and status may be sometimes difficult to analyze as operators in modern Japanese, because periphrastic expressions are far more widely used than genuine auxiliaries (e.g. *te.(mo.)ii* TE+PRT+fine, 'may (permission)' vs. *ka.mo.(sire. nai)* PRT(Q?)+PRT+know+NEG, 'may (supposition)'). In tradition-conscious Japanese grammars, this issue has been discussed under 'modality', which has a much broader application than the term is commonly used in western grammar (cf. Nita and Masuoka 1989 for a latest collection of studies).

The second prediction that is made from the template (16) directly concerns the combining of clauses and the occurrence of operators. Given that each operator modifies a specific layer of linkage, '[i]t is therefore possible to predict the inflectional form of the verb in the linked unit in a complex sentence within a very narrow range of variation, given a description of the simple, independent clauses and a list of the juncture-nexus combinations in a language' (Van Valin 1984: 556). Conversely, if the function of an operator is identified on independent grounds, the juncture type of a given linkage can be determined on the basis of the possibility of the occurrence of the operator. In both cases, the distribution and interpretation of operators is motivated by the closeness of the semantic relation between the linked units. That is, when clauses are highly integrated, operators tend to be shared, rather than independently specified, and when the clause integration is lower, the linked units can have separate specifications for operators (cf. the following chapter for further remarks). Of course, not all languages have every one of the above operators, and it is not uncommon that one morpheme can encode

multiple functions (cf. the following Turkish examples). But the template itself is considered to be valid as long as one is concerned with forms that a given language grammaticizes.

To illustrate these claims, let us start with abstract schemas. Suppose we know that, in (22), the operator encodes the status but we do not know the juncture type of the linkage between unit 1 and unit 2. In such a case, if the status operator modifies both units, then the linkage is either a nuclear or core juncture, as in (23). If, on the other hand, status only modifies the second unit, the linkage is a clausal juncture, as in (24). The modified portions are italicized.

(22) Unit 1 + Unit 2 + Status

(23) *Cl[Co[Unit 1]* + *Co[Unit 2]]* <=Status

(24) Cl[Unit 1] + *Cl[Unit 2]* <=Status

Put differently, the scope of operators correlates with the structural as well as semantic integration between clauses. This way of reasoning has grave bearing on the arguments in the analysis part, especially those in 2.3 relating to reference tracking.

A more complex set of examples are offered from Turkish (based on Watters 1987). In Turkish, the morpheme *mIş* can mark aspect, tense, and evidential, depending on the construction in which it occurs. See the following example (Watters 1987: 136):[4]

(25) Odam-da yat- mış uyu-yor-du-m.

room-LOC lie-MIṢ sleep-PROG-PT-1sg

'I was lying in my room sleeping.'

This is an instance of core juncture, and, as (16) predicts, such operators as tense and evidential must be shared by the linked units, i.e. they must be placed next to the main clause. Consequently, the only permissible reading of *mıṣ* is aspect which modifies *yat* 'lie', as *yor* modifies *uyu* 'sleep'. Thus, *mıṣ* should be regarded as 'functioning as a perfect aspect, allowing the achievement verbs *yatmak* and *uzanmak* to have a stative reading.' (Watters 1987: 136). However, when *mIṣ* occurs next to the second unit, it has an evidential reading, having the scope over both of the linked units:

(26) Odam-da yat-ıyor uyu-yor-muṣ-um.

room-LOC lie-PROG sleep-PROG-MIṢ-1sg

'(They say) I was lying in my room sleeping.'

Notice that the linkage type here is exactly the same as (25), namely core juncture. Since aspect is independently specified for both units, *muṣ* here must be analyzed as a clausal operator, hence the gloss 'they say'. Thus the linkage type and the operator scope show a very strong correspondence, and if one is determined on independent grounds, the other can be predicted with high certainty. In (22)-(24), the juncture type was determined from the scope of operators, but in examples (25)-(26), the linkage type constrains the distribution and interpretation of operators. In either way, the RRG template of (16) has wide-ranging validity (cf. further Genetti 1986 for interesting data from Newari).

Turning to Japanese, an intriguing question that arises at this point is where to place honorifics in the template of operators. This question, formulated as follows, seems to be suitable to illustrate the RRG methodology in some detail (cf. Tagashira 1973, which is an early study in this direction):[5]

(27) Are there any generalizations to be made concerning the relative ease of marking a subordinated predication with a Politeness morpheme? (Assuming that the main clause is marked 'polite'.)

Semantically, it seems plausible to consider honorifics as a kind of operator, because they modify a certain part of the proposition as being 'polite'. Since honorific forms are found in a variety of languages other than Japanese (in South and Southeast Asia especially), this issue seems to pose an interesting theoretical problem for RRG (and Bybee's 'relevance' for that matter). Here the reader needs to be aware that the purpose of the following discussion is the illustration of methodology, and the answer may not be decisive. In what follows, I will restrict my analysis to *masu* alone. There are many other means to encode politeness in Japanese, but in the following I will only take up *masu* which is a bound morpheme and thus a genuine auxiliary.

To begin, see the following example, taken from non-introspective data (an official negotiation between two groups), which provides initial clues to the position of POL:

(28) Moosiwake-ari-mase-n-ga, sore-o ooyake.ni.suru koto-wa habaka-rare-masu.
excuse-be-POL-NEG-GA that-ACC make.public COMP-TOP avoid-MOD-POL

'(We) are sorry [=lit. (there) is no excuse], but (we) might better avoid making it public.'

Here, there are two occurrences of *masu*. The first one (*moosiwake-ari-mase-n*) indicates that it occurs before negation (which appears to be internal), and the second one (*habaka-rare-masu*) indicates that it occurs after modality. Since in (16) internal negation is placed next to modality, we may provisionally state that *masu* can be placed at the core layer between modality and internal negation, as in (29):

(29) The relative order and scope of operators (modified):

Nucleus

Aspect

Directionals

Core

Modality (=deontic modality)

Politeness *masu* (?)

Internal negation

Clause

Status (=epistemic modality & external negation)

Tense

Evidentials

Illocutionary force

To wit, (30) is a well-formed example, where aspect, modality, politeness, negation, and tense are all overtly marked:

(30) Ohiru-wa zisaboke-de zenzen oki-te.i-rare-mase-n-desi-ta.
daytime-TOP jet.lag-INST at.all wake.up-STAT-MOD-POL-NEG-PRED-PAST
'During the daytime, (I) could not stay awake at all from jet lag.'

Note here the adjunct *zisaboke-de* 'from jet lag' is within the scope of PAST, but not within the scope of NEG. Thus the negative marker in (30) is internal, and *masu*, occurring closer to the verb than NEG, must be analyzed as a core operator.

However, there is obviously something counter-intuitive in treating *masu* as a core operator, because politeness is generally supposed to mark the speaker's attitude. As such, it ought to operate on the whole clause, rather than the core proposition. This position is shown in (31):

(31) The relative order and scope of operators (modified):
Nucleus
Aspect
Directionals
Core
Modality (=deontic modality)
Internal negation
Clause
Status (=epistemic modality, external negation, & **politeness *masu* (?)**)
Tense
Evidentials
Illocutionary force

Support for this position, though indirectly, comes from the fact that there are morphological anomalies in politeness marking. The negative marker *n* that occurs next to *mase* in (28) and (30) is indeed highly restricted in its distribution. In Modern Japanese, normal negative marker is *nai*, which is attached to most verbals, but not to *masu*. The form *desi* (citation form *desu*) in (30), glossed PRED, also encodes politeness (its non-polite alternative is *da*). The negation of *desi* is *nai-desu*, not **dese-n*. At the same time, neither **nai-masu* nor **masa-nai* is well-formed. If it is possible to stipulate that morphological anomalies can override the basic order of operators, then the placement of *masu* between modality and internal negation, solely based on the availability of the string *mase-n*, will become void.[5] As a result, *masu* can be placed anywhere between modality and tense, which makes possible the analysis of it as a status operator.

Evidence from the scope of *masu* in linked clauses is rather indeterminate, and permits both (29) and (31). The only thing that can be asserted from that evidence is that *masu* is not a nuclear operator. Thus in the following set of examples, (32) is OK but neither (33) nor (34) is, for it cannot modify the dependent term of the nuclear juncture.

(32) Miti-ni kuruma-o tome-te-oki-masi-ta.
street-DAT car-ACC park-TE-put-POL-PAST
'(I) kept the car parked on the street.'

(33) *Miti-ni kuruma-o tome-masi-te-oi-ta.
street-DAT car-ACC park-POL-TE-put-PAST

(34) *Miti-ni kuruma-o tome-masi-te-oki-masi-ta.
street-DAT car-ACC park-POL-TE-put-POL-PAST

See the following schematic representations:

(35) **Nu** [**Nu$_1$** [V]+ **Nu$_2$** [V]] <=MASU

(36) ***Nu** [**Nu$_1$** [V] <=MASU + **Nu$_2$** [V]]

(37) ***Nu** [**Nu$_1$** [V] <=MASU + **Nu$_2$** [V] <=MASU]

In (35), *masi* modifies the linked nuclei *tome-te-oki*, but in (36) and (37), its placement violates both (29) and (31), because the politeness auxiliary must not modify only a moiety of the nuclear juncture.

The same test, unfortunately, does not work for deciding the scope of *masu* between core and clause. See the following examples:

(38) Heya-de razio-o kake-te suugaku-o benkyoo.si-masi-ta.
room-LOC radio-ACC play-TE math-ACC study-POL-PAST
'(I) played the radio and studied math in (my) room.'

(39) ?Heya-de razio-o kake-masi-te suugaku-o benkyoo.si-masi-ta.
room-LOC radio-ACC play-POL-TE math-ACC study-POL-PAST
'(I) played the radio and studied math in (my) room.'

(40) Tosyokan-de suugaku-o benkyoo.si-te.iru-to soto-de rarii-ga hazimari-masi-ta.

library-LOC math-ACC study-STAT-TO outside-LOC rally-NOM start-POL-PAST

'(I) was studying math in the library and (they) started a rally outside.'

(41) Tosyokan-de suugaku-o benkyoo.si-te.i-masu-to soto-de rarii-ga hazimari-masi-ta.

library-LOC math-ACC study-STAT-POL-TO outside-LOC rally-NOM start-POL-PAST

'(I) was studying math in the library and (they) started a rally outside.'

Example (39), a core juncture with two *masu*'s, is a little redundant and the *masu*-marking on only the main clause as in (38) does not make the utterance impolite. If (39) were completely grammatical, *masu* could be a core operator, and if it were completely ungrammatical, *masu* could be a clausal operator, but neither is actually the case. In contrast, both examples of the clausal juncture, (40) and (41), sound quite natural, but it only indicates that *masu* modifies either core or clause. As an aside, I might mention that on stylistic grounds, *masu*-marking on both dependent and main clauses makes an utterance hyper-polite, especially in core juncture. This stylistic strategy is fairly commonly exploited for alienating the hearer and thereby protecting the speaker's ego (as in cross-examinations and like situations).

The foregoing discussion may not be sufficient to determine where *masu* should be ultimately located in the template of operators, but it has served its purpose, namely to demonstrate the details of the RRG approach. Though further investigation is awaited, it seems to offer interesting perspectives. Below I offer two possibilities for the placement of *masu*, out of several (for those interested in the internal structure of predication in

Japanese, cf. Mizutani 1983, who formalizes the overall structure using a finite-state automaton).

First, *masu* is indeed an operator and its behavior requires modification either on our intuitive assumption about politeness or on the RRG template. If we take the linear order of morphemes at its face value and adopt (29), we must make sense of the situation that *masu* modifies the same entity as modality and negation do (i.e. its scope is not the whole utterance, but the core). On the other hand, if we take the morphological anomaly seriously and adopt (31), we may need reservations to the RRG template in such a way that marked morphological processes (most commonly historical residues) can be exceptions to the template.

Second, *masu* is not an operator in the normal sense of the word, counter to our initial expectation. If this is the case, *masu*, or politeness in general, should be treated separately from negation, tense, and other markers that are in fact operators. In this connection, Halliday's division of linguistic functions (e.g. Halliday 1985) into ideational, interpersonal, and textual seems relevant. Ordinary operators realize ideational functions, while *masu* and other politeness markers can be seen as interpersonal operators.

In this chapter, one major parameter for the typology of clause linkage, namely juncture (=layer of linkage), was introduced with illustrations from Japanese and a few other languages. It was shown that operators such as modality and tense strongly correlate with the layer of linkage, reflecting the form-meaning correlation in clause integration in general. The central claims were (i) the linear order of operators is fixed as long as they are grammaticized, and (ii) their distribution in linkage constructions is systematically

constrained. In addition, some illustration of the RRG methodology was given, using the Japanese politeness marker *masu*.

Notes to 1.1

1. The non-configurational (or 'flat') representation of syntactic structures is adopted in a variety of theories. For example, tagmemics, focused on non-English type languages, uses the notions of 'nucleus' and 'satellite', which correspond to core and periphery in RRG (mentioned in Watters 1987: 130). In Longacre (1965), the term 'periphery' is used in place of 'satellite'. Functional Grammar developed by Simon Dik and his allies (cf. Dik 1978; Nuyts, et al. 1990) is more directly comparable to RRG. There, the terms 'nuclear predication' and 'extended predication' are used, which correspond to the RRG notions of core and clause respectively. See Van Valin (1990) for a comparison between the RRG and Functional Grammar perspectives.

2. Advantages of layered representation, naturally enough, become most visible when seen within the whole picture of the theory. Alongside the analysis of operators presented below, the layered representation is harmonious with free word order languages as well as verb initial languages, neither of which have an easily identifiable VP structure. While configurational approaches to case marking face problems in dealing with such languages, the RRG approach correctly predicts the distribution of cases by combining its theory of clause structure with richly articulated lexical semantics. Also, the introduction of 'pre-core slot' in Van Valin (1991ms), together with the theory of information structure, provides a powerful device for the analysis of such constructions as inversion and topicalization. See LaPolla (1991) for a study of the grammar-discourse interface in Chinese within this framework.

3. In fact, the connective *suruto* has its internal syntax. Its full form is *soo-suru-to*, so-do-TO, '(X) has done so, and then', TO being a conjunctive particle of sequentiality. Thus, etymologically, *suruto* can be seen as an abbreviated clause. For sentential connectives, see 2.6. below.

4. The following glosses are used by Watters (1987) for Turkish examples (25)-(26): PROG(ressive), PT(=past).

5. The order of operators in classical Japanese also generally conforms to the template (16). Quinn (1990: 256) gives the following generalization, based on OJ and MJ data (typographical modification added):

(N1-1) Lexical base-Valency-Politeness-Aspect-Modality$_1$-Modality$_2$

While this is basically correct, politeness in classical Japanese, especially in OJ, is realized by an exceptionally complex interplay of markers, and 'politeness' in the above scheme only refers to polite verbs such as *tamahu* (lit. 'give' > 'do the favor of' > 'respect for the doer'). In addition, forms that can fill in the slot of valency and modality can also participate in encoding politeness.

5. My attention was drawn to this point by the discussion at informal meetings on Japanese grammar at UC Berkeley during the summer of 1991. Especially, I am indebted to comments from Minoru Nakau on operators and 'modality' in Japanese, although I am afraid I have not fully understood his ideas and take sole responsibility for that.

1.2. The nature of dependency

Having examined the layers of linkage, the next parameter for the typology of clause linkage concerns the nature of dependency that holds between the linked units (=structural properties of L in the scheme X-L-Y). In most modern theories of grammar, either structural or generative, the coordination vs. subordination dichotomy is maintained, just as in traditional grammars. The distinction is categorical, and is defined in terms of the dominance relation within hierarchical structures. Thus the subordinate clause is defined as an embedded S under such phrase markers as NP or PP (cf. Brøndal 1937; Rosenbaum 1967).

The RRG approach rejects this simplistic coordination-subordination distinction, like other functional-typological approaches (e.g. Haiman and Thompson 1984).[1] What makes RRG different is that it postulates two features for determining the syntactic relation or *nexus* between clauses: embedding and dependency. Embedding is the hierarchical dominance of constituents, and dependency is here defined as distributional restriction of a consituent by another. Three possible types of linkage are established based on these features:

(42) Coordination: [-dependent, -embedded]
Subordination: [+dependent, +embedded]
Cosubordination: [+dependent, -embedded]

Note that there is an implicational relation between the two features. When a linkage involves embedding, it must be [+dependent], because the embedded clause is by definition dependent on the upper clause. Thus the

feature [±embedded] is relevant only in conjunction with [+dependent]. Parentheticals might be seen to be an instance of the relation [+embedded, -dependent], but even in that case, not everything in the embedded clause is free from syntactic constraints that come from the upper clause (say those on pronominalization, let alone intonational signals). Examples from Japanese are given below.

(43) Coordination

Ame-ga hut-ta-si kaze-mo hidoku hui-ta.
rain-NOM fall-PAST-SI wind-also terribly blow-PAST
'It rained, and the wind also blew terribly.'

(44) Subordination (adjunct)

Ame-ga hut-ta-node hayaku kaet-ta.
rain-NOM fall-PAST-NODE early go.home-PAST
'Because it rained, (I) went home early.'

(45) Subordination (argument)

Ame-ga hut-ta-no-ga Taroo-wa iya.dat-ta.
rain-NOM fall-PAST-NZ-NOM Taroo-TOP hate-PAST
'Taro hated it that it rained.'

(46) Cosubordination

Ame-ga hure-ba siai-wa tyuusi-dat-ta.
rain-NOM fall-BA game-TOP suspended-PRED-PAST
'If it had rained, the game would have been suspended.'

To start with, coordination seems least problematic syntactically, because as in (43), the linkage involves neither embedding nor dependency. It is a juxtaposition of two distinct states of affairs. Though semantic conditions may bring about asymmetries in the linkage, coordination is characterized as encoding symmetrical syntactic relations when taken in isolation. However, it would be a mistake to think that coordination is something basic and universal compared to the other two types of linkage. As Mithun (1988) shows, not all languages grammaticize coordination, and it is wrong to assume that it is a 'primitive' relation out of which more elaborate structures develop.

Next, subordination, primarily characterized by embedding, is exemplified by adverbial clauses as in (44) as well as by complement clauses as in (45). This distinction corresponds to that between adjuncts and arguments. In (44), *ame-ga hut-ta node*, 'because it rained', which is a full clause with the marker NODE (etymologically NO=nominalizer and DE=instrumental/ locative marker) functions as an adverbial (i.e. periphery in RRG terms) in relation to the main clause *hayaku kaet-ta*, '(I) went home early'. Thus, on distributional grounds, the peripheral constituent can be replaced by an adverbial phrase, e.g. *ame-de*, 'because of rain'. In contrast, in (45), *ame-ga hut-ta-no*, 'that it rained', with the nominalizer NO, occupies an argument position of the clause *Taroo-wa iya.dat-ta*, 'Taroo said'. Here too, the complement clause can be replaced by a more simple constituent, e.g. *ame-ga*, 'rain'. But it must be noted that the distinction between arguments and adjuncts is not always clear-cut, and there seems to be a cline of the relative strength of clause integration in adverbial clauses. I will turn to this point later in this chapter.

Third, cosubordination is a term introduced by Olson (1981) for analyzing the clause chain found in Barai, a language of Papua New Guinea. This type of linkage involves only dependency, with no embedding. An illustration is given below from Kanite, another Papuan language (Longacre 1985: 266):[2]

(47) his-u'a-ke-'ka, naki a'nemo-ka hoya ali-'ka,
do-we-DS-you, so women-you garden work-you
naki ali ha'noma hu-ne'atale-'ka, inuna kae-'ka, popo hu-'ka,
so work finish do-COMPL-you, weeds burn-you, hoe do-you
inuna kae-'ka, inuna kae-'ka, naki ha'no hu-talete-ke-ta'a,
weeds burn-you, so finish do-COMPL-DS we
naki viemoka-ta'a keki'yamo'ma ha'noma nehis-i-ana
so men-we fence finish do-it-CONJ
'If we do this, you women work the garden, when it is finished hoe and burn the weeds, when that is finished we men will finish making the fence.'

In this chain of eight clauses, the verb *nehis-i-ana*, 'do it', alone is the final verb (i.e. bears final desinence), while all other verbs are medials with different desinence. Medial clauses are often known for bearing switch reference markers. In (47), *ke* which is glossed DS ('different subject') is a 'transition marker which tells us that there will be a different subject in the clause which is to follow' (ibid.). The crucial problem here is what sort of relation medial clauses have to the final clause. It is not subordination because medial clauses are not embedded in the sense of being a sentential constituent of the final clause. A medial clause is 'hooked', so to speak, on

the following clause by its verbal desinence, while there is no syntactic position in the main clause that can be filled in by any of the clauses that precede it. Nevertheless, medial clauses are dependent on the final clause because, first, they cannot occur by themselves (hence they are distributionally dependent on the final clause) and second, they are usually not marked for certain grammatical properties such as tense or mood (hence they are dependent in terms of grammatical categories). This type of dependency is not found in English, in which a great majority of clause linkage constructions can be either coordination or subordination. This peculiarity of English has been a pitfall for theories that attempt to treat what is essentially cosubordination in terms of subordinate structures (e.g. Finer 1985 on switch reference; Baker 1989 on serial verbs).[3]

Turning back to the Japanese examples, (46) is analyzed as cosubordination because tense is suppressed in the BA-marked clause, which is an instance of feature dependency. In (44), no such grammatical feature dependency is observed, and the first, NODE-marked clause is only distributionally dependent on the second clause. In (45), the NO-marked clause is a sentential argument of the matrix verb *iya.da* 'hate', and the clause likewise involves only distributional dependency. Note that in these examples the past tense marker *ta* appears in the first clause, encoding the tense of the clause. In contrast, in (46), in addition to being distributionally dependent, the BA-marked clause is feature-dependent on the main clause, because the main clause alone bears *ta* and the tense of the dependent clause is interpreted only relative to the main clause. Compare (46) with the following:

(48) Ame-ga hure-ba siai-wa tyuusi-da.

rain-NOM fall-BA game-TOP suspended-PRED

'If it rains, the game will be suspended.'

In this example, even though the dependent clause is the same, its interpretation is different, because the main clause is in the present tense. Crucially, the placement of the past marker *ta* in the dependent predicate, *hut-tara-ba*, does not change the interpretation of tense, because in modern Japanese *tara-ba* is grammaticized as a conditional marker in its own right (in fact, TARA is used with systematic difference of meaning from BA, cf. 2.2).[4]

From these considerations, cosubordination displays higher clause integration than subordination, because in the former the dependency is dual (i.e. dependent in terms of distribution and feature-marking) while in the latter the dependency is only distributional. Thus we have the following hierarchy of the strength of dependency, which is from weaker to stronger linkage.

(49) Coordination > Subordination > Cosubordination

Importantly, the realization of operators and their scopes become relevant in coordination and cosubordination, but not in subordination. This is because a subordinate clause, especially when it is embedded in an argument position, can have independent operators assigned to that layer.

At this point, a distinction must be drawn between the *dependency* of grammatical features and the *sharing* of them. In a given construction, a grammatical feature may not be encoded on all of the linked predicates, but there can be more than one reason for that. For example, in (50) both *uti*

'shoot' and *korosi* 'kill' share the grammatical feature of tense (whose value is 'past').

(50) Werther-wa Lotte-o uti-korosi-ta.
Werther-TOP Lotte-ACC shoot-kill-PAST
'Werther shot Lotte to death.'

But this does not mean that the first predicate is feature-dependent on the second one and thus exemplifies cosubordination. Rather, this is an instance of feature sharing, because tense is a clausal operator and both predicates, linked at the *nuclear* layer (note that both subjects and objects are shared), are within its scope. Hence this example should be seen as an example of nuclear coordination rather than any sort of cosubordination. In contrast, (46), as we have just seen, is a true case of feature dependency, i.e. cosubordination, because the linkage is at the clausal layer and both of the linked clauses can potentially bear separate tense markers.

The combination of the layers of linkage (15) and the types of dependency (49) leads to nine possible types of clause linkage, as given in (51):[5]

(51) Nuclear cosubordination --tightest (=most integrated)
Nuclear subordination
Nuclear coordination
Core cosubordination
Core subordination
Core coordination
Clausal cosubordination

Clausal subordination

Clausal coordination --weakest (=least integrated)

Not all of these types need be attested in a given language. Some linkage types are very common, while others, e.g. nuclear subordination, are not. The hierarchy thus given serves as a fine-grained model for discussing structural aspects of clause linkage.

In the following, I will compare the RRG typology of clause linkage with two other functional-typological approaches, namely Haiman and Thompson (1984) and Lehmann (1988). Their approaches, in essence, are to decompose the relations that hold between clauses into multidimensional factors, and to view a given construction as a cluster of features. As we will see, one potential source of confusion that pertain to their approaches, which RRG is free from, is that they conflate abstract categories of linkage with their morpho-syntactic manifestations. After reviewing what may count as correlates of the tightness of linkage, I will give a synthesis of them in the next chapter.

Haiman and Thompson (1984: 511) reject the dichotomy between coordination and subordination, and give the following list of features to characterize the relations that hold between the linked clauses:

(52) (a) Identity between the two clauses of subject, tense, or mood,

(b) Reduction of one of the clauses,

(c) Grammatically signalled incorporation of one of the clauses,

(d) Intonational linking between the two clauses,

(e) One clause is within the scope of the other,

(f) Absence of tense iconicity between the two clauses,

(g) Identity between the two clauses of speech act perspective.

Not intending to reject the validity of such a proposal, in the following I will show that this way of decomposition is at least in part harmonious with the RRG approach, and that a more comprehensive typology of clause linkage will be obtained through a sound exchange of ideas. Also, it must be made clear that the above list is essentially a heuristic or checklist for analyzing clause relations, while the RRG typology provides a set of categories from which various predictions about the concomitant properties of linkage derive.

Of the properties given in (52), some are readily captured by the RRG framework. For example, identity of tense and mood (=part of (a)) and that of speech act (=(g)) can be thought of either in terms of the sharing of grammatical features or in terms of feature dependency. Also, property (e) explicitly refers to scope phenomena. Since these points are all concerned with operators of some kind, their identity across linked clauses can be handled by the combination of juncture and nexus. Thus the corresponding RRG formulation for capturing the phenomena given as (a), (e) and (g) is as follows:

(53) Constructions in which both of the linked clauses are within the scope of some operator (e.g. tense, mood, illocutionary force) are either cosubordination at the layer which the operator in question is defined to modify, or coordination at the layer inner than that.

Since this point was amply illustrated in the previous chapter, not much elaboration may be necessary.

Other properties are less directly translatable into RRG, partly because they are rather heterogeneous and form and function are put together in there. For example, (d) is about the way dependency is encoded, and (f) is about the semantic interpretation between the linked clauses.[6] Features (b) and (c), both of which are very important, more directly concern structural aspects of linkage. Of these features, I put aside (d), because it is not predictable from the RRG typology of clause relations. At the same time, it must be noted that realization rules of intonation are extremely complex, and no existing theory seems to fully succeed in explaining them. I also put aside (f) here, and discuss it in the next chapter when we turn to semantic relations between the clauses.

Now we are left with part of (a) (=subject identity), (b) and (c). The latter two features seem to interact closely, and the monitoring of subject should be best understood as its result. To start with the reduction of clause, it results in either ellipsis or opposition loss. One way ellipsis is reflected is the coreferentiality of subject as in gapping, and another is an 'impersonal' construction (i.e. non-realization of an indefinite subject). This aspect of clause reduction seems to be somewhat broader than what can be captured by the RRG typology. Although gapping can be understood as reduction of clausal into core juncture, pragmatic control in impersonal constructions seems to fall out of the realm of clause linkage proper. As for opposition loss, some varieties of it are precisely what happen with cosubordination. The only difference between Haiman and Thompson (1984: 513) and RRG is that the former seem to take 'coordination' in a broader sense: 'a glance at languages such as the “chaining languages” of Papua New Guinea...shows that non-finiteness resulting from identity is found only in clauses which can be shown to be *coordinate*: those which are typically tense-iconic and in the

same tense and mood as the clause with which they are conjoined.' What does not seem to be captured by RRG in a straightforward way is decategorization of verbals, e.g. conversion of full verbs into participials or nouns, as in the following example:

(54) I recommend submitting a proposal immediately.

Compare this with (55), which uses an infinitive:

(55) I recommend you to submit a proposal immediately.

RRG can predict, based on the assumption that (54) is core subordination and (55) is core coordination, that opposition loss of some grammatical features comes from the linkage type. For example, it is quite natural that clausal operators, say tense, is shared by both clauses. In addition, discourse-pragmatic factors such as 'contextual (un)predictability' and 'discourse redundancy' (cf. Haiman and Thompson 1984: 512) may be also related to the choice of a participial instead of an infinitival form in a particular discourse context. This is an area which needs be explored for a truly adequate theory of complex constructions. Overall, non-realization of coreferential subject on the one hand and neutralization or one-way dependency of grammatical features on the other are properly handled by RRG without stipulation, whereas the problem of decategorization such as the choice of one verbal form over the other should be relegated to discourse pragmatics.

Next, clause incorporation is also a little broader than what can be captured by the RRG typology of clause linkage. According to Haiman and Thompson (1984: 513), 'grammatically signalled incorporation' means 'a

relationship between a pair of adjacent clauses such that one can be shown to be a part of the other by grammatical criteria'. Two major criteria for incorporation are (i) one clause can be contained within the other, that is, *surrounded by* material from the other, and (ii) one clause can bear grammatical morphology which marks it as being a constituent of the other (ibid.). Of these, the first criterion is simply a non-technical description of embedding, which any reasonable theory of complex constructions should take care of. The second criterion is more important, because it addresses the issue of the degree of incorporation. Earlier in this chapter, I remarked that the RRG category of subordination can in principle be put into two subclasses, namely argument subordination and adjunct subordination. The former encodes complement clauses while the latter encodes adverbial or circumstantial clauses. Haiman and Thompson speak of this distinction and state that the former exhibits 'more tightly incorporated' mode of combining (1984: 515). They cite the following Latin examples to make this point (AUX= auxiliary):

(56) Aristide patria pulso, Persae Graecos aggressi sunt.
Aristides:ABL country:ABL expelled:ABL Persians Greeks attacked AUX
'Aristides having been exiled, the Persians attacked the Greeks.'

(57) Aristidem patria pulsum viderunt.
Aristides:ACC country:ABL expelled:ACC saw:3pl
'They saw Aristides, who had been exiled.'

In the first example, the dependent clause, *Aristide patria pulso*, 'Aristides having been exiled', is in the ablative case (i.e. ablative absolute) and is not an argument of the matrix clause *Persae Graecos aggressi sunt*, 'the Persians attacked the Greeks'. In the second example, however, the dependent clause, *Aristidem patria pulsum*, 'Aristides had been exiled' is in the accusative case, so it is the direct object of *viderunt*, 'they saw'. Thus the clause governed by the verb is more tightly incorporated than the clause which occupies a peripheral position in the matrix clause. Examples of the type similar to (57) can be called subordination proper, which RRG has no problem characterizing, but absolute constructions, as well as 'adjoined' structures typical in Australian languages, may not be easily handled. The point here is that the linkage with the feature [+dependent] can be classified into subordination proper or complementation ([+dependent, +embedded]) and oblique subordination or adjunction ([+dependent, ?embedded]), besides cosubordination ([+dependent, -embedded]). Adjunctions exhibit a wide variety of dependency, as the following English examples show:

(58) This army knife cuts just as I expected.

(59) The phone rang when I arrived at the office.

(60) John liked the idea whereas his wife hated it.

In (58), the subordinate clause *just as I expected* is clearly an indispensable constituent of the main clause (i.e. not exactly an adjunct), though it is an adverbial in itself (hence **this army knife cuts*). In (59) the clause marked by WHEN is properly an adjunct, and it is not overly counter-intuitive to say

that the subordinate clause *I arrived at the office* is governed by the adposition-analog of WHEN (in this sense the whole clause is an analog of PP). But in (60), it is rather strange to say that WHEREAS governs the clause it introduces. The dependent clause is here adjoined to the main clause, rather than strictly embedded or governed. Further, there is no simple (=non-clausal) adverbial phrase that can replace the subordinate clause, like *well* can in (58) and *then* can in (59). To see the relative peripherality of clauses, compare (61) and (62):

(61) The phone rang when I arrived at the office, didn't it?

(62) *John liked the idea whereas his wife hated it, didn't he?

The oddness of the latter example seems to come from the fact that WHEN has a somewhat closer connection to the main clause than WHEREAS does. The following test suggests that (62) is closser to coordination:

(63) John liked the idea whereas his wife hated it, didn't she?

(64) John liked the idea but his wife hated it, didn't she?

In this way, Haiman and Thompson's position that clause incorporation is a degree concept seems to enrich certain part of the RRG typology of clause linkage. It may be worth dividing subordination into argument subordination (=complementation) and adjunct subordination (=adjunction). The latter consists of a variety of constructions with different degrees of dependency as examples (58)-(60) show.

Another well-developed typology of clause linkage is found in Lehmann (1988). Like Haiman & Thompson's, his approach is to give a list of hierarchies and to account for each construction in terms of their combination. But Lehmann's hierarchies are more directly comparable with RRG, because they are mainly based on the structural properties of linkage. The following is adapted from Lehmann (1988: 217):

(65) Elaboration <- -> Compression

(a) Downgrading of subordinate clause

Weak <- -> Strong
parataxis embedding

(b) Syntactic level

High <- -> Low
sentence word

(c) Desententialization

Weak <- -> Strong
clause noun

(d) Grammaticalization of main predicate

Weak <- -> Strong
lexical verb grammatical affix

(e) Interlacing

Weak <- -> Srong
clauses disjunct clauses overlapping

(f) Explicitness of linking

Maximal <- -> Minimal
syndesis asyndesis

Lehmann does not seem to endorse the view that all of the above hierarchies show correlation, but he admits that there are several possibilities of correlation among the parameters (1988: 214-216), e.g. (a) and (b) (complementation presupposes embedding in a verb position while adjunction does not), (c) and (d) (semi-auxiliarization of a predicate entails the loss of its sentential status), and (c) and (e) (control phenomena as an instance of interlacing typically happens with desententialized clauses such as infinitives and participials). From the RRG perspective, (a) and (b) are rightly comparable with nexus and juncture respectively, which I will discuss first.

While hierarchy (b) parallels the layer of linkage, Lehmann's approach is different in that he seems to be concerned with individual syntactic manifestations rather than with abstract categories of linkage. Thus Lehmann speaks of such units as clauses, VPs, participials, and derivational formatives. Note also that they concern encoding strategies, and to this extent, Lehmann's rejection of the RRG trichotomy of nuclear, core, and clause, in favor of 'a multiplicity of syntactic levels between the morpheme and the paragraph' (1988: 189) is both right and wrong. He is right in saying that there are many (obviously more than three) possible morpho-syntactic realization patterns that form clause linkage constructions, but he is wrong in failing to see that the RRG trichotomy is based on the particular concept of clause structure as presented in the previous chapter. Thus VPs can be *employed* to realize core juncture, while there is nothing inherent in the surface string labelled VP that forces it to encode a particular category of linkage. Likewise, participials can encode either clausal or core juncture. In some cases, for example resultative constructions, participials can even participate in nuclear juncture. As such, the main clause syntactic level (b)

should best be looked at in terms of both constructional schemas (as in RRG) and their encoding strategies (as in Lehmann).

The hierarchy (a), 'downgrading' of subordinate clause, partially corresponds to the typology of nexus in RRG. Although grammatical feature dependency is not explicitly incorporated in Lehmann's framework, his 'continuum of hierarchical downgrading' given below is worth paying attention to (1988: 189):

(66) Parataxis <- -> Embedding

independent clauses	adjoined clause	correlative diptych	medial clause	conjunctive participle	governed clause

As I discussed above, the RRG notion of subordination is not exactly uniform. On the other hand, (66) gives a detailed description of non-complement 'subordination', by introducing such categories as adjoined clause and correlative diptych. In fact, there is some reason to suppose that correlatives may be treated separately from the scale of syntactic downgrading, because they involve what Lehmann calls 'interlacing', rather than one-way dependency.

The other four hierarchies are less directly comparable with the RRG typology. Hierarchy (c), 'desententialization', is a welcome elaboration, like certain aspect of 'clause reduction' in Haiman and Thompson's framework. Hierarchy (d), 'grammaticalization of main predicate', is not a direct concern of RRG, but certain facts can be captured by the theory of nexus type. For example, in the formation of complex predication, nuclear subordination tends to be more highly grammaticized than nuclear coordination (i.e. used for semi-auxiliary functions). This point will be amplified in 2.5, focusing on

the diachronic aspects of a few 'versatile' verbs, i.e. verbs that can be used both as main predicates and as semi-auxiliaries, in Japanese (the term is due to Matisoff 1969).

What seems to be of particular interest for discussing the nature of dependency is hierarchy (e), 'interlacing'. Lehmann defines the semantic aspect of interlacing as the situation 'that two propositions share some elements of their meanings' and its syntactic correlate as 'the non-specification of the common elements in one of the propositions and/or the syntagmatic interweaving of the two propositions' (1988: 204). In practice he discusses 'the sharing of predicates, of tense and aspect, and of actants' (ibid.). The sharing of predicates refers to what has been called gapping, and that of tense and aspect can be dealt with by the RRG theory of operators. The sharing of actants relates to such phenomena as switch reference, control, and 'raising', which are all concerned with some aspects of reference tracking. RRG handles the latter two as typical cases of core juncture, in which semantics of the predicate and linking theory play a decisive role. Another important instance of interlacing that Lehmann discusses is correlative constructions. An important point about correlatives is that what is analyzed as matrix clause is not completely autonomous in that it contains an anaphoric or resumptive element which is connected to some constituent in what is analyzed as lower clause. Lehmann cites the following Hittite example (1988: 184):[7]

(67) [Nu kwit LUGAL-us tezzi] nu apat iyami.
CONN REL:ACC.SG.INAN king-NOM says CONN D3:ACC.SG.INAN do
'And what the king says, that I do.'

Here, *apat*, 'that' refers to the denotatum of the preceding clause, namely 'what the king says'. Note also the occurrence of the connective *nu* in both clauses. It appears to suggest that the first clause is not simply embedded in the second clause. This type of mutual dependency poses a problem for a theory of clause linkage, some aspects of which will be examined in 2.4 when we turn to the history of TOKORO-complements in comparison with that of NO-complements. There, the notion of clause integration and autonomy will be re-examined in detail.

Finally, hierarchy (f), explicitness of linking, is about the encoding strategy alone, and consequently is less strongly concerned with the typology of linkage as such. It may, however, be an important issue for the study of discourse organization (in the sense of, for example, Mann and Thompson 1988).

In this chapter, to summarize, we have seen that the traditional coordination-subordination dichotomy is untenable, and a more fine-grained typology is needed. The RRG typology of clause relations in terms of distributional dependency and feature dependency was introduced with illustrations. While the three-way distinction between coordination, subordination, and cosubordination can capture a wide range of constructions, the argument-adjunct distinction may need be incorporated to refine the notion of subordination. In addition, two proposals, Haiman and Thompson (1984) and Lehmann (1988), were examined, both of which are attempts to characterize clause relations in terms of a set of features. The RRG approach provides abstract patterns of clause linkage, while the other approaches seem to mix such patterns and their encoding strategies through morpho-syntax. Yet the

individual features that different authors discuss are worth giving consideration to so we can be fully equipped to investigate the varieties of the way clauses are combined.[8]

Notes to 1.2

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1. As early as in 1973, the gradient nature of structural dependency was demonstrated by Kuno in his study on Japanese syntax. Hooper and Thompson's (1973) study on 'root' phenomena was followed by Green (1976) and Bolinger (1977b) and it was shown that such syntactic operations as inversion and tag formation can be applied to an embedded clause given a due contextual frame. Haiman and Thompson (1984) push the idea even further to the point of abandoning the distinction between coordination and subordination entirely. Their ideas are compared with the RRG approach later in this chapter.

2. The following glosses are used by Longacre (1985) for the Kanite example (47): COMPL(ementizer), CONJ(unction).

3. For example, Finer's (1985) analysis rests on the assumption that dependent (i.e. cosubordinate in our terms) clauses are hierarchically lower than the main clause. This assumption is vital since Finer analyzes switch reference in terms of c-command relations. However, he gives no explicit evidence for viewing switch reference clauses as 'subordinate'. Problems with this approach are, first, it completely fails to deal with the 'look forward' type of switch reference (an affix marking whether the subject of the clause is identical to the *following* clause), and second, it cannot handle long-distance reflexives either, for a clause containing a reflexive expression is by definition higher than the preceding clause that contains its antecedent. For a detailed criticism of Finer's analysis, cf. Roberts (1988).

4. In fact, the interpretation of tense in dependent clauses is far more complex. Here the reader is referred to Teramura (1984: Ch. 5), among the massive literature on the issue.

5. Although terminological fuss is usually no more than a fuss, the term *cosubordination* is not liked by many linguists. It might be actually misleading, for one can take it to refer to two coordinated clauses which together are subordinate to some upper clause. At the risk of renaming for renaming's sake, I might propose the following characterization for those who dislike the term by coining the term *transordination* in place of cosubordination, as all cosubordinate clauses are dependent on the final clause, including non-adjacent ones:

(N-1) Coordination:

[-distributional dependency, -feature dependency]

Subordination:

[+distributional dependency, -feature dependency]

[±argument] => complementation vs. adjunction

Transordination:

[+distributional dependency, +feature dependency]

One (trivial) advantage of this system is that the number of pluses reflects the tightness of linkage. The feature [±embedded] is here replaced by the subfeature [±argument] which is specified only for hypotaxis. As I will discuss later, the notion of embedding may better be limited to that in an argument position.

6. However, the distinction between core and nuclear junctures can capture the two different interpretations of the following example, cited by Haiman and Thompson (1984: 516; attributed to Martin 1975: 541).

(N-2) Hon-o tot-te (PAUSE) mi-masi-ta.

book-ACC take-TE see-POL-PAST

With pause: '(I) took the book and read in it,' or

Without pause: '(I) tried reading the book (to see what would happen).'

The first reading is restricted to core juncture and the second one is restricted to nuclear juncture (see the semi-auxiliarization of *mi*, 'see'). An RRG generalization would be that intonation break tend not to occur in nuclear juncture while it can in core juncture.

7. The following glosses are used by Lehmann (1988) for the Hittite example (67): CONN(ective), D3 (=demonstrative of 3rd person deixis), INAN(imate), REL(ative), SG(=singular).

8. Yet another, latest attempt at a typology of complex constructions is Croft (1991) from a cognitive perspective. In essence, he classifies complex constructions into two basic types. Type A constructions are characterized by tense iconicity, including coordinate structures, serial verb constructions, and complements. Type B constructions lack tense iconicity, and include adverbial clauses, relative clauses, and cleft constructions. The latter type is typically characterized by the backgrounding function.

1.3. Semantic relations and the tightness of linkage

The various linkage types reviewed above serve to encode a great variety of semantic relations. As remarked in the introduction, one crucial prediction of RRG--and any non-autonomous models of grammar in general--is that the way form and meaning are paired is not random. More specifically, RRG predicts that hierarchy of the structural tightness of linkage, as given in (51) based on the two parameters of juncture and nexus, correlates with that of semantic integration. In this chapter, I will substantiate this claim and formulate the hypotheses to be tested in the following chapters.

The fundamental question about the form-meaning correlation, which I will pursue most intensively throughout this study, is as follows:

(B) In which way do structural and semantic hierarchies correlate? Which grammatical features are sensitive to the tightness of the semantic relation in a given construction?

We have already seen in 1.1 that the hierarchy of structural integration is reflected in the relative scope of operators. But the tightness of linkage puts constraints on other areas of grammar as well, including case marking, voice alternation, word order, and reference tracking, some of which we will see below. The RRG commitment is that such constraints are not purely formal and unmotivated, but are crucially rooted in the semantics and pragmatics of linkage. The hierarchy posited in Foley and Van Valin (1984: Ch. 6) is as follows, slightly modified after Van Valin (1991ms):

(68) Causative --tightest (=unitary event)

Aspectual

Psych-action

Purposive

Jussive

Direct perception

Propositional Attitude

Cognition

Indirect discourse

Temporal adverbial

Conditionals

Simultaneous actions

Sequential action: overlapping

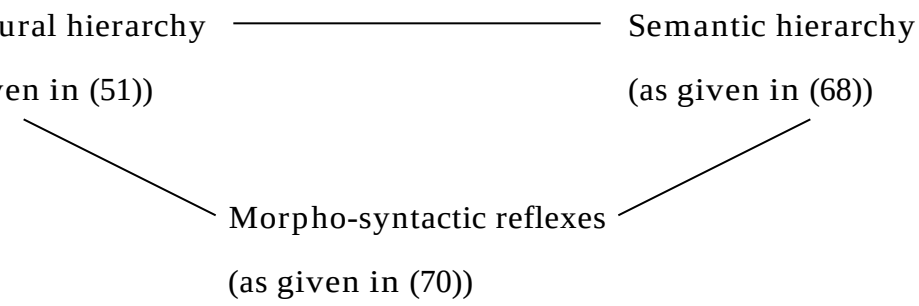
Sequential action: non-overlapping

Action-action: unspecified --weakest (=distinct events)

Although there are points to be elaborated with this hierarchy (see below), it serves as a sufficient starting point for our discussion.[1]

Conceptually, the form-meaning correlation in clause linkage is triangular, consisting of a structural hierarchy, a semantic hierarchy, and their morpho-syntactic reflexes. The first two are abstract categories and the last one is their realization patterns. In the first place, the hierarchy of semantic relations and that of the structural types of clause linkage are expected to exhibit correlation. This is at the very heart of the whole system of clause linkage in natural language. At the same time, this form-meaning pair is encoded with appropriate clusters of morpho-syntactic features. Such features tend to co-vary, rather than occur randomly. This triangular correlation is schematized in the following way:

(69)



Put differently, the tightness of linkage cross-cuts various subsystems of grammar in a coherent way.

In the previous chapter, two approaches to the typology of clause linkage were compared with RRG. Below I will give a tentative synthesis of what may count as morpho-syntactic reflexes of the tightness of linkage:

(70)

	Tight / strong <-	->Loose / weak
Nominals	Same subject	Different subject
	Not realized (e.g. 'Equi-deleted')	Realized
	Constrained case marking	Normal case marking
Verbals	Reduced inflection	Elaborate inflection
	Grammaticized	With full lexical content
	Voice alternation suspended	Voice alternation at liberty
Operators	Shared	Not shared
	Dependent	Not dependent
Others	No explicit signal	Explicit signal
	Word order fixed	Word order at liberty

This scheme basically captures all the relevant encoding strategies listed by Haiman and Thompson (1984) and Lehmann (1988), and some aspects of what Givón (1980) discusses under 'binding', assuming that 'reduced/ elaborate inflection' includes the possibility of nominalization. Importantly, the features given in (70) are in principle predictable from the RRG typology of clause linkage, characterized in terms of the layer of linkage and the nature of dependency. Thus, for example, the feature of tense reduction can be considered as a reflex of the category of cosubordination. Furthermore, works by Silverstein (1976, 1980ms, 1981) have revealed that a crucial determining factor of case marking and voice alternation in split ergative languages is the 'logical relations of clauses', which in part is included in the list of (70).

Below, I will briefly illustrate how the form-meaning correlation might look like by examining the encoding of reference tracking. According to the list of reflexes given in (70), the non-realization of an argument in the dependent clause is one important sign of clause integration. Let us start with causative constructions. Cross-linguistically, it is quite common that causatives are realized by unitary predicates which, by definition, do not doubly express the shared argument. On the semantic side, causatives are characterized by the closeness between cause and result on the chain of causality.[2] Structurally, their type is commonly nuclear junctures as in the French example in (71) (taken from Van Valin 1991ms), or complex predication with a bound affix *se* (glossed CAUS), as in the Japanese example in (72) (FUT=future), though English causatives behave differently.

(71) Je ferai manger les gâteaux à Jean.
1sg make.FUT eat the cakes to Jean

'I will make Jean eat the cakes.'

(72) Taroo-wa neko-ni gyuunyuu-o noma-se-ta.
Taroo-TOP cat-DAT milk-ACC drink-CAUS-PAST
'Taroo let the cat drink milk.'

Note that in both of these examples, the subject of the caused activity is not realized independently. It is coreferential with the dative-marked causee (*Jean* in (71) and *Taroo* in (72)). Note also that in *manger* 'eat' and *noma* 'drink' the inflection is reduced or suspended.

Next, purposives may not necessarily take the form of complex predication, but the subjects of the main and dependent clauses are normally identical and the dependent clause is typically subjectless. Semantically, purposives embody a tight semantic relation, because what is expressed in the purpose clause cannot be realized without the primary action expressed in the main clause. English, for example, uses *to* complements for purposives, as in the following:

(73) I went to the library to check out Laotze.

This is an example of typical core juncture with argument sharing. Here, along with the suppression of the subject, the tense of the dependent clause is neutralized by the infinitive.

As we go down the semantic hierarchy (68), we find linkages where the subject of the dependent clause is not suppressed or 'deleted'. Thus perception and attitude predicates need not involve 'deletion' of the lower subject. This is a kind of borderline area, and both (74) and (75) are OK:

(74) We hate to say good bye.

(75) We hate it that we must say good bye.

Example (74) is core juncture and (75) is clausal juncture, both subordination. Semantically, attitude predicates embody less tight clause integration than purposives, because the realization of the content of dependent clause is not conditioned by the activity expressed in the main clause. Thus in (73), the subject's going to the library is a crucial precondition for checking out the book, but this does not hold in attitude predicates.

When we come to indirect discourse or reportative predicates, the linkage becomes much less tight. Structurally, the linkage type is clausal subordination and less frequently clausal coordination. The subject of the dependent clause is overtly encoded in most cases, because there is no obligatory identity between the subjects of the main and dependent clauses, as in the following example.

(76) John told Mary that he had to leave early.

The semantic relation between the clauses is weaker than that in (75), in the sense that the subject's commitment to the embedded proposition is weaker. It is unimaginable that this type of semantic relation is encoded by nuclear juncture or even core juncture. As to the encoding of the subject, many languages allow pragmatically controlled deletion of it, while others (e.g. Bantu languages) may exploit logophoric pronouns, but the linkage type remains the same.

Finally, we come to action sequences, with or without overlap. This is where clausal coordination is typically employed, and naturally enough, the subjects of the linked clauses are both overtly encoded unless its omission is licensed independently. A typical example is:

(77) John went to the bathroom and Mary yawned a couple of times.

Here nominals are fully realized, verbal inflection is not suppressed, and there is no sharing or dependency of operators. The triangular correlation between linkage type, semantic relation, and morpho-syntactic features is thus supported at least in canonical instantiations.

At this point, three remarks may be made on the semantics of clause linkage. The question formulated as (B) presupposes that semantic relations can be arranged hierarchically in a manner paralleling the arrangement of structural relations given in (51), and it is crucial that the hierarchy of semantic relations serves its duty. The first point is that the list of semantic relations is obviously not exhaustive. For example, where would 'Manner' or 'Reason' be located? Are there any common denominators for systematically treating the variety of semantic relations rather than take such relations as primitives? Of course, our past experience in phonology and lexical semantics tells us that decomposition does not always yield an ideal result, but it ought to be exploited at least as a heuristic.

In the discussion that follows, I will provisionally adopt the notion of 'motivatedness' to discuss the relation between clauses. A linkage is motivated when the truth or validity of state of affairs expressed in the dependent clause is assured, enhanced, or restricted by the content of the main clause. This notion is in part comparable to Givón's (1980) three

features, control, success, and independence for characterizing the 'binding' hierarchy. He states that manipulative verbs are ranked over non-manipulative ones, implicative verbs over non-implicative ones, intended manipulations over unintended ones, and direct causation over indirect causation along the hierarchy. Thus in a semantically very tight linkage such as causatives or resultatives, the caused or resultant activity can only be true (and by implication valid) by virtue of the realization of the main predicate. In perception or cognition complements, the content of the dependent clause is not the *result* of the activity denoted by the main predicate, but it is valid only in relation to somebody's perception or cognition. In this sense, the motivatedness between the linked units is not as strong as in causatives or resultatives, but is clear enough. In adverbial clauses, however, the motivatedness is not always explicit, but there is usually some connection between the clauses in the sense that the validity of the dependent clause is at least partially assured by the main clause, as in reason clauses or conditionals. In simple juxtaposition of events, this kind of motivatedness is at best supplied from context, not strictly a part of the semantic relation between clauses.

The second point is that the distinction between the semantics and pragmatics of clause linkage is not always clear. For example, the definition of 'conditionals' would require both semantic and pragmatic considerations. Mere juxtaposed clauses can have conditional interpretations, while other linkage types can be used to encode the same semantic relation. Also, it should not be overlooked that in the clause-chaining construction, the semantic relation is relatively underdetermined and much information is supplied by contextual inferences.

The third point concerns one pseudo-debate in the discussion of clause linkage, namely that the form-meaning correlation may not be uniform. Some scholars point out that hierarchies such as (51) and (68) do not exactly line up together, and it is untenable that one semantic relation is always associated with one linkage type. Thus Haiman and Thompson (1988: xii) claim, 'What does emerge from these papers is that the motivations for clause creation and combination are semantically and pragmatically heterogeneous, that correlations between formal indices of subordination...and pragmatic function are inconsistent'. This point ought to be taken seriously, but also with care. Notionally, the correlation is relative, and I am essentially in favor of the position that there can be more than construction-specific generalizations in the form-meaning correlation. The point is that, as with any commonly accepted universals, the *reverse* tendency cannot hold. The RRG prediction in this sense is that there is no language which consistently encodes causatives with juxtaposition of full clauses and action sequences with complex predication. What I am going to investigate in this study is thus the substantiation of the relativized hypothesis about form-meaning correlation. This position is formulated in (78) as a proposed hypothesis to question (B):

(78) If an instantiation of one construction is at a higher position in the hierarchy of semantic relations than that of another, then the former tends to exhibit a higher degree of structural integration than the latter.

I suppose this formulation correctly represents the RRG perspective, which may perhaps be shared by other moderate functionalists as well.

Earlier in the introduction I argued that synchronic structures can, if not should, be understood in relation to the historical motivations behind them. The form-meaning correlation in clause linkage becomes most visible when it is in the process of change. That is to say, it is expected that one does not change without triggering the change in the other. In this sense diachrony provides one of the most solid bases for testing linguistic hypotheses. To repeat: synchronic systematicity is shaped by historical mutation after competing motivations. Thus, our third problem to be dealt with is:

(C) What are the general tendencies in the grammaticization of clause linkage and the rise of polyfunctionality?

As stated in (78), my hypothesis about the form-meaning correlation in clause linkage is that there is some discernible correlation in a relational, not atomistic sense. Diachronically too, the changes in form and meaning go hand in hand in one respect or another. To examine how historical changes in clause linkage constructions are motivated--which is the essence of question (C)--is precisely to deal with question (B).

The same argument holds for the polyfunctionality of linking devices in synchrony as well. The rise of polyfunctionality is equally important as ordinary grammaticization. A linguistic form may lose its lexical meaning (i.e. become 'bleached') and become a grammatical formative, but it is quite often the case that one linguistic form develop more than one function without losing the original meaning. From this point of view, synchronic polyfunctionality is a result of functional mutations through history. Lexical words may participate in grammatical processes in certain context while they may be used as full lexical items in other context. Also, grammatical words

may become more grammatical, i.e. may be used in constructions other than those they are originally for. Semantically, this is what polysemy is, but I expand this notion and adopt the term polyfunctionality, in order to capture the diversification of grammatical meanings, or meanings that can be either encoded by or induced from grammatical forms. Thus the synchronic 'layering' of diachrony is equally important for the understanding of language. By examining how one marker participates in different constructions and/or has different meanings, I assume, further evidence will be obtained about the correlation between the shift in structural integration on the one hand and the shift in semantic relation on the other.

The general hypothesis about the diachrony of clause linkage is given as follows:

(79) One basic diachronic tendency about the grammaticization of clause linkage is from less to more tightly integrated linkage, both structurally and semantically.

More specifically, this hypothesis means that on the structural side, the path of grammaticization typically follows the hierarchy (51) in the ascending order, and on the semantic side it follows the hierarchy (68) in likewise the ascending order. As (51) is a combination of two parameters for the typology of clause linkage, predictions made in (79) can be further detailed as in the following:

(80) a. Clause > Core > Nucleus (> Affix)

b. Coordination > Subordination > Cosubordination

These hierarchies both represent paths from lower to higher clause integration, to be tested in the analysis part. It is conceivable that only one of them turns out to be supported, which is nevertheless a welcome result for deeper understanding of the diachrony of clause linkage. Concerning the first hierarchy, it need be remarked here that when an instance of nuclear juncture, or complex predicate formation, becomes even more fused, one of the linked elements loses its lexical status and turns into either an inflectional or a derivational morpheme.[3]

On the semantic side, the hierarchy (68) is somewhat atomistic and may not be suitable for discussing the historical development of the semantic relation encoded in clause linkage constructions. Thus I will adopt the feature 'motivatedness' to deal with the semantic change at large, formulated as follows:

(81) Less motivated (weaker control, relevance, etc.) > More motivated (stronger control, relevance, etc.)

In the same vein, Traugott has amply shown in a series of works (e.g. 1982, 1986, 1989) that one general tendency of semantic change is from less to more *situated* via the conventionalization of contextual inferences. A typical example is obtained from the development from a temporal to logical connective as in English *since*. In terms of Givón's (1980) parameters of 'binding' hierarchy, possible paths of development are (i) the matrix predicate comes to have stronger control, (ii) the factivity of the complement clause is enhanced, and (iii) the complement clause becomes less autonomous.

Below I will give a few ready illustrations of the cases of historical development that support the hypothesis (79) as a preliminary to the chapters

in the analysis part. First, let us look at an instance of the development from clausal to core junctures. While both (82) and (83) are both OK in Modern English, the latter is a later innovation.[4]

(82) The general commanded that the army retreat.

(83) The general commanded the army to retreat.

The first example is clausal subordination with fully tensed clause, while the second example is core coordination with the shared argument *the army*. As Riddle (1975) argues in detail, the control of the matrix subject, *the general*, is stronger in (83) than in (82). Thus the semantic connection between the linked clauses is more strongly motivated in the latter than in the former. In terms of grammatical features, the tense is not marked in (83), and the subject of the complement clause is 'raised' to the object position of the matrix clause, losing its surface subject status.

Next, there is also good amount of evidence for the development from core to nuclear junctures. In footnote 2 to 1.2, I mentioned two possible interpretations of Japanese *V-TE-miru* construction (V-LINK-see). One interpretation, where the verb *miru* is taken as a full lexical verb, is core juncture which allows intonational break, and the other interpretation, where *miru* is functioning as a semi-auxiliary, is an instance of nuclear juncture. Although the latter use of *miru* seems to have existed in OJ and MJ, another such polyfunctional predicate, *kakeru* 'hang', seems to have developed its semi-auxiliary function in MJ (cf. 2.5 for further discussion). ModJ examples are given below:

(84) Boosi-o kabe-ni kake-ta.
hat-ACC wall-DAT hang-PAST
'(I) hung my hat on the wall.'

(85) Hon-o yomi-kake-te otya-ni si-ta.
book-ACC read-hang-TE tea-DAT do-PAST
'(I) withdrew from reading and had a cup of tea.'

In (84), *kake* is a full lexical verb and the linkage is core juncture. But in (85), the same *kake* is used as a semi-auxiliary. Thus *yomi-kake*, read-hang, literally means 'read (something) and hung', or 'hung up reading'. Historically, the latter use, which is nuclear juncture, seems to have developed out of core juncture, which does not encode semi-auxiliary function.

These are all simple illustrations, and we will see more wrinkles of the diachronic aspects of clause linkage in 2.3-2.5. Other changes from lower to higher clause integration are reported elsewhere. For example, Lord (1976) reports the grammaticization of complementizers out of serial verb constructions, which illustrates a change from coordination to subordination. The rise of participial constructions in many languages can be seen as a change from either coordination or subordination to cosubordination, though the exact paths of change may differ across languages and morphological conditions must be fully considered.[5] The auxiliarization of *masu* in Japanese, mentioned in footnote 3 in this chapter, is an instance of the change from nuclear juncture into genuine auxiliaries. The grammaticization of English modals (i.e. the loss of main verb function with *can*, for example) may be seen as analogous to the change with *masu*. For now, however, the

above discussion might suffice to posit tendencies given in (79)-(81) as something worth examining in detail.

In this chapter, the RRG hierarchy of semantic relation was presented, with critical comments. The hypotheses to be tested were then presented, which, in summary, state that the form-meaning association is not random in the formation of clause linkage constructions, and that their diachronic development is commonly from lower to higher clause integration, defined in terms of the hierarchies given in (51) and (68). Several examples were given to illustrate the points being made. The hypotheses formulated in this chapter will be verified in the analysis part, which, if sufficiently supported, will offer strong evidence for the functionalist commitment that the association between form and meaning in natural language is to a considerable extent motivated.

Notes to 1.3

1. Robert Van Valin (p.c.) suggested that the semantic relations listed as in (68) are indeed 'salient' points on the continuum, like case roles such as 'agent', 'stimulus', 'recipient', etc. are on the scale of, say, agentivity. This is an important point to ponder on, but I suppose there may be more than one scale to be considered, and semantic relations may be defined as intersections of scales. I will briefly turn to this point later in this chapter.

2. Of course, it goes without saying that indirect causatives may be realized by core junctures, reflecting what Haiman (1985a) calls iconicity principle of distance. There, the weakness or indirectness of the causer's control is reflected in syntactic structures.

3. According to Robert Van Valin (p.c.), the primary branching point in acquisition is the distinction between coordination and non-coordination, the former acquired first. Also, juncture and nexus may interact in, for example, the development of a nuclear juncture into a bound affix, because in order for a morpheme to be bound, it is most likely to be structurally subordinated. One example from Japanese is the politeness auxiliary *masu*. Its etymology is not completely certain, but according to an accepted view, its main source is *mawirasu*, 'attend; do service' (Konoshima 1973: 435ff). The *V-mawirasu* construction, which was nuclear coordination expressing politeness, underwent sound changes such as: *mawirasu* > *marasu (> massu/mattsu)* > *masu*. At the same time, the semantic shift resulted in the rise of a subordinate structure. The form *marasu* is found in MJ and the change is reported to have been completed in Pre-ModJ. In ModJ, *masu* is a complete auxiliary, which can only occur as an affix to the main verb.

4. For example, cf. Brunner's (1960-2) chapter on infinitives. Interestingly, verbs like *command*, which has a fairly strong control over the subordinate event, had infinitive complementation in relatively early stage. Attitude predicates, for example *like*, had an impersonal construction with *that*-complements even in ME, and the construction like *I like it to be hot* is an innovation in ModE.

5. One candidate of such a change is Japanese BA. In ModJ, as examples (46) and (48) show, BA-linkage is cosubordination. But in OJ and MJ, and in some varieties of Pre-ModJ, the predicate of the clause marked by BA could also be marked for certain auxiliaries such as *keri*, expressing remote experience and hence evidential (=hearsay). As evidentials are a clausal operator, its occurrence suggests that BA-linkage in old days was either coordination or adjunct subordination. Thus it can be said that BA-linkage underwent a change from coordination or subordination to cosubordination.

2. Clause Linkage in Japanese

In this part I will present a fairly comprehensive examination of major clause linking devices in Japanese. In 2.1, I will first give an overview of the basic types of clause linkage construction to be looked at. Then I will describe core and clausal junctures in 2.2-2.4, nuclear junctures in 2.5, and sentential junctures in 2.6. Among them, the largest portion will be devoted to clause linkage proper, i.e. core and clausal junctures. Finally, 2.7 will be devoted to brief cross-linguistic observations.

2.1. Overview

Japanese displays a wide range of clause linkage constructions. Before going into the analysis, it may perhaps help to review some typological properties of Japanese and look briefly at how various types of clause linkage constructions are realized.

To begin with, in terms of word order, Japanese is a typical SOV language, exemplifying all the generalizations of Greenberg's (1966) word order typology. It has orders such as Adj-N, RelCl-N, V-Aux, NP-adposition, etc., with no commonly-used alternative orders, except OSV for SOV. Japanese also conforms to Greenberg's universals 13-16 on complex constructions (1966: 111):

(86) 13: If the nominal object always precedes the verb, then verb forms subordinate to the main verb also precede it;

14: In conditional statements, the conditional clause precedes the conclusion as the normal order in all languages;

15: In expressions of volition and purpose, a subordinate verbal form always follows the main verb as the normal order except in those languages in which the nominal object always precedes the verb;

16: In languages with dominant order VSO, an inflected auxiliary always precedes the main verb. In languages with dominant order SOV, an inflected auxiliary always follows the main verb.

With respect to the freedom of word order, Japanese is fairly restricted. The normal order of clauses is dependent > main. Inversions do occur, but are highly marked, unlike in some other SOV languages.

Next, concerning grammatical relations, Japanese is both subject- and topic-oriented, and can have a 'multiple subject' construction (cf. Li and Thompson 1976). The encoding of grammatical relations is exclusively dependent-marking (cf. Nichols 1986) with no agreement system.[1] Nevertheless, it is important to recognize that Japanese allows the pragmatically-conditioned omission of argument NPs (including both subjects and objects), and reference tracking in Japanese is mostly inference-based (cf. Van Valin 1987). In terms of the distinction role- vs. reference-dominance (cf. Foley and Van Valin 1984: Ch. 4), Japanese seems to exhibit a certain degree of reference-dominance, but reference tracking does not always trigger voice alternation, especially when the topic is firmly established across clauses. Case marking is nominative-accusative, with a set of exceptions conditioned by the semantics of the verb (one common alternative pattern is dative-nominative).

The following passages illustrate how various clause linking devices are put into use in actual discourse (predicates are in bold; glossing is simplified):

(87) Written expository discourse:

Wangan.sien.hi-no 90-oku doru-o **makanau** sekiyu.zoozee-ga --#1
Gulf.contribution-GEN 90-hundred.million dollar-ACC furnish oil.tax hike-NOM
'The oil tax hike which will create nine billion dollars of (Japan's) contribution to the Gulf crisis
1-niti-kara zissi-ni-**nari**, --#2
1-day-from effective-DAT-become
'became effective as of (April) 1, (and)
zenkoku-de gasorin.zee-ga 1-rittoru-atari yaku 1-en **neage.sar-eru** nado, --#3
everywhere-LOC gas.tax-NOM 1-liter-per about 1-yen raise-PASS the.like
'all over the country the gas tax has been raised about one yen per liter (together with other oil-related taxes, and consequently)
sekiyu.seehin.kakaku-ga wazuka.nagara **agat-ta**. --#4
oil.product.price-NOM a.little become.higher-PAST
'the price of petroleum products has become a little higher.
Naganen **yasukat-ta** enerugii.kakaku-ga **motarasi-ta** mono-o --#5
long.lasting inexpensive-PAST energy.price-NOM bring.about-PAST thing-ACC
'What the long-lasting low energy cost has brought about
kangaeru yoi kikai-**da**. --#6

think.over good occasion-PRED

'(this) is a good occasion to think over.'

[From *Asahi Shinbun* April 2, 1991, p. 2]

(88) Conversational narrative discourse

A: Nn ano Oakland-ni **sun-de-ta** toki ne, --#1

Hmm that Oakland-DAT live-TE-PAST time PRT

'Yeah (it happened) when (I) lived in Oakland,

Oakland-no kowai tokoro-ni **sun-de-ta** no; sorede --#2

Oakland-GEN dangerous place-DAT live-TE-PAST PRT so

'(I) used to live in Oakland's dangerous areas; so ...'

B: Nanka obake-ga **deru** to ka. --#3

somewhat ghost-NOM haunt COMP Q

'Did ghosts haunt?'

A: **Tigau**, --#4

wrong

'No,

min'na-ga watasi-wa zenzen **sira-nai**-de --#5

everybody-NOM 1sg-TOP at.all know-NEG-TE

'everybody says (it's a dangerous area) but I didn't know (that) at all;

ki-ta bakari-**da**-kara --#6

come-PAST just-PRED-KARA

'it was right after (I) came here, so

sira-nai-de --#7

know-NEG-TE

'(I) didn't know (that).

anoo reiku-no soto-**da**-kara --#8

well lake-GEN outside-PRED-KARA

'Well, (it) was near the Lake, so

ii-na-to **omot**-te --#9

nice-PRT-COMP think-TE

'(I) thought (it) would be nice, and

kari-ta-n.da-kedo.mo. --#10

rent-PAST-PRED-but

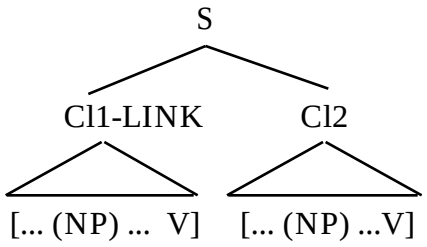
'(I) rented (a room) there.'

[From my tape-recorded data]

These two passages exemplify various types of clause linkage constructions, which we will identify in the following.

In both (87) and (88), core and clausal junctures stand out as playing a key role in linking idea units (cf. the survey in 2.2). Based on the scheme X-L-Y introduced in 1.1, we may represent a typical structure of the linkage as follows (LINK stands for linking device, including verbal inflection):

(89) Cl_1[(NP)...V]-LINK, Cl_2[(NP)...V]



I call this 'verbal head' linkage, because the dependent unit (=Cl_1) is headed by a verb (or more precisely, verb complex). This is by far the commonest type, and includes linkages such as #2 in (87) and #5, #6, #7, #8, and #9 in

(88). The linkage may be realized either by the inflection alone (the Japanese verb has several inflectional forms, two of which can link clauses directly) or by the affixation of linking particles to the inflected verb (cf. 'Notes on transcription and glossing').

(90) V/LINK (*ren'yookee* 'linking form')
V/PERF (*izenkee* 'perfective form' or *kateekee* 'conditional form')
V/LINK, PERF, or FINAL with PRT

Examples are (the citation form of the verb *ari*, *are*, and *at-* 'be' or PRED is *aru*):

(91) Doitu-wa hitotu-de.ari, bunka-mo hitotu-da.
Germany-TOP one-PRED/LINK, culture-also one-PRED
'There is one Germany, and there is one culture.'

(92) Doitu-wa hitotu-de.are, seekatu-wa hutatu-da.
Germany-TOP one-PRED/PERF, life-TOP two-PRED
'There is one Germany, but there are two lives.'

(93) Doitu-wa hitotu-de.at-te, bunka-mo hitotu-da.
Germany-TOP one-PRED/LINK-TE, culture-also one-PRED
'There is one Germany, and there is one culture.'

Linkage by V/LINK occurs frequently in the written or formal register (cf. #2 in (87)), but V/PERF is very restricted in its use and does not seem to be fully productive. Linkage by conjunctive particles such as TE and KARA displays a

great variation (cf. TE (#9) and its allomorph (#5, #7) DE, as well as KARA (#6, #8) in (88)). In the following analysis, linkage by particles will be referred to by the marker being used, e.g. *TE-linkage*, without indicating the inflectional ending which the particle requires.

There is yet another type of linkage at the clause level, namely the 'nominal head' linkage, which is structurally analogous either to the relative clause or to noun complementation.[2] Relativization in Japanese is that of typical SOV languages, i.e. it is prenominal and adopts the 'deletion' strategy.

(94) [Dooryoo-ga $ø_i$ kai-ta] hon_i-o syohyoo.si-ta.
colleague-NOM write-PAST book-ACC review-PAST
'(I) reviewed the book which (my) colleague wrote.'

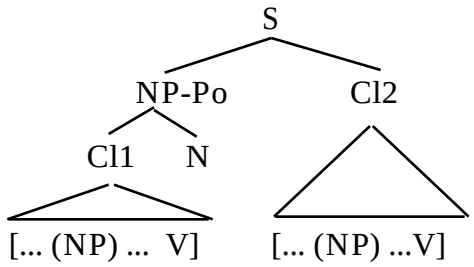
When the head noun in a relative clause expresses some relational concept (e.g. spatial, temporal, or qualitative) and occupies an adjunct position in the matrix predicate, the resulting pattern is almost indistinguishable from an adverbial clause.

(95) [Eki-ni tui-ta] toki(-ni) wasuremono-ni kizui-ta.
station-DAT arrive-PAST time-DAT forgotten.thing-DAT realize-PAST
'When (I) arrived at the station, (I) realized that (I) had forgotten something,' lit. 'At the time (I) arrived at the station, (I) realized that (I) had forgotten something.'

In this example, the meaning of the construction is compositional, but there is a sign of grammaticization, namely the omissibility of DAT *ni* after the

head noun *toki* 'time'. The phrase structure of (95) under a relative analysis may be represented as follows (*Po* stands for postposition):

(96) NP[Cl_1[(NP)...V] N](-Po), Cl_2[(NP)...V]



The V form in Cl_1 is the 'noun-modifying' ending in traditional grammar, which is indeed identical to the final ending in form. Here, the first clause is structurally dependent on the following noun, which has some kind of relational meaning, and the whole relative clause (Cl_1[(NP)...V]-N) encodes a circumstance for the following clause with a postposition (most commonly dative *ni* or locative *de*). Unlike ordinary relativization (cf. #1, #5 in (87)), the relative clause in this construction is not used to identify the denotatum of the head noun. According to this analysis, the postposition (Po) marks the relation of the relativized N to the matrix clause, and to this extent, this pattern is a linkage between the main clause (Cl_2) and the expression headed by a lexical noun (Cl_1). I call this 'nominal head' linkage because the morpheme which marks the relation between the two units (=Po) is structurally attached to the head N of the relative clause (=Cl_1), which in turn forms a complex NP.

However, the string *N-(Po)* such as *toki(-ni)* functions, and is indeed reanalyzable, as a linkage marker, and it becomes analogous to LINK given in (89) (accordingly the label NP which embraces Cl_1 becomes void). This

construction is exemplified by #1 of (88), in which *toki*, 'time' encodes temporal setting (compare the gloss 'when'). In many cases, the meaning of the construction is mostly compositional (i.e. the semantics of the linkage is directly predicted from the lexical meaning of the head noun, as in *toki*), but in others, the head noun undergoes a semantic shift, as in the following example:

(97) [Sigoto-ga aru] kuse-ni terebi bakari mi-te.iru.
work-NOM have bad.habit-DAT TV only watch-STAT
'Even though (I) have work to do, (I) am only watching TV.'

In this example, the relative-like clause can hardly be translated without altering its lexical meaning 'a bad habit or disposition' (but cf. the expression *in spite of (the fact that)* in English). Here, the semantic shift of the head noun is clear enough so the linkage can be seen as an independent construction.

For both verbal and nominal head linkages, clauses can be chained in Japanee as Cl_1-L-Cl_2-L-Cl_3.., though not very extensively. The chaining can be seen in both written and spoken registers. For example, we can see a chain that extends over #5-#9 in (88). The chaining (or multiple embedding) of relative clauses is exemplified by #5 in (87), which is also common in Japanese.

Next, we also find examples of nuclear juncture in the above texts. 2.5 below will be devoted to its discussion. In this construction two or more nuclei are linked so as to form a complex predicate (cf. 1.1 for more detailed definition):

(98) Cl[(NP)...Pred[V_1-V_2]]

The linking device for V_1-V_2 is either TE or V/LINK. Examples can be found in #1 and #2 in (87), both of which contain *sun-de-ta*, which is a reduced form of *sun-de-i-ta*, live-TE-stay-PAST 'used to live' (*i* is often deleted in the spoken register). Notice that both the subject (the speaker 'I' in both #1 and #2), and the location ('Oakland' in #1 and 'dangerous area' in #2) are shared by the linked predicates. Semantically V_2 modifies various aspects of V_1 such as aspect. Thus *i* 'stay' may also be glossed STAT when used with the linking TE (i.e. is functioning as a semi-auxiliary predicate; cf. Matisoff 1969). Unlike auxiliaries, verbs that occur in the place of V_2 can also be used as a main verb in itself. Interestingly, there is a mismatch of valency between the linked nuclei; for example, the first verb is Vi while the second one is Vt. In the analysis below, I will put a particular focus on the rise of this type of nuclear juncture which is not a simple coordination.

Finally, sentential juncture, which will be discussed in 2.6, is most heterogeneous, and does not exactly form a closed set. The lexical source for markers of sentential junctures is quite varied, but the commonest device at this level is zero linkage (i.e. no linking marker between sentences). In (87), #5 starts with no overt linkage marker. In (88), #2 contains the connective *sorede*, analyzable as *sore*, an anaphoric expression, plus *de*, most probably a predication marker (hence literally 'being so'). Interesting as it is, sentential juncture is of relatively minor significance within the overall system of clause linkage as we construe the term in this study. Only a few markers that indicate a recurrent pattern of change in Japanese will be examined below.

In this chapter, we have reviewed basic patterns of Japanese clause linkage with illustrations from natural data, introducing the notions verbal and nominal head linkages. Their syntax and semantics will be detailed in the following chapters.

Notes to 2.1

1. Some people might consider honorifics as an instance of head-marking which indicate the subject of the clause, but in fact this is misconceived. Honorifics serve to help identify the referent by social deixis, not by encoding the grammatical relation as such.

2. Other scholars, for example Inoue, Kazuko (1976), call this type of construction 'pseudo-relatives'.

2.2. Core and clausal junctures (I): Syntax and semantics of major constructions

There are several criteria for classifying the markers of verbal head linkage. Though in this chapter I will proceed on an item-by-item basis, the following classification based on morphological criteria is helpful:

(99) (a) Zero affixation (inflection alone): linking form and less commonly conditional / perfective form
(b) Monomorphemic: TE, BA, TO, GA, SI, KARA, etc.
(c) Polymorphemic: NONI, TEMO, NODE, etc.
(d) Nominal head: TOKI(NI), MAMA(DE), TAME(NI), etc.
(e) Phrasal: TOIUYORIWA, NIMOKAKAWARAZU, TOIUNOWA, etc.

Phrasal markers differ from the others in that they have internal syntax. For example, TOIUYORIWA is analyzable as (S) TO-IU-YORI-WA, which can be glossed (S) COMP-say-than-TOP(?), lit. 'rather than to say (S)' > 'rather than (S)' (TOP is contrastive). What is peculiar about them from a distributional viewpoint is that they can occur as independent sentence-initial connectives, as the following examples illustrate:

(100) Kane-ga nai-nimokakawarazu, hataraka-nai.
money-NOM have.not-NIMOKAKAWARAZU work-NEG
'(I) have no money, but (I) don't work.'

(101) Kane-ga nai. Nimokakawarazu, hataraka-nai.
money-NOM have.not NIMOKAKAWARAZU work-NEG

'(I) have no money. But (I) don't work.'

In (100), NIMOKAKAWARAZU is occurring as a clause-final connective, so this is an example of clausal juncture. But in (101), the same form is separated from the first clause, and is occurring as a sentence-initial connective, so this is an example of sentential juncture (here, I only represent the difference via orthography, but it has an intonational manifestation in speech as well). I call this type of linkage marker *detached connectives*. Since most phrasal markers are of this type, I will put off their discussion to 2.6.

Below I give a list of non-phrasal conjunctive particles (type (b) and type (c) in (99)) that are commonly used in modern Japanese. Each entry consists of the marker's (i) morphological (and to some extent etymological) information, (ii) semantic and/or discourse functions, and (iii) reference tracking function when the subject NP is omitted throughout the linked clauses. Other information will be supplied when relevant (*Mn* and *Pl* stand for monomorphemic and polymorphemic; SS and DS stand for same subject and different subject; the missing subject is glossed by pronouns rather than 'X' for convenience). After listing each marker, I will look at their morpho-syntactic correlates.

(102) BA (or (R)EBA): (i) Mn; Suspected to be cognate with the topic marker WA (< OJ *Fa*; PreOJ **pa*)[1], for details cf. 'Excursus' of Ohori (1988). In casual speech, *STEM-e-BA* (*STEM-e* stands for the conditional ending of verbals) is reduced to *STEM-ya* (e.g. *kakeba*, 'if (X) writes', becomes *kakya(a)*); (ii) BA is a conditional marker affixed to the conditional ending (a), and it also encodes symmetricality (b) and temporal sequence (c). Ohori (1988) gives an analysis whereby the

essential function of BA is to mark clausal topics from a historical perspective; (iii) Typically DS or open:

(a) Yasukere-ba, kau yo.
cheap-BA buy PRT
'If (it) is cheap, (I)'ll buy (it).'

(b) Taroo-wa asi-mo hayakere-ba, kata-mo tuyoi.
Taroo-TOP foot-also fast-BA shoulder-also strong
'Taroo runs fast and has a strong throwing arm as well.'

(c) Mado-o akere-ba, soto-wa ame.
window-ACC open-BA outside-TOP rain
'(I) opened the window to find (it)'s raining outside.'

GA: (i) Mn; Homophonous with NOM marker and perhaps cognate with it. GA came to be used as a clause linker only in late OJ, while other case markers such as NI (=DAT) and WO (=ACC) were already used in early OJ (cf. Ishigaki 1955); (ii) GA is affixed to the final ending of verbals, and is usually said to encode the antithetical meaning (a). But my understanding is that its primary function is to mark a brief pause of thought, and antitheticality may derive from it (b). Some prescriptivists seem to dislike the use of GA for a pause of thought, because they think that the speaker's evaluation of the relation between the two events may remain unclear as in (c). However, it ought to be noted that it is a built-in feature of GA; (iii) Not clear with respect to reference tracking:

(a) Daigaku-ni hait-ta-ga, benkyoo-bakari-si-te.iru.
college-DAT enter-PAST-GA study-only-do-STAT
'(I) entered a college, but (I) have not quit studying.'

(b) Ani-wa sizin-da-ga, otooto-wa ongakuka-da.
elder.brother-TOP poet-PRED-GA younger.brother-TOP musician-PRED
'The elder brother is a poet and/??but the younger brother is a musician.'

(c) Kotosi sotugyoo-da-ga, singaku-o kangae-te.iru.
this.year graduation-PRED-GA go.to.upper.school-ACC consider-STAT
'(I) am graduating this year, and/but (I) am considering whether to go to upper school (i.e. graduate program).'

KARA: (i) Mn; Extension from KARA as a postposition which means 'from'; (ii) KARA is affixed to the final ending of verbals, and encodes reason. Cf. English *FROM this I conclude, ...* For the difference from NODE, see my accounts therein; (iii) Open with respect to reference tracking (cf. (a) vs. (b)):

(a) Yasui-kara, kau.
cheap-KARA buy
'Because (it)'s cheap, (I)'ll buy that.'

(b) Yasui-kara, warui.
cheap-KARA bad
'Because (it)'s cheap, (it)'s bad.'

NAGARA: (i) Mn; This form also occurs with NP, cf. *waga ofokimi kamu-nagara...*, our majesty god-NAGARA, 'His Majesty, being divine,...' (from early OJ, lit. 'His Majesty, while a god')[2]; (ii) Affixed to the linking (=V/LINK) ending. This form mainly encodes simultaneity (a), and is used for encoding concessivity as well (c). In this respect, NAGARA is comparable to the English *while*; (iii) SS preferred if simultaneous (cf. (a) and (b)) and open if concessive (cf. (c) and (d)):

(a) Razio-o kiki-nagara, benkyoo.suru.
radio-ACC listen-NAGARA study
'(I) study while (I) listen to the radio.'

(b) ??Kazoku-ga terebi-o mi-nagara, watasi-wa benkyoo.suru.
family-NOM TV-ACC watch-NAGARA 1sg-TOP study
'(I) study while my family watch TV.'

(c) Nihon-ni i-nagara, eego-o itumo hanasu.
Japan-DAT stay-NAGARA English-ACC always speak
'Though (I) am in Japan, (I) always speak English.'

(d) Kazoku-ga Nihon-ni i-nagara, watasi-wa au-koto.ga.deki-nai.
family-NOM Japan-DAT stay-NAGARA 1sg-TOP see-MOD-NEG

'Though (my) family is in Japan, I cannot see (them).'

NARA(BA): (i) Mn; Etymologically, NARA is a marker of predication (irrealis form, citation form NARI) and its conditional function is due to the loss of BA, though NARABA is still used. In casual speech, NARA(BA) tends to become NARYA (cf. BA above); (ii) Affixed to the final ending, this form encodes conditionality. Its difference from BA, TARA, TO, is an interesting issue (see (c)-(e); also cf. Kuno 1973; Murayama 1985); (iii) With respect to reference tracking, NARA(BA) appears to be (normally) open (a), but when the semantic relation is contrastive and non-conditional, DS is preferred (b):

(a) Omosiroi-nara, kau / ureru yo.
entertaining-NARA buy / sell PRT
'If (it)'s entertaining, (I)'ll buy (it) / (it)'ll sell.'

(b) Omae-ga Keio-nara, ore-wa Waseda-da.
2sg-NOM Keio-NARA 1sg-TOP Waseda-PRED
'(You say) you're a graduate of Keio, then (let me tell you) I'm from Waseda.'

(c) Natu-ga kure-ba / *kuru-nara / ki-tara, omoi.dasu.
summer-NOM come-BA / come-NARA / come-TARA remember
'When the summer comes, (I)'ll remember (it).'

(d) Sensee-ni ??ae-ba / au-nara / at-tara, yorosiku.

teacher-DAT see-BA / see-NARA / see-TARA say.hello
'If / when (you) see the teacher, please say hello.'

(e) Kyoo-zyuu-ni sotira-ni ?todoke-ba / todoku-nara / *todoi-tara, okuri-masu.
today-within-DAT there-DAT reach-BA / reach-NARA / reach-TARA send-POL
'If (it) reaches there today, (I)'ll send it (or else I won't).'

NI: (i) Mn; homophonous and maybe cognative with dative marker[3]; (ii) Affixed to the linking ending. There are noticeable differences from another purpose clause marker TAME-NI (cf. the list of nominal head linkage markers below). NI links two events that are temporally and / or causally close to each other (a), and does not seem to express indirect relations (b), but TAME-NI seems to be able to encode indirect purpose (c); (iii) SS:

(a) Ippuku.si-ni syokudoo-ni it-ta.
have.a.break-NI cafeteria-DAT go-PAST
'(I) went to the cafeteria to have a break.'

(b) *Ryuugaku.si-ni, eego-o benkyoo.si-te.iru.
study.abroad-NI English-ACC learn-STAT

(c) Ryuugaku.suru-tame-ni, eego-o benkyoo.si-te.iru.
study.abroad-TAME-NI English-ACC learn-STAT

'(I)'m learning English to study abroad.' (also translatable with *so that*)

NODE: (i) Pl; NO is a complementizer (or nominalizer), and DE is the linking ending of the predication marker DA. In the spoken register, NODE is reduced to NDE; (ii) This form is affixed to the final ending, and encodes reason. As remarked earlier, its difference from KARA is an interesting topic for discussion, though I do not know of any definite analysis (many speakers seem to think that the difference is stylistic, i.e. NODE is for the written register and KARA is for the spoken, but this account seems insufficient). Makino and Tsutsui (1986) suggest that one important difference lies in operator scope, but I do not find myself quite convinced. The mini-dialogue (b) illustrates one noticeable difference. It seems that KARA can encode marked or emphatic assertion, while NODE has difficulty in doing it. In (b), the economic development is the marked or emphatic focus in B's utterance, and NODE sounds strange in this context[4]; (iii) Open with respect to reference tracking:

(a) Samui-node / kara, kaze-o hii-ta.
cold-NODE / KARA flu-ACC get-PAST
'Because (it)'s cold, I caught a flu.'

(b) A: Zinkoo-ga antee.suru-to keezai-ga hattatu.suru.
population-NOM get.stable-TO economy-NOM make.progress
'When the demographic condition becomes stable, the economy takes off.'

B: Iya, keezai-ga hattatu.suru-??node/kara zinkoo-ga antee.suru-no.de.aru.
no economy-NOM make.progress-NODE/KARA population-NOM get.stable-PRED
'No, precisely because the economy takes off, the demographic condition becomes stable.'

NONI: (i) Pl; NO is a complementizer (or nominalizer), and NI is originally DAT; (ii) NONI is affixed to the final ending and encodes adversity and concessivity. In (a), NONI, GA, NAGARA, and TEMO are all acceptable. It seems that NONI can take an atemporal, eternally true statement for its complement (b), unlike other markers. This is probably because concessivity is stronger in NONI than in others, and eternally true statements can be cancelled by NONI alone; (iii) Open with respect to reference tracking:

(a) Nihon-ni iru-noni/iru-ga/i-nagara/i-temo, eego-o itumo hanasu.
Japan-DAT stay-NONI/GA/NAGARA/TEMO English-ACC always speak
'Even though (I) am in Japan, (I) always speak English.'

(b) Tikyuu-wa ugoi-te.iru-noni/*ugoi-te.iru-ga/*ugoi-te.i-nagara/?ugoi-te.i-temo, Garireo-wa kokuhatu.sa-re-ta.
earth-TOP move-STAT-NONI/GA/NAGARA/TEMO Gallileo-TOP condemn-PASS-PAST
'Even though the earth is moving, Gallileo was condemned.'

SI: (i) Mn; (ii) Affixed to the final ending, SI is mainly for contrast or enumeration. Halliday and Hasan (1976) would say it marks the 'additive' relationship; (iii) Typically DS (a), but there are examples of SS (b) when the subject is not realized. It may be noted that even in the subject-sharing construction, the linkage is not quite tight:

(a) Ani-wa isya-da-si, otooto-wa bengosi-da.
elder.brother-TOP doctor-PRED-SI younger.brother-TOP lawyer-PRED
'The elder brother is a doctor and the younger brother is a lawyer.'

(b) Kanozyo-wa kasikoi-si, utukusii.
she-TOP smart-SI beautiful
'She is smart and beautiful.'

TARA(BA): (i) Mn; TARA is the irrealis ending of TARI, which is a perfective auxiliary in classical Japanese. TARA(BA) is affixed to the linking ending; (ii) Like NARA, the conditional meaning of TARA comes from the loss of BA. Its typical conditional sense is exemplified by (a), but it can also encode a temporal sequence in the realis domain (b). TARA and BA have an idiomatic use as in (c) which is not replaceable with NARA (*ii* may be omitted); (iii) Appears to be open with respect to reference tracking:

(a) Benkyoo.si-tara, ii daigaku-ni hai-reru.
study-TARA good college-DAT enter-MOD

'If (you) study (hard), (you) can enter a good college.'

(b) Benkyoo.si-tara, ii daigaku-ni hai-re-ta.
study-TARA good college-DAT enter-MOD-PAST
'(I) studied (hard), and (I) could enter a good college.'

(c) Zya, soo si-tara / sure-ba(-ii).
Interj. so do-TARA / do-BA-fine
'Well then, (you) can do so.', lit. 'To do so will be fine.'

TE: (i) Mn; Etymology uncertain, but allegedly originates from a perfective auxiliary; (ii) Like V / LINK, TE is ubiquitous, especially in the spoken register, with a wide variety of uses. Morphologically, TE is affixed to the linking ending, but frequently V-TE is called 'TE-form'. TE is semantically open and can have a variety of interpretations, such as temporal sequence (a), reason (b), manner (c), conditional (d), concessive (e), or symmetrical / contrastive (f). For its comparison with V / LINK, see descriptions under V / LINK; (iii) Basically SS, but can be DS especially when the linked clauses are symmetrical or contrastive, or both.

(a) Tosyokan-ni it-te hon-o kari-ta.
library-DAT go-TE book-ACC borrow-PAST
'(I) went to the library and borrowed a book.'

(b) Nesugosi-te maniawa-nakat-ta.
wake.up.late-TE come.on.time-NEG-PAST

'(I) woke up late, so (I) couldn't come on time.'

(c) Warat-te aisatu.si-ta.
smile-TE say.hello-PAST
'(I) said hello with a smile.'

(d) Kimi-o nakusi-te iki-te-ike-nai.
2sg-ACC lose-TE live-TE-go-NEG
'If you're gone, (I) cannot live.'

(e) Aredake benkyoo.si-te siken-ni oti-ta.
that.much study-TE exam-DAT fail-PAST
'Though (I) studied that much, (I) failed in the exam.'

(f) Ano musume-wa wakaku-te kiree-da.
that girl-TOP young-TE pretty-PRED
'That girl is young and pretty.'

TEMO: (i) Pl; TE (see above)+MO (a particle that induces scalar implicatures, translatable as 'also', 'even', 'as much as', 'any'); (ii) Occurs in the same morphological environment as TE. TEMO can mark either realis (pure concessive) or irrealis (concessive conditional), including counterfactual. English on the other hand has to be explicit about the realis/irrealis distinction (cf. Yamaguchi 1989, 1990). It is intriguing to think about why the particle MO is used as part of the concessive and concessive conditional marker TEMO; (iii) Open with respect to reference tracking:

(a) Man'iti ame-ga hut-temo, iki-masu.
by.chance rain-NOM fall-TEMO go-POL
'Even if / *though it rains by any chance, (I)'ll go.'

(b) Haru-ga ki-temo, kibun-wa saiaku.
spring-NOM come-TEMO feeling-TOP rotten
'Even *if / though the spring has come, I feel rotten.'

TO: (i) Mn; Cognate to, or homophonous with the comitative TO, the resultative TO, and the complementizer TO[5]; (ii) The semantic relationship encoded by TO is mainly a temporal, action sequence (a). This form is affixed to the final ending, but one wrinkle is that the past tense marker cannot occur before a non-complementizer, sequential TO (b); (iii) Basically DS, or at least the switch of viewpoint (which is sometimes called 'surprise' by language teachers) is very common with this marker (cf. Iwasaki 1988):

(a) Ton'neru-o nukeru-to, soko-wa yukiguni-de.atta.
tunnel-ACC go.through-TO there-TOP snow.country-PRED
'As (I) went through the tunnel, (I realized) it was a snow country.'

(b) *Ton'neru-o nuke-ta-to, soko-wa yukiguni-de.atta.
tunnel-ACC go.through-PAST-TO there-TOP snow.country-PRED

TUTU: (i) Mn(?); Reduplicated form of TU, which is observed in classical texts; (ii) TUTU encodes simultaneity, 'while; at the same

time' (a). Unlike NAGARA, TUTU is unlikely to have a non-simultaneous, concessive interpretation (b). Affixed to the linking (=V/LINK) ending. Stylistically TUTU is almost limited to the written register; (iii) SS:

(a) Zisyo-o hiki-tutu/nagara, sono hon-o yon-da.
dictionary-ACC look.up-TUTU/NAGARA that book-ACC read-PAST
'(I) read that book looking (it) up in the dictionary.'

(b) Zisyo-o hiki-?tutu/nagara, sono hon-o yomi-tigat-ta.
dictionary-ACC look.up-TUTU/NAGARA that book-ACC read-mistake-PAST
'(I) misread that book though (I) looked (it) up in the dictionary.'

V/LINK: (i) (Zero); This is the linking ending of verbals, and is in itself a clause linking device; (ii) Because it is zero-marked, its 'meaning' is quite varied. Temporal sequence and reason are commonly expressed by V/LINK. A manner relationship between dependent and main clauses is basically acceptable (a), although only questionably so if what is expressed in the dependent clause is less autonomous (b). Unlike TE, conditional and concessive readings are not allowed here ((c), (d)). On the other hand, very loose, juxtapositional linkage is more commonly expressed by V/LINK than by TE (e). For more details on the difference between TE and V/LINK, cf. Kuno (1973), Inoue, Kazuko (1983), Makino and Tsutsui (1986), Myhill and Hibiya (1988), and especially Ono (1990). Ohori

(1991a) generalizes that the relevance of the dependent clause to the main clause is higher with the TE-marked clause than with the V/LINK-marked clause, in the sense that TE-linkage can be more *inference-intensive* compared with V/LINK-linkage; (iii) Basically SS, but can be DS especially when the linked clauses are enumerative or contrastive, or both. SS and DS functions of V/LINK should best be considered as separate constructions.

(a) Hikooki-ni nori Sapporo-made it-ta.
airplane-DAT ride/LINK Sapporo-to go-PAST
'(I) went to Sapporo by taking an airplane.'

(b) ??Warai aisatu.si-ta.
smile/LINK say.hello-PAST
'(I) said hello with a smile.'

(c) *Kimi-o nakusi iki-te-ike-nai.
you-ACC lose/LINK live-TE-go-NEG

(d) *Aredake benkyoo.si siken-ni oti-ta.
that.much study/LINK exam-DAT fail-PAST

(e) Ue.no ko-wa kotosi kookoo-o sotugyoo.si, watashi.domo-mo kekkon 20 nen-ni nari-masu.
elder child-TOP this.year high.school-ACC graduate/LINK 1pl-PRT marriage 20 year-PRT become-POL

'The elder child graduated from high school this year, and it is 20 years since we got married.'

In addition, below is a partial list of grammaticized or 'formal' nouns that participate in nominal head linkage (type (d) in (99)).[6] This type of linkage differs from these constructions in the lexical meaning of the head noun and its relation to the matrix predicate. They typically form adverbial clauses, with different degrees of delexicalization. Syntactically, the structural type of nominal head linkage is clausal subordination, because there is no obligatory argument sharing or feature dependency (cf. the array of syntactic tests given below). The result of the tests for nouniness is also given, using the frames demonstrative+N [e.g. *sono+N*, 'that N'] and N-NOM+predication [e.g. *N-ga aru* 'there is N'].[7] Commonly used postpositions are also identified.

(103) AGEKU(-ni): 'after doing' (with negative evaluation); lexical meaning: 'end; destiny':

(a) Roohi.si-ta ageku(-ni) hasan.si-ta.
waste.money-PAST AGEKU(-DAT) bankrupt-PAST
'After wasting a lot of money, (I) went bankrupt.'

(b) sono ageku; *ageku-ga aru

HODO(-ni): 'to such an extent that; as much as'. The dependent clause need not be true, so the subject (=I) in the following example is not

actually crazy in (a). The comparative-correlative construction in Japanese is realized by this noun (b); lex. 'degree; limit':

(a) Ki-ga kuruu hodo(-ni) benkyoo.si-ta.
mind-NOM go.crazy HODO(-DAT) study-PAST
'(I) studied to such an extent that (I) go crazy,' i.e. '(I) studied like crazy.'

(b) Isogasikere-ba isogasii hodo sake-no ryoo-ga hueru.
busy-BA busy HODO alcohol-GEN quantity-NOM increase
'The busier (I) am, the more (I) drink (=lit. the quantity of alcohol increases).'

(c) ?sono hodo (distal / neutral); kono hodo (proximal); hodo-ga aru (OK only in idiomatized use, 'that's enough; don't get carried away')

IZYOO: 'now that', sometimes connoting firm will; lex. meaning 'above; beyond' (this is a typical relational noun used for expressing spatial relations, and is not normally used as a pure lexical noun):

(a) Himitu-o sit-ta izyoo, saigo-made tukiau-n.desu na.
secret-ACC know-PAST IZYOO end-till come.with-PRED PRT
'Now (you)'ve known the secret, (you) must come with us till the end.'

(b) *sono izyoo; *izyoo-ga aru

KORO(-ni): 'while; during'; lex. 'roughly the time':

(a) Daigaku-ni i-ta koro(-ni), takusan ason-da.
college-DAT be-PAST KORO(-DAT), a.lot play-PAST
'While (I) was in college, (I) played around a lot.'

(b) sono koro; koro-ga aru (OK when modified)

KUSE-ni: 'although; in spite of the fact that' (with negative evaluation). Its similarity to English *spite* is interesting. In colloquial speech, *kuse-si-te* is also used; lex. '(bad) habit or disposition; spite':

(a) Ason-da kuse-ni, siken-ni ukat-ta.
play-PAST KUSE-DAT, exam-DAT pass-PAST
'Though (I) played around (a lot), (I) passed the exam.'

(b) sono kuse; kuse-ga aru (OK when modified)

MADE(-ni): 'until; by the time' (DAT *ni* is used only when the main clause is temporally bounded, as in (b)); lex. uncertain. This form may be considered to be a completely delexicalized linkage marker, since its nouniness is close to nil:

(a) Yasumi-ga owaru made nyuuin.suru.
vacation-NOM end MADE stay.in.hospital
'(I) will stay in the hospital until the vacation is over.'

(b) Yasumi-ga owaru made-ni genkoo-o siageru.
vacation-NOM end MADE-DAT draft-ACC finish
'(I) will finish the draft by the time the vacation is over.'

(c) *sono made; *made-ga aru

MAMA(-ni / de): 'while doing something'. This marker, unlike TUTU and NAGARA, can encode two simultaneous events with different subjects without difficulty (cf. (b) and (c)); lex. uncertain ('accord-(ance)?'):

(a) Puroguramu-o hasira-se-ta mama(-de) debaggu.si-ta.
program-ACC run-CAUS-PAST MAMA(-LOC?) debug-PAST
'(I) debugged while (I) was running the program,' or '(I) debugged with the program running.'

(b) Puroguramu-ga hasit-ta mama(-de) debaggu.si-ta.
program-NOM run-PAST MAMA(-LOC?) debug-PAST
'(I) debugged while the program was running,' or '(I) debugged with the program running.'

(c) *Puroguramu-ga hasiri-tutu / nagara debaggu.si-ta.
program-NOM run-TUTU / NAGARA debug-PAST

(d) sono mama; *mama-ga aru

ORI(-ni): 'when; on the occasion that'; usually in the formal register; lex. 'occasion':

(a) Sensee-ni at-ta ori(-ni) kono hon-o itadai-ta.
teacher-DAT see-PAST ORI(-DAT) this book-ACC receive-PAST
'When (I) saw my teacher, (s/he) kindly gave (me) this book.'

(b) sono ori; ori-ga aru (OK when modified)

SEE-de: 'because'; lex. 'fault; deed(?)':

(a) Ason-da see-de siken-ni oti-ta.
play-PAST SEE-INST(?) exam-DAT fail-PAST
'Because (I) played around (too much), (I) failed in the exam.'

(b) sono see; *see-ga aru

TABI(-ni): 'every time'; lex. '(number of) time(s); occasion':

(a) Kono kyoku-o kiku tabi(-ni) mukasi-o omoidasu.
this song-ACC listen TABI-DAT old.time-ACC recall
'Every time (I) listen to this song, (I) recall old times.'

(b) sono tabi; *tabi-ga aru

TAME(-ni): 'in order to; because'. As I remarked above, TAME can encode remote purpose, unlike NI; lex. 'cause':

Purpose:

(a) Asobu tame(-ni), daigaku-ni hait-ta.
play TAME(-DAT), college-DAT enter-PAST
'In order to play around, (I) entered college.'

Reason / Cause:

(b) Ason-da tame(-ni), siken-ni oti-ta.
play-PAST TAME(-DAT), exam-DAT fail-PAST
'Because (I) played around (too much), (I) failed in the exam.'

(c) sono tame; *tame-ga aru

TOKI(-ni): 'when'; lex. 'time':

(a) Mita-ni kaigi-de iku toki kopii-o tori-masu.
Mita-DAT meeting-on go TOKI copy-ACC take-POL
'When (I) go to Mita for a meeting, (I)'ll make a copy (of it).'

(b) sono toki; toki-ga aru (OK when modified)

TOKORO-de: 'even if / though'. The main clause is perhaps limited to future prediction. TOKORO also forms an analog of head-internal relative construction (see 2.4 below). *TOKORO-ga* is also used, though less frequently in nominal head linkage. It occurs more frequently as a sentence-initial connective; lex. 'locus; situation' (extended to 'point; characteristic'):

(a) Benkyoo.si-ta tokoro-de siken-ni ukara-nai.
study-PAST TOKORO-LOC exam-DAT pass-NEG
'Even if / though (you) study hard, (you) won't pass the exam.'

(b) sono tokoro; tokoro-ga aru (OK when modified and has the meaning 'point; aspect')

UE(-ni): 'in addition to; moreover'; lex. 'above':

(a) Ason-da ue(-ni), takusan syakkin-o si-ta.
play-PAST UE(-DAT), a.lot debt-ACC do-PAST
'In addition to playing (a lot), (I) built a great debt.'

(b) sono ue (cf. the idiomatized use, 'furthermore'); ue-ga aru

UTI-ni: 'as long as; before'. Kuno (1973) discusses the difference between UTI and MAE, both of which mean 'before', and remarks that with UTI the first clause must not be something that has already happened (cf. (b) and (c)). MAE would be acceptable in both (b) and (c); lex. 'space / time within':

(a) Wakai uti-ni issyokenmee benkyoo.si-yoo.
Young UTI-DAT hard study-VOL
'(I) will study hard as long as (=while) (I) am young.'

(b) Kyoo-wa kuraku nara-nai uti-ni kaero-o.

today-TOP dark become-NEG UTI-DAT go.home-VOL
'Today, let's go home before it gets dark,' lit. 'Today, let's go home while it is not yet dark.'

(c) ?Kinoo-wa kuraku nara-nai uti-ni kaet-ta.
yesterday-TOP dark become-NEG UTI-DAT go.home-PAST
'Yesterday, (I) went home before it got dark,' lit. 'Yesterday, (I) went home as long as it did not get dark.'

(d) sono uti (cf. the idiomatized use, 'in the meantime'); *uti-ga aru

YOO(-ni): 'so that; in the way that'; lex. 'manner?':

(a) Soto-ga mieru yoo(-ni) mado-o ake-ta.
outside-NOM seeable YOO(-DAT) window-ACC open-PAST
'(I) opened the window so that (I) could see the outside.'

(b) sono yoo; *yoo-ga aru

YUE(-ni): 'because' (not colloquial); lex. 'reason':

(a) Ason-da yue(-ni), siken-ni oti-ta.
play-PAST YUE(-DAT), exam-DAT fail-PAST
'Because (I) played (a lot), (I) failed in the exam.'

(b) sono yue; ?yue-ga aru

In addition, nouns that encode *sequencing*, such as MAE 'before', ATO 'after', etc., also participate in nominal head linkage. Their syntax is the same as *toki* 'time/when'. Excluded from the above list are the forms which are frequently used as common nouns and are less grammaticized. Nouns of this type include: AIDA ('space/time in between' > 'during'), BAAI ('case' > 'in case'), IPPOO ('one way; another way' > 'at the same time; all the while'), KAWARI ('substitute' > 'instead of'), KEKKA ('result' > 'as a result of'), OKAGE ('favor' > 'thanks to'), WAKE ('reason; account' > 'on account that').

Highly grammaticized nominal head constructions tend to have the following peculiarities: (i) the function of the relative clause is no longer to identify an entity by modifying it; (ii) the head noun undergoes semantic shift and delexicalization; (iii) marking by postposition is optional; (iv) the semantic relation expressed by the linkage cannot be explicitly realized by the verbal head linkage. Below, I present a few remarks that are relevant to the diachronic aspect of nominal head linkage.

Of characteristics (i)-(iv), the last one is especially important from the viewpoint of the ecology of grammar. It seems that nominal head linkage is suitable for encoding more specific relations than those encoded by conjunctive particles such as BA or TE. This becomes natural when we consider that the semantic relation in nominal head linkage is determined (at least originally) by the lexical meaning of the head noun. It is even the case that some semantic relations can only be encoded by formal nouns. For example, HODO 'to such an extent that' is not paraphrasable with any verbal head linkage. MADE 'until', TABI 'every time', UTI 'before', and YOO 'so that' are also of this type. TABI 'every time' may be replaced by TO, which allows a dispositional interpretation, but the former can encode the same relation more explicitly. Historically, it may be speculated that , given that the

etymology of the nouns used as linkage markers is relatively transparent, semantically more specific markers tend to be innovative, retain lexicality, and form only a loosely closed set. On the other hand, conservative markers tend to have a broad range of meanings and form a truly closed set of functional morphemes.

Further, it must be noted that in all of the markers for verbal head linkage taken up above, the order of clauses is iconic except in NI-linkage (i.e. the linkage in which the order Cl_1-Cl_2 corresponds to that of the temporal sequence). It is only with such nominal head linkage constructions as MADE 'until', MAE 'before', TAME 'in order to', UTI 'before', and YOO 'so that' that non-iconic relations can be realized. This is harmonious with the general characteristic of nominal head linkage that it is semantically more specific and leaves less room for inferences that come from linear-iconicity (compare with the interpretation of TE-marked clauses, for example, which to a large extent depends on short-circuited inferences). Put differently, the iconic interpretation framed in the order of clauses can be blocked when the semantic content of the linkage marker is specialized enough. Interestingly, Talmy (1978) reports that in Atsugewi the relation *after A, B* is encoded by grammatical affixation but non-iconic relations such as *before B, A* can only be encoded by periphrastic means. It may be surmised from a cross-linguistic perspective that in order to encode non-iconic relations, morpho-syntactically more elaborate devices are needed because of their semantic complexity.

Having thus surveyed major linking forms, in what follows, I will look at various morpho-syntactic correlates of the above linkage markers, and discern the relative strength of dependency they encode. This is an attempt to answer the question formulated in (B) from a synchronic perspective. In

doing so, I will see if they exhibit anything like the 'graceful glide' of category squish (the epithet due to Ross 1973).

An initial attempt along this line was made by Kuno (1973). The examined forms are: V/LINK, TE, TO, TOKI, NODE, and SI. He uses five grammatical tests to check the relationship that holds between two clauses CL_1 and CL_2. (A) Question: the scope of the question particle KA, which is put at the end of the sentence, can or cannot embrace both CL_1 and CL_2. (B) Negation: the scope of the negative auxiliary NAI can or cannot embrace both CL_1 and CL_2. (C) Volition: the scope of the volitional expression YOO-TO-SURU can or cannot embrace both CL_1 and CL_2. (D) Scrambling: a NP in CL_2 can or cannot be 'extracted' and put into CL_1, e.g. *[Taroo-wa boosi-o nui-de] [Hanako-ni aisatu.si-ta]* (Taroo-TOP hat-ACC take.off-TE, Hanako-DAT greet-PAST, 'Taroo took off his hat and said hello to Hanako' vs. *[Taroo-wa Hanako-ni boosi-o nui-de] [ø aisatu.si-ta]*. (E) Coreference: when CL_1 has an overt NOM-marked subject and CL_2 does not, the latter's subject can or cannot be coreferential with that of CL_1 (Kuno's criterion is whether CL_2 can have a *separate* subject from CL_1, but I changed it into whether CL_2 can have the *same* subject as CL_1 so the distribution of Y/N becomes more consistent). The results of (A)-(E) are summarized in the table below (adapted from p. 133, with modifications):

(104)

	V/LINK&TE-i	TOKI	NODE	TO	V/LINK&TE-ii	SI
(A)	Y	Y	N	N	N	N
(B)	Y	N	N	N	N	N
(C)	Y	Y	N	N	N	N
(D)	Y	Y	Y	Y?	N	N
(E)	Y(def.)	Y	Y	Y	N(def.)	Y

[N.B. (i) V/LINK&TE-i is the linkage with the same subject, and V/LINK&TE-ii is that with different subjects; (ii) the value of (B) for TOKI is Y in Kuno's table, but it is apparently a typo, judging from his examples in the text; (iii) 'def' means that the value is Y or N by definition.]

Kuno (1973) considers V/LINK&TE-i, TOKI, NODE, and TO as 'subordinate' and V/LINK&TE-ii and SI as 'coordinate', though he admits subordination is a degree concept. According to him, the degree of dependency becomes stronger from right to left (note that markers on the left have more Y's, which are signs of higher dependency, than those on the right). As Kuno himself admits, his analysis is not exhaustive, but there are not very many works which fully develop his ideas (cf. however Shinzato 1981; Minami 1974).

I will now build on (104), adding more markers and syntactic tests. All the forms in (102) will be surveyed. For nominal head linkage, I select TOKI as a representative, for unlike the forms for the verbal head linkage, the structure of nominal head linkage is invariably relativization, i.e. the NP analog of clausal subordination. The tests I add are: tense suppression, causativization, suspendability, and relativization. Tense suppression means that the tense marking is suppressed when certain markers are affixed. For example TE suppresses any marking of tense (hence the TE-marked clause is called 'participial clause'). TO on the other hand does not occur next to the past tense marker *ta*, but can occur next to the plain non-past ending of verbals (cited as *(r)u*). NODE has no such restrictions. The other tests are illustrated below, using TE, which is OK with all of the tests:

(105) Causativization: Can causative marking on the second predicate affect the first?

(a) [Hon-o kari]-TE [yon-da].
book-ACC borrow-TE read-PAST
'(I) borrowed a book and read (it).'

(b) [Hon-o kari]-TE [yoma-se-ta].
book-ACC borrow-TE read-CAUS-PAST
'(I) made (somebody) borrow a book and read (it),' or '(I) borrowed a book and made (somebody) read it.'

The causative marker can optionally affect the first, TE-marked predicate, but some linkage markers cannot have this option. It may be mentioned in this connection that, while in core and clausal juncture causativization only *optionally* affects linked predicates (partially through inference), in nuclear juncture it *obligatorily* affects both predicates.

(106) Suspendability: Can the dependent clause stand by itself?

(a) [Mondai-ga wakara-naku]-TE [komat-ta].
question-NOM see-NEG-TE troubled-PAST
'(I) couldn't understand the question and was troubled.' or '(I) was troubled because (I) couldn't understand the question.'

(b) [Mondai-ga wakara-naku]-TE...
question-NOM see-NEG-TE

'Because (I) couldn't understand the question...' but can be uttered even when the interlocutor does not ask why, so this example can also be glossed, '(I) couldn't understand the question, (and you know what).'

Assuming that the stronger the dependency, the less likely the clause is to stand by itself, 'plus' is given if the clause is *not* suspendable and 'minus' is given if it is suspendable (so the value in table in (108) below represents 'anti-suspendability'). In 2.7, I will briefly return to this topic when discussing (potentially) comparable constructions in other languages.

(107) Relativization: Can both of the linked clauses modify one and the same noun?

(a) Taroo-wa [sono hon-o kari]-TE [yon-da].
Taroo-TOP that book-ACC borrow-TE read-PAST
'Taroo borrowed that book to read (it).'

(b) [[Sono hon-o kari]-TE [yon-da]] hito-wa i-masu-ka?
that book-ACC borrow-TE read-PAST person-TOP be-POL-Q
'Is there anybody who borrowed that book to read (it)?'

In addition, my test for reference tracking is different from Kuno's in that neither of the linked clauses has an overtly realized subject NP (+ means SS, - means DS, and ± means open reference). The result of analysis is summarized in the following table (108), arranged according to the applicability of syntactic operations to each marker. When two values are given, the first one is the interpretation under SS and the second one is that under DS:[8]

(108)

	Causativization	Volition	Scope: Negation	Scope: Question	Anti-suspendability	Tense suppression	Scrambling	Relativization	Ref. tracking
			SS/DS	SS/DS			SS/DS	SS/DS	
SI	–	–	–/–	–/–	–		–/–	+?/–	–
GA	–	–	–/–	–/–	–	–	+?/–	+/–?	±
NARA(BA)	–	–	–/–	–/–	+?	–	+?/–	+/–?	±
KARA	–	–	–/–	–/–	–	–	+/–	+/–?	±
NODE	–	–	–/–	–/–	–	–	+/–	+/+?	±
NONI	–	–	–/–	–/–	–	–	+/–	+/+?	±
TO	–	–	–/–	–/–	+	+?	+/–	+/+	±
TARA(BA)	–	–	–/–	–/–	–	+?	+/–	+/+	±
BA	–	–	–/–	–/–	–	+	+/–	+/+	±
TEMO	–	–	–/–	–/–	+?	+	+/–	+/+	±
NAGARA	+?	+	+?/–?	+?/–	+	+	+/–	+/+	+
V/LINK	+	+	+/–?	+/+?	+	+	+/–	+/+	+
TE	+	+	+/–?	+/+?	–	+	+/–	+/+	+
TUTU	+	+	+/n.a.	+/n.a.	+	+	+/n.a.	+/n.a.	+
NI	+	+	+/n.a.	+/n.a.	+?	+	+/n.a.	+/n.a.	+
(TOKI	–	–	–/–	–/–	+?	–	+/–	+/+?	±)

From this table, we can understand that the linking devices form a cline. Interestingly, suspendability does not seem to correlate with the tightness of linkage. For example, NARA(BA), which encodes relatively loose linkage, does not seem to be suspendable, while TE, which encodes tight linkage, can occur as a suspended clause. We may thus assume that suspendability has little to do, directly at least, with the structural aspect of clause linkage.

Putting this issue aside, from the rest of the tests we can identify three major groups. First, SI, GA, NARA(BA), KARA, NODE, and NONI are characterized by full tense marking. As such, I consider them either coordination or subordination. The next group consists of TARA(BA), TO, BA, and TEMO, which all share the property of tense suppression, and are thus identified as cosubordination. These two linkage types are both clausal junctures, because no argument sharing is required. Then comes the third group, including NAGARA, V/LINK, TE, and TUTU, and NI. The dependency type is either coordination or subordination. Alongside tense suppression, this category has the property that the subject is maintained across clauses in most cases, especially when it is omitted. Thus, at least canonically, this group is considered as core juncture. Note that even though tense is suppressed in this type of linkage, it is not cosubordination, because tense is a clausal operator and in core juncture it is shared by definition. TOKI-linkage (and nominal head linkage in general) is relatively weak, and is close to the first group.

The canonical linkage types encoded by the above markers are given below:

(109) SI: clausal coordination

GA: clausal coordination

NARA(BA): clausal subordination

KARA: clausal subordination

NODE: clausal subordination

NONI: clausal subordination

TARA(BA): clausal cosubordination

TO: clausal cosubordination

BA: clausal cosubordination

TEMO: clausal cosubordination

NAGARA (SS): core coordination

V / LINK (SS): core coordination

TE (SS): core coordination

TUTU: core coordination

NI: core subordination

(TOKI: clausal subordination)

Of the first group of markers, I identified SI and GA as coordination, because, in addition to the loose semantic connection expressed by them, they behave differently with respect to the possibility of marking by the politeness morpheme *masu* (cf. Minami 1974). When one speaks in a polite register, it is very strange not to put *masu* in SI- or GA-marked clause along with the main clause. But in other linkage constructions, the effect of the *masu*-marking on the main clause extends to the dependent clause as well, and it is not necessary to mark the dependent clause with *masu* (indeed, doing so is sometimes even ungrammatical). Since this politeness morpheme expresses the speaker's attitude, it has to be marked independently when the juncture is coordination, but when there is some sort of dependency, the politeness

marking on the main clause alone may sufficiently express the speaker's attitude.

Next, within the second group, the relevant differences seem to be all semantic and/or pragmatic (e.g. the tailoring of the realis-irrealis continuum, the encoding of viewpoint, etc.). Some of them are discussed in the above survey, but I am unable to find any significant syntactic test for distinguishing among the markers of this type.

Concerning the third group, the difference between NAGARA and TUTU on the one hand and TE and V/LINK on the other may be that the latter two are also used in grammaticized nuclear juncture, such as *V-te-iru* (V-TE-stay, grammaticized into STAT). As to the linkage by NAGARA, the subject is shared when the semantics of linkage is simultaneity. But when the semantic relation is concessive, the linkage does not involve obligatory argument sharing. TUTU, on the other hand, is invariably core juncture. NI-linkage is peculiar in that, when causativized, both of the linked predicates are obligatorily affected, hence the label subordination. Another point that must be mentioned is that in contrastive or juxtapositional TE- and V/LINK-linkages, where the linked clauses can have different subjects, the linkage can be a clausal juncture, but it is difficult to determine the dependency type (pointed out to me by Yoko Hasegawa, p.c.). It can be considered as cosub-ordination because tense is suppressed, but the linked clauses can have separate time reference, and the linkage may indeed be coordination. See the following example:

(110) Musuko-ga kinoo kaet-te-ki-te musume-mo asita kisee.suru.
son-NOM yesterday return-TE-come-TE daughter-also tomorrow come.home

'(Our) son returned home yesterday, and (our) daughter is also coming home tomorrow.'

V/LINK is also fine instead of V-TE. In this example, though there is no tense marking on the dependent, TE-marked clause, the two events encoded in the linked clauses have separate time references. If we remove the expressions *kinoo* 'yesterday' and *asita* 'tomorrow', the time references of the linked events can still be separate:[9]

(111) Musuko-ga kaet-te-ki-te musume-mo kisee.suru.
son-NOM return-TE-come-TE daughter-also come.home
'(Our) son is returning home, and (our) daughter is also coming home,' or '(Our) son returned home, and (our) daughter is also coming home.'

Perhaps it is right to say that the time reference of the dependent clause is identical to that of the main clause when there is no explicit temporal expressions. In this sense, the interpretation of tense in TE- and V/LINK-linkages at the clausal layer as determined by the main clause is a default feature specification. To this extent, I consider TE and V/LINK as coordination, whether they link units at the core layer or at the clausal layer. If they were cosubordination, there would be no room for variability of tense interpretation.

The next task is to investigate the correlation between structural and semantic integration. Put differently, the question is whether each marker's susceptibility to syntactic processes reflects the tightness of semantic relation. As I have pointed out, this is one of the most intriguing issues about clause

linkage. Let us look at the semantic relations encoded by the markers we are considering. Below most typical semantic relations are given (hence concessive reading for NAGARA and juxtapositional reading for TE and V/LINK are not listed). Linkage types are shown by indentation (i.e. constructions that belong to the same structural type are aligned together).

(112) <--Looser Tighter -->

SI: juxtapositional, contrastive, enumerative

GA: juxtapositional, antithetical

NARA(BA): conditional

KARA: reason

NODE: reason

NONI: concessive, adversative

TO: dispositional, temporal

TARA(BA): conditional, temporal

BA: conditional, temporal

TEMO: concessive conditional, concessive

NAGARA (SS): simultaneous, manner

V/LINK (SS): sequential, manner, etc.

TE (SS): sequential, manner, etc.

TUTU: simultaneous, manner

NI: purpose

(TOKI: temporal setting)

This table suggests that there is a correlation between structural and semantic integration, though not very strongly. SI seems to correspond to 'action-action (unspecified)' or more precisely 'event-event', which is at the lowest

position in the hierarchy (68) preented in 1.3 above. At the other extreme, the tightness of NI-linkage, which encodes purpose, also corresponds to the RRG hierarchy. In between stand such relations as reason, conditional, and temporal, marked by KARA, BA, TO, etc. The sequential meaning of V/LINK and TE seems to be a problem, but when these markers are used, the actions are more closely tied to each other (cf. the availability of a 'manner' reading). Likewise, simultaneity encoded by NAGARA and TUTU is a close one. Of course, as I remarked earlier, the semantic relations posited in the RRG hierarchy are not exhaustive by any means (though, admittedly, exhaustive listing of relations is not what is intended by Foley and Van Valin 1984). Nevertheless, the form-meaning correlation in clause linkage is seen to be something real, when we consider the facts given in the foregoing discussion seriously. At the present stage, the following hypothesis, given in 1.3, best represents the RRG position:

(113) If an instantiation of one construction is at a higher position in the hierarchy of semantic relations than that of another, then the former tends to exhibit a higher degree of structural integration than the latter.

I consider it a good strategy, for further explorations, to relativize and localize the semantic hierarchy so we can concentrate on a set of markers that share certain semantic properties. In this sense, the strategy adopted by König and van der Auwera (1988), focusing on concessives and concessive conditionals, is to be highly appreciated. While they do not seem to be in favor of the global correspondence between structural and semantic hierarchies, their result supports the form-meaning correlation within a delimited domain of semantic relations.

In this chapter, syntax and semantics of major clause linkage markers were examined. By taking up clause-linking particles that can be attached to the verbal head and applying a set of syntactic tests to them, it was demonstrated that there is covariance among the syntactic properties being checked. It was also shown that if we arrange the linkage constructions according to the structural tightness of linkage, the result also represents the semantic tightness of linkage, though some markers are not restricted enough in their meaning. Suspendability of dependent clauses, interestingly, does not seem to reflect the tightness of linkage. The result of the analysis generally supports our hypothesis that form and meaning do correlate in terms of the tightness of linkage.

Notes to 2.2

1. The OJ *Fa* is a voiceless bilabial fricative.

2. In early OJ, *kamu* is frequently used instead of *kami*. Assuming that the extension from NP adposition to clause linkage marker is more likely than the opposite, the simultaneous and concessive readings of NAGARA came from its adpositional use, which is to express some contingent property.

3. An alternative analysis of NI-linkage is not to see NI as a linkage marker but simply to see the predicate of the dependent clause as nominalized (cf. English gerunds). Compare the following examples, where *nomi* in the former is an inflected verb (which might be called gerundive) and *syokuzi* in the latter is a pure noun:

(N-1) Nomi-ni it-ta. (the citation form of *nomi* is *nomu*)
drink-NI go-PAST
'(I) went out to drink.'

(N-2) Syokuzi-ni it-ta.
meal-DAT go-PAST
'(I) went out for a meal.'

However, it must be noted that *nomi* is not completely nominalized, cf. **nomi-wa/syokuzi-wa itu desu-ka?* drinking-TOP/meal-TOP when PRED-Q 'When will we drink/eat?' (though in casual speech some people, including myself, say, *nomi-ga tarinai*, drinking-NOM not.enough 'Drink more!' (lit. '(Your) drinking is not enough'). Since nominalization represents an

advanced stage of clause integration, I consider it reasonable to include NI in our discussion, even if it could be analyzed as DAT.

4. James Matisoff (p.c.) suggested that the emphatic or narrow-focus particle *koso* can only be used with KARA but not with NODE, as in (N-3):

(N-3) Kimi-ga i-ta-kara / *node koso sigoto-o oera-re-ta.

2sg-NOM be-PAST-KARA / NODE PRT work-ACC finish-MOD-PAST

'Precisely because you have been (with me), I could finish the work.'

5. As remarked in 2.3 below, TO came to be used as a linkage marker for sequentiality, partially replacing BA, in early Pre-ModJ. The composite forms TOMO (TO plus MO, cf. TEMO) and TOTE (TO plus TE), both expressing weak adversity, had been in use since OJ, but it is uncertain where the sequential TO came from. The resultative TO and complementizer TO might be more closely related to each other than to other uses of TO, as in the following:

(N-4) Yamato-wa senzyoo-no hana-to tit-ta.

Yamato-TOP battlefield-GEN blossom-TO scatter-PAST

'Yamato became scattered blossoms of the battlefield,' lit. 'To the battlefield's blossoms, Yamato scattered.'

(N-5) Sensee-wa Taroo-ni de-te-ike-to it-ta.

teacher-TOP Taroo-DAT move.out-TE-go-TO say-PAST

'The teacher told Taroo to get out.'

In both of these examples, the semantics of the construction is *V(matrix) to the effect of NP/S(complement)*. However, there still is a considerable distance between this pattern and the sequential TO, let alone the distance between the comitative TO and the other uses.

6. 'Formal nouns' in traditional grammar do not form a unified category. Those that can form linkage markers are only a part of this category. There are nouns used to mark modality (e.g. *hazu*, meaning high probability), aspect (e.g. *bakari*, meaning perfective or immediate past), emphasis (e.g. *dake*, marking limit), and complementation (e.g. *koto*, 'fact; event').

7. There is another test, namely the use of *sore+N* frame, with which one can check the non-lexicality of the markers for nominal head linkage. *Sore* is also a deictic expression but is closer to *it* and can function as a nominal constitute by itself. As such, formal nouns that can participate in the *sore+N* frame are more grammaticized than those that can participate in the *sono+N* frame. All the markers taken up in the present survey are in complementary distribution with respect to these tests, except *hodo*. See the following examples:

(N-6) Kono hodo ryuugaku-suru koto-ga kimari-masi-ta.

this HODO study.abroad-do thing-NOM decide-POL-PAST

'Now it has been decided that (I) study abroad.'

(N-7) Sore hodo it-temo wakara-nakat-ta no ka.

it HODO say-TEMO understand-NEG-PAST PRT Q

'Didn't (s/he) understand even though (you) explained that much?'

Perhaps the use of HODO in the first example should be treated separately from nominal head linkage proper.

8. Causativization and volition tests do not apply to linkage with different subjects. For the former, it is almost impossible to code a situation where someone causes two individuals to do separate things at the same time. Likewise, with the latter, one volitional marker cannot code the mental state of two individuals. For suspendability and tense suppression, they are both properties of the dependent clause itself, so the SS/DS distinction does not concern us.

9. When the main clause is in the past tense (which can express a future event), however, the result is unambiguous.

(N-8) Musuko-ga kaet-te-ki-te musume-mo kisee.si-ta.
son-NOM return-TE-come-TE daughter-also come.home-PAST
'(Our) son returned home, and (our) daughter also came home.'

It appears to me that tense iconicity is playing some role here. When the main clause is in the past tense, only *past* > *past* reading is available as in (N-8), but when the main clause is in the present tense, either *past* > *present* or *present* > *present* is acceptable. Compare with the following example, which is almost unaccaptable:

(N-9) ??Musuko-ga asita kaet-te-ki-te musume-mo kinoo kisee.si-ta.

son-NOM tomorrow return-TE-come-TE daughter-also yesterday come.home-PAST

'(Our) son is returning home tomorrow, and (our) daughter also came home yesterday.'

2.3. Core and clausal junctures (II): 'Switch reference' in Old and Middle Japanese

In Old and Middle Japanese (OJ and MJ respectively), according to some scholars, linkage markers had 'switch reference' functions (Akiba 1977; Fujii 1985). In the following, I will examine the nature of reference tracking in OJ and MJ. In the previous chapter, we saw that the various morpho-syntactic properties of clause linkage markers in Modern Japanese correlate with the tightness of semantic relations that are encoded by these markers. In what follows, I will take up TE and BA, and turn to the diachronic dimension of form-meaning correlation in clause linkage. The assumption being made here is that reference tracking, i.e. the expression and interpretation of argument NP's across clauses, is one important reflex of the tightness of clause linkage. Haiman (1985a: 120-127; also 1980, 1983b), for example, discusses switch reference phenomena in Papuan languages and a few unrelated others by referring to the notion of 'conceptual distance', arguing that the same/different distinction of the subject iconically reflects the conceptual distance between the linked clauses. It is thus worthwhile investigating the reference tracking function in OJ and MJ and showing how the change in the system can be motivated.

The reason for choosing TE and BA is twofold. First, they are among the few markers which have been used throughout the history of Japanese. Other such markers include NAGARA, TUTU, and V/LINK (along with those originating from case markers, namely GA, NI, and [W]O).[1] Second, focusing on two apparently contrasting markers enables a close examination of structural and semantic aspects of clause linkage, which is highly desirable in order to promote our understanding of the diachrony of complex construc-

tions. In sum, the problem I am going to deal with in this chapter is formulated as the following: What is the nature of reference tracking in Old and Middle Japanese? What change occurred in the reference tracking function of linkage markers, and what are the motivations for this change?

The presentation is chronologically organized. First, I will give an overview of 'switch reference' in OJ, with a partial re-examination of data used by Akiba (1977, 1978) and Fujii (1985). Then, I will look at the exact nature of apparent 'switch reference' functions, drawing upon evidence from operator scope and discourse functions. Discussion of MJ centers around changes that took place with 'switch reference' once associated with TE and BA. Appeals will be made to the proposed general tendencies of grammaticization, that historical changes in clause linkage is from lower to higher clause integration (cf. (79)-(81) in 1.3). Finally, brief remarks will be made on the situation in the Pre-ModJ period.

Old Japanese

In OJ and MJ (and Pre-ModJ too, for that matter), argument NPs are often omitted, as in ModJ (cf. 2.1). Nevertheless, there is no overt morphological device such as person or gender marking for encoding the identity of arguments in the language. As such, reference tracking in OJ and MJ mostly relied on inferences from the context. Yet at the same time, it is not a groundless supposition that there was some auxiliary device which helped identify the implicit argument. For example, in some OJ narrative texts such as *Genji*, the honorific system is so ramified that the person being referred to can be unambiguously identified in many cases. That is, social deixis, including non-referential expressions (e.g. case frames of verbs), has the power

to point to a unique individual in context. The same effect is seen in ModJ too, though to a lesser extent.[2]

What is more interesting, however, from the viewpoint of clause linkage is the case in which properties of linkage themselves help to retrieve the tracked referent. Thus Akiba (1977, 1978), analyzing three OJ narrative texts (*Taketori Monogatari*, *Genji Monogatari*, and *Tsutsumi Chunagon Monogatari*), claims that in OJ (8-11C), conjunctive markers such as TE and BA used to have 'switch reference' functions, i.e. TE linked clauses with the same subject (SS) and BA (along with NI and WO) linked those with different subjects (DS). See the following examples, taken from *Taketori Monogatari* (c. 9C):

(114) TE-linkage (*Taketori*: 18)

[ito kasikoku tabakari-te] [Naniha-ni misoka.ni mo-te-ide-nu]

very cunningly plan-TE Naniha-DAT secretly carry-TE-come-PERF

'(he$_i$) planned very cunningly, and (he$_i$) came carrying (it) to Naniha secretly' not *'(he$_i$) planned very cunningly, and (he$_j$) came carrying (it) to Naniha secretly'

[Situation: Prince Kuramoti (=he) had been requested to bring a blossom from Hourai (the land of bliss), but he made up a fake blossom (=it) and arrived at Naniha with it secretly]

(115) BA-linkage (*Taketori*: 41)

[orosoka.naru.yau.ni ihi-kere-ba] [kokoro.no.mama.ni-mo e-seme-zu]

outright speak-EVID-BA arbitrarily-PRT PRE-force-NEG

'(she$_i$) spoke outright, and (she$_j$) couldn't arbitrarily force (her$_i$)' not *'(she$_i$) spoke outright, and (she$_i$) couldn't arbitrarily force (her$_j$)'

[Situation: Kaguyahime (=she$_i$) was urged by her old mother (=she$_j$) to get married, but she (=she$_i$) flatly refused it, so her mother (=she$_j$) couldn't arbitrarily force her (=her$_i$) to]

Schematically, the difference between TE- and BA-linkages is represented as follows:

(116) [(S_i) V]-TE, [(S_i) (O) V]

(117) [(S_i) V]-BA, [(S_j) (O) V]

Note that examples (114) and (115) share exactly the same syntactic pattern: the first clause has a subject and a verb, and the second clause has a subject, an object and a verb. Also note that none of the argument NPs--that is, both subjects and objects--are overtly realized in both examples (hence they are in brackets in the gloss)[3]. Consequently, the only formal difference between (114) and (115) is TE and BA, which suggests that the identification of the subject may have exclusively depended on the choice of conjunctive markers in OJ.

Below are examples of WO (ModJ O) and NI that illustrate linkages that embody a DS function. They function as accusative and dative case markers respectively when attached to NP's.

(118) WO-linkage (*Taketori*: 14)

[okina-no inoti kehu asu to-mo sira-nu-wo] [kaku notamahu
old.man-GEN life today tomorrow PRT-PRT know-NEG-WO thus say
kindati-ni-mo yoku omohi-sadame-te tukahu-mature]

prince-DAT-PRT well consider-determine-TE serve-POL
'as this old man does not know whether his life (ends) today or tomorrow, (you must) consider carefully and serve (one of those) princes who say so (=that they want you).'

(119) NI-linkage (*Taketori*: 20-21)

[ni san niti bakari mi-ariku-ni] [tenzin-no yosohohi si-taru
two three day about see-walk-NI nymph-GEN appearance do-PERF
on'na yama-no naka yori ide-ki-te ...]
woman mountain-GEN inside from show.up-come-TE
'as (I) walked around seeing things (on the land) for a few days, a woman who appeared like a nymph came out of the mountain, and ...'

will return to these constructions briefly in the next chapter, since they have much in common with the relative clause construction with an 'internal head' and may better be treated together with other constructions that have a nominal head.

The dominance of SS reading for TE and DS reading for BA in the entire text of *Taketori* is confirmed by the following figures, gathered from Akiba (1978).

(120)

	TE	BA
SS	506 (94.4%)	10 (8.3%)
DS	30 (5.6%)	110 (91.7%)
Total # of tokens	536	120

For NI and WO, it is not easy to give an exact figure, because the identity of the construction itself is fuzzy between adverbial or appositive linkage (cf. (118) and (119)) and relativization. But the DS function of NI and WO holds in the great majority of cases. Consequently, Akiba rejects naive semantic characterizations of conjunctive markers in OJ (e.g. condition, cause, adversity, etc.) as in the traditional literature, and concludes, 'such semantic properties are not inherent to these conjunctive particles,' and 'they are better characterizable in terms of the switch-reference function' (1977: 611). My own calculation does not differ significantly from Akiba's. For TE, SS=93.3% and DS=6.7%, and for BA, SS=10.2% and DS=89.8%. The difference may in part be attributed to the existence of idiom-like expressions, which may not have been treated equally.

For *Genji*, Akiba's statistics are as follows, though she does not give any figure for TE:

(121)

	TE	BA
SS	(not given)	12 (2.6%)
DS	(not given)	448 (97.4%)
Total # of tokens	(not given)	460

Compare this with Fujii's counting, based on the first 400 clauses of *Genji* (1985: 186):

(122)

	TE	BA
SS	44 (71.0%)	2 (5.7%)
DS	18 (29.0%)	33 (94.3%)
Total # of tokens	62	35

The figures Fujii gives for BA do not show a significant difference from Akiba's. The problem, however, is with TE, for Akiba does not give any statistics for TE in *Genji*, and Fujii's counting shows a weaker correlation than what is seen in (120). This problem brings us to the question of what is really monitored in TE- and BA-linkages in Japanese. Before going into the analysis of their functions, I will give a working definition of 'subject' in Japanese 'switch reference' constructions.

In the analysis of the linkage markers in ModJ, I mainly used sentences with NP's whose grammatical relations can be uncontroversially identified. That is, the subject of each example is a human agent that can be interpreted as topical unless some extra assumption is made. This method, however, does not work for the examination of classical texts. Instead, some coherent and explicit conditions must be set up. I will define, following RRG, *subject* (or more precisely *pivot*) as *bearer of the highest-ranking macrorole* in a clause. In Japanese, the macrorole hierarchy is Actor > Undergoer (> nil). Thus when a clause has an Actor, it is the subject, and if it does not, the Undergoer is encoded as subject (cf. Foley and Van Valin 1984: Ch. 3). For example, in (114) and (115), both of the linked clauses have an Actor for subject. In (118), the first clause has an Actor subject, while the second clause is causative, with causer (rather than causee) as Actor and hence as subject. In (119), the subject is an Actor in the first clause, but it is an Undergoer in the second clause. These are relatively easy cases in which cross-theoretical conflicts may not occur.

In discussing reference tracking, three additional, non-canonical cases must be considered. First, in a clause with a mental predicate, the human experiencer does not qualify as a subject, but the stimulus or theme is nor-

mally the obligatory complement of the predicate. In ModJ, the former is typically encoded with DAT *ni*, and the latter with NOM *ga*. When such a clause is followed by a clause with a human agent, the problem arises as to whether this type of linkage is SS or DS. In one sense, it is DS because the NOM-marked NP can be considered as subject, but in another sense, it is SS because the experiencer is potentially agentive and topical. Second, there are cases in which the non-human subject of a clause is strongly associated with some human individual, who becomes the subject in the following clause. This often happens with inalienable possession, for example one's appearance, mental disposition, and social status, among others. One typical example is given below:

(123) TE-linkage (*Genji*: 17)
[ohon-mune nomi tuto hutagari-te] [tuyu madoroma-re-zu...]
PRE-heart only PRT filled-TE hardly sleep-MOD-NEG
'(His Majesty's$_i$) heart became filled (with sorrow), and (he$_i$) could hardly sleep'

Here, topic continuity is maintained in a broad sense, since clauses linked in this way are about the same person. Third, clauses that do not have any salient, individuated NP are also problematic, because in such cases (typically expressing weather or other general circumstances), each clause may have its own 'subject', but it is neither Actor nor Undergoer. It may be noted in this context that, generally speaking, the subject is not firmly grammaticized in OJ and MJ (especially in the former) compared with ModJ. In a number of cases, there is nothing that is positively monitored even via pragmatic bridging. What is expressed by these clauses is at best general 'ambience'. Thus a literal

translation would have only 'it' as subject, which refers to something that was only expressed sentences ago in the text.

In the analysis that follows, I will adopt a highly constrained notion of subject and consider all the above non-canonical cases as DS. In some way, this is an attempt not to discount problematic cases. Remarks on the contents of SS and DS categories will be given whenever needed.

Given these conditions, I consider 47 of the 62 occurrences of clause-linking TE in Fujii's data to be genuine SS (=75.8%) and 2 to be genuine DS (=3.2%). There are 13 problematic cases (=21.0%; besides two semi-idioms, one involves mental state, three inalienable possession, and seven ambience). If I add them to genuine DS, the SS/DS ratio becomes 47/15 (=75.8/24.2%). This result is fairly close to Fujii's calculation, though DS will become more than 90% if the notion of subject is relaxed to include topic continuity. For the first 35 occurrences of BA, my counting was exactly the same as Fujii's.

Below is my own analysis of *Genji*, based on Book Two and Book Three, which I refer to in the following discussion.

(124) *Genji*

	TE	BA
SS	324 (83.3%)	14 (7.8%)
DS	65 (16.7%)	166 (92.2%)
Total # of tokens	389	180

Summing up, for BA, all sources of evidence ((120), (121), (122), and (124)) confirm that it is safely associated with DS in OJ. TE is also associated with SS in more than 90% of cases in *Taketori* (120), but the correlation is a little lower in *Genji* (124). One factor that is responsible for this discrepancy betwen

Taketori and *Genji* is the extremely elaborate style of the former. As remarked above, a considerable number of problematic DS instances of TE-linkage are circumstantial expressions. Since *Genji*'s style is far more complex than that of the average OJ texts, there is much more background information and elaborative narration. Consequently, circumstantial clauses, with no salient NP's that bear no macrorole, occur more frequently in *Genji*. In contrast, *Taketori*, and other texts to varying degrees, contain fewer circumstantial expressions, so they may exemplify the central function of TE in a more straightforward way.

Now if TE and BA in OJ are really best characterized in terms of 'switch reference' functions, as Akiba and Fujii claim, they will add further insight into the typological characterization of switch reference systems.[4] As Haiman and Munro (1983) discuss in their introduction, switch reference is typically encoded by verbal affixes that are akin to agreement markers. It is then necessary to consider whether conjunctive particles such as TE and BA really encode the SS/DS distinction.

Let us take a closer look at the syntax and semantics of TE- and BA-linkages. To give my conclusion first, TE, which induces a SS reading, and BA, which induces a DS reading, are not specialized for switch reference, and the differences between them arise from the overall properties of linkage. That is, TE is a marker of *core juncture* and BA is that of *clausal juncture* (cf. also Ohori 1989, 1990). As we will see, the crucial notions are layers of linkage and discourse functions, and reference tracking ought to be seen as one of their reflexes. The logic of my argument is this: TE and BA differ in various respects that are logically independent of reference tracking, which cannot be explained if we assume that switch-reference is the defining property of TE and BA. Consequently, the differences between TE- and BA-constructions,

including switch reference, should be seen as manifestations of a more essential difference. Below, I will first turn to the grammatical basis of reference tracking, focusing on the scope of modal auxiliaries. Afterwards, I will discuss the discourse functions of TE and BA.

As we have seen earlier in 1.1, one important prediction of the RRG typology of clause linkage is that each operator is associated with a specific layer of the clause, based on its semantic properties. Thus in the clause-linkage construction, whether a given operator modifies both clauses or only one of them is determined by the layer of linkage. This is precisely the case in OJ. See (125), reproduced from 1.1:

(125) Nucleus

Aspect

Directionals

Core

Modality (=deontic modality)

Internal negation

Clause

Status (=epistemic modality & external negation)

Tense

Evidentials

Illocutionary force

Below I will compare deontic and epistemic modalities in OJ clause linkage (cf. Quinn 1990, who gives a survey of affix ordering in OJ).

First, consider the following examples in which the epistemic modals (='status') *meri* and *besi* occur in TE- and BA-linkages:

(126) TE-linkage (*Taketori*: 32)

[utate.aru nusi-no mi-moto-ni tukau-maturi-te] [suzuro.naru sini-wo su-beka-meru kana]

hopeless master-GEN PRE-place-DAT serve-POL-TE unexpected death-ACC do-MOD-MOD PRT

'(I) would serve a hopeless master and (I) would have to die an unexpected death'

(127) BA-linkage (*Taketori*: 32)

[saihahi.ni kami-no tasuke ara-ba] [minami-no umi-ni huka-re-ohasi-nu-besi]

by.luck god-GEN help be-BA south-GEN sea-DAT blow-PASS-POL-PERF-MOD

'(if) by luck there is God's help, then (you) would be blown to the south sea'

From these examples, it can be seen that in TE-linkage, both clauses are within the scope of the clausal operator, but this does not hold in BA-linkage. Note that in (126), the scope of the modal auxiliary *meru* (citation form *meri*) extends to both clauses. That is, the speaker supposes it is probable that he is bound to die with a hopeless master (thus a more idiomatic translation would be: 'I would die an unexpected death by serving a hopeless master'). Compare this with (127), with the auxiliary *besi*. Here, what the speaker supposes to be highly probable is only the second clause, i.e. that the hearer (and the speaker too, for that matter) will be blown to the south sea. The

scope of the epistemic *besi* is limited to the second event, whose high probability is only relative to the realization of the first event.[5]

The following schematic representations may clarify the scope of *meri* and *besi*. Both of them are here glossed 'would' (more precisely, *besi* marks higher certainty):

(128) WOULD[[I serve ...]-TE, [I die ...]]
=> 'it would be the case that (I) serve a hopeless master and (I) have to die an unexpected death'

(129) [there is God's help ...]-BA, WOULD[you'll be blown ...]
=> '(if) by luck there is God's help, then it would be the case that (you) are blown to the south sea'

The implication of this fact is clear: TE and BA have different properties with respect to operator scope, which cannot directly derive from their function of reference tracking. Assuming that (125) is correct, such a difference between TE and BA with respect to clausal operators makes most sense when we consider that TE encodes the linkage at the core level and BA at the clause level. According to (125), if two clause linkage constructions, in the present case TE and BA, exhibit a difference in the relative scope of operators, then these constructions represent linkage at different layers.

Below, some more illustrations are given, with modal auxiliaries *besi* (realized as *beki*) and *mu* (realized as *n* in (133)). As remarked earlier, *besi* is lexically ambiguous, but here too its interpretation is epistemic. Likewise, *mu* is also ambiguous in isolation between volition and supposition, but in the

following examples, the subject is indefinite third person, so the normal reading is epistemic.

(130) TE-linkage (*Taketori*: 29)

[ika.ni omohi-te ka] [nandi.ra kataki mono-to mausu-beki]

how think-TE PRT you(pl) difficult thing-COMP say-MOD

'what thought should you have and say (it's) difficult?'

(131) TE-linkage (*Genji:* 41)

[kakaru sukigoto-wo sue.no yo-ni-mo kiki-tutahe-te] [karobitaru na-wo ya nagasa-mu]

such love.affair-ACC late time-DAT-ALSO hear-POL-TE flamboyant reputation-ACC PRT speak.of-MOD

'(people) of future generations will hear of such love affairs, and (they) will speak of (Genji as) flamboyant'

(132) BA-linkage (*Taketori*: 13)

[adagokoro tuki-na-ba] [noti kuyasiki koto-mo aru-beki-o-to omohu bakari nari]

flirtation go.out-NEG-BA later feel.sorry thing-PRT be-MOD-PRT-COMP think PRT PRED

'(I) think if (my husband's) flirtatious feeling does not go out, (I) would regret my marriage'

(133) BA-linkage (*Genji*: 56)

[utoki hito-ni mi-e-ba] [omotebuse-ni ya omoha-re-n]

unacquainted person-DAT see-PASS-BA dishonor-PRT PRT think-SPON-MOD

'if (I) should be seen by an unacquainted person, then (s/he) would think of (me) as (my husband's) dishonor'

In (130), *beki* expresses the speaker's rhetorical question, and as such, it expresses the speaker's evaluation. Example (131) is part of an inner monologue of Genji, so it can be translated as '*I suppose* that people of future generations will hear of my love affairs, and will speak of me as flamboyant'. The use of modals in BA-linkage is likewise uncontroversial. In (132), though the gloss goes '(I) would regret', the original construction is impersonal, whose literal translation is 'there would be regrettable things'. Thus the epistemic reading of *beki* is unproblematic. The last example is a little problematic because the subject of the clauses is not easy to identify. The morpheme *e* in the first clause is here analyzed as PASS(ive) and *re* in the second clause as SPON(taneous), but they share a semantic feature of uncontrollability. With its position external to such markers, *n* in (133) must be analyzed as epistemic, encoding the speaker's supposition, rather than the volition of somebody who is the grammatical subject. All these examples suggest that TE encodes core juncture and BA clausal juncture.

This granted, I argue that the SS reading with TE-linkage is a function of its linkage type. In OJ, TE-linkage is typically core juncture, with *obligatory sharing of the subject*, and the SS reading is not a property of the linkage marker itself. BA is a linkage marker at the clausal layer, so it is indifferent to the maintaining of the subject (I will turn to this point later). Speaking in terms of the tightness of clause linkage, TE links clauses more tightly than BA, and the difference in operator scope is a result of the difference in clause

integration. In TE-linkage, two events are linked closely enough that they are located in one and the same mental state (i.e. epistemic stance) of the speaker; both clauses together form a single, unitary image, because of the tightness of the structural as well as semantic integration between clauses. On the other hand, in BA-linkage, the clause integration is not as strong as in TE-linkage, so the linked clauses can assume separate mental states. This is natural in view of the fact that epistemic modals modify, or encode the speaker's attitude towards, a whole event (=state of affairs). I consider BA-linkage to embody less tight integration, hence two clauses are seen to be events with separate epistemic status. The following schemes represent the structures of TE- and BA-constructions (the scope of modals is indicated by italics):

(134) TE-linkage (core juncture)

Cl [[Co] + [Co]] <=besi, mu, etc.

(135) BA-linkage (clausal juncture)

Cl [Co] + *Cl [Co] <=besi, mu,* etc.

With TE, there are occasionally cases that may be seen as nuclear juncture (see below), but that does not affect the point being made here.

As far as I can see, there is no clear counterexample to the proposed analysis. What may look problematic at first glance is not quite so. See the following example of TE-linkage:

(136) TE-linkage (*Taketori*: 18)

[kore-o Kaguyahime kiki-te] [ware-ha miko-ni make-nu-besi-to, mune uti.tubure-te omohi-keri]

this-ACC Kaguyahime hear-TE 1sg-TOP prince-DAT lose-PERF-MOD-COMP heart break-TE think-EVID

'Kaguyahime heard this, and (she) thought she would lose against the prince, her heart breaking'

Here, *besi* only modifies the clause *ware-ha miko-ni make-nu*. But the fact is that it is not directly connected to the preceding clause, and it is actually a complement clause of *omohi-keri*, 'thought' (notice *to*, glossed COMP). Structurally, what TE links are *kiki-* and *omohi-keri*. The clause occurring in between is subordinate to the latter predicate, and the scope of the operator is not problematic.

Next, evidence from the scope of deontic, or root, modality neatly fits into the picture. As (125) shows, it is an operator at the core layer. Thus deontic modality (e.g. the speaker's ability or volition) modifies--at least canonically--only the second clause in TE-linkage, unlike the epistemic modality. Examples of TE-linkage are given below, with the auxiliary *mu*:

(137) TE-linkage (*Taketori*: 20)

[oni-no.yau-naru mono ide-ki-te] [korosa-mu-to si-ki]

devil-like-PRED thing appear-come-TE kill-MOD-COMP do-EVID

'a monster like a devil came up, and (it) meant to kill (me)'

In (137), though the subject is the third person, the phrase *mu-to-si* makes up a volitional construction, so *mu* here does not express supposition. Given that deontic modality expresses the ability or volition of the participant in an event, not of the speaker, it is expected that the scope of *mu* is limited to the second clause. That is to say, the scope of deontic modality is the activity

relative to an actor who, in the present case, wishes to perform it, and does not have to extend to both clauses. In passing, note that the outermost operator, *ki*, which is glossed 'evidential' which signals that the event belongs to the witnessed past, embraces both clauses, as predicted in (125). As a result, the reading, 'a monster like a devil meant to come up and kill (me)' is unacceptable.

In BA-linkage too, the scope of deontic modals only covers the second clause, which is natural given that BA is a linkage marker at the clausal layer. See the following examples with volitional *mu* and *nan*:

(138) BA-linkage (*Taketori*: 25)
[mosi tendiku-ni tamasaka.ni mote watari-na-ba] [tyauzya-no atari-ni toburahi motome-mu ni]
if India-DAT by.chance bring come-PERF-BA rich.people-PRT around-DAT visit ask-MOD PRT
'if by any chance (it) is brought to India, (I) will visit rich people and ask for it'

(139) BA-linkage (*Genji*: 99)
[anata-ni kaheri-haberi-na-ba] [tabakari-haberi-nan]
over.there-DAT return-POL-PERF-BA cheat-POL-MOD
'when (she) goes away, (I) will cheat (them)'

In both of these examples, *mu* in (138) and *nan* (analyzable as *na* as PERF and *n* as MOD) in (139) modify predicates whose subject is first person, so they are properly seen as deontic modals. As can be understood from the glosses, both

auxiliaries modify the participant's attitude. Schematically, this fact is captured as follows:

(140) TE-linkage (core juncture)

Cl [[Co] + [*Co*]] <=*mu(-to-si)*, etc.

(141) BA-linkage (clausal juncture)

Cl [Co] + *Cl [Co]* <=*mu*, *nan*, etc.

One might argue, however, that clauses linked by BA have different subjects, and that therefore it is logically impossible that the same deontic modality, for example, volition, can cover both clauses. But this argument does not hold, given the following example:

(142) BA-linkage (*Taketori*: 32)

[kami nara-ne-ba] [nani waza-wo tukau-matura-mu]

god PRED-NEG-BA what skill-ACC perform-POL-MOD

'since (I) am not god, what can (I) do (for you)?'

This is an exception to the DS reading associated with BA-linkage. Notice that in (142), the underlying subject is retained. A more literal translation would be 'I am not god, and what skill I can exercise for your sake I know not'. Here, even though the linked clauses share the first person subject, the modal *mu* modifies only the second clause. Thus it can be argued that the fact that deontic modals can modify only the second clause in BA-linkage is a constructionally embodied feature, rather than something that can be accounted for solely from the DS function of linkage.

The following schemas, abstracted from the foregoing examples, summarize what we have examined so far.

(143) TE-linkage:
[clause]-TE, DEONTIC [clause]
EPISTEMIC [[clause]-TE, [clause]]

(144) BA-linkage:
[clause]-BA, DEONTIC [clause]
[clause]-BA, EPISTEMIC [clause]

Alternate possibilities are given below, though they are less common:

(145) TE-linkage:
DEONTIC [[clause]-TE, [clause]]

(146) BA-linkage: (very rare)
EPISTEMIC [[clause]-BA, [clause]]

There are examples of TE-linkage that do not accord with the schema (143), but follow the pattern in (145). That is, the deontic modal modifies both of the linked clauses. The following is such an example:

(147) TE-linkage (*Taketori*: 22)
[kore-wo tamahi-te] [keko-ni tamaha-se-mu]
this-ACC receive-TE disciples-DAT receive-CAUS-MOD
'(I) will receive it and give it to my disciples'

This example is core juncture, but illustrates an advanced clause integration. Note that in (147), in addition to subject-sharing, the object, namely 'it' (in this context money), is also shared by both clauses. In this sense, (147) is a core juncture that is close to nuclear juncture, because all the macroroles are shared but the oblique NP *keko-ni* is not. Example (148) illustrates a similar kind of core juncture:

(148) TE-linkage (*Taketori*: 28)
[nao kore-wo yaki-te] [kokoromi-n]
still this-ACC burn-TE try-MOD
'still, (I) would like to burn it and examine it'

Here too, *yaki-te kokoromi* 'burn and examine' are within the scope of the volitional auxiliary *n*. Note that all the arguments are shared in this example (cf. 2.5 for the grammaticization of nuclear junctures).

By now it should be evident that the concomitant properties of TE and BA arise precisely from the typology of clause linkage in terms of the degree of structural and semantic integration. The 'switch-reference' function derives from this essential property of clause linkage. Put simply, what appear to be switch-reference markers in Old Japanese are not switch-reference *markers* per se, but they are clause-linking particles which have switch-reference *functions* as one of their concomitant properties. Evidence from operator scope clearly suggests that TE encodes a much higher degree of integration between clauses than BA does, and to fail to recognize this point is to miss an important generalization. To repeat, the retention or the sharing of the subject in TE-linkage is a property of the construction itself, because

core juncture is defined in terms of argument sharing. In BA-linkage, the clauses are less tightly linked, with no structural constraint on reference tracking, and the marker is thus associated with the DS function.

Having examined the grammatical basis of reference tracking, the remaining problem is why BA-linkage ever has a strong tendency for subject switching. That BA-linkage is an instance of clausal juncture provides only a partial account for its DS function. Now further examination of the discourse basis of clause linkage is in order. In the above discussion, it was remarked that the DS function of BA reflects a weaker clause integration, and I will focus on this point in the following. In this connection, Haiman's (1983b, 1987) discussion of the origin of switch reference morphology seems relevant. He speculates that DS markers in certain Papuan languages may have developed from overt conjunctive morphemes (as opposed to a zero morpheme, which he claims has developed into a SS marker). DS markers, under this assumption, are icons of 'separateness' between the linked clauses. Certainly the analogy is only partial, since what is associated with the SS function is TE, which is by no means a zero morpheme. But the idea that the DS marker has some sort of 'separateness' as one of its discourse-level correlates is worth pursuing to understand apparent 'switch reference' functions associated with TE and BA.

To give a nutshell characterization at this point, TE combines ideas into one unitary event, while BA marks a certain kind of detachment. That is, in BA-linkage, two clauses constitute separate events with separate participants realized as subjects. One most basic discourse function of BA is, as expected, to encode a linear sequence of events. This feature is shared by TE as well, but outside this basic function, noticeable differences arise. Examples (149)-(152) illustrate the sequential function of TE and BA:

(149) TE-linkage (*Taketori*: 31)

[kokoro.motona-gari-te] [ito sinobi-te] [tada toneri hutari mesi.tugi-to-si-te] [yature-tamahi-te] [Naniha-no hen-ni ohasi-masi-te] [tohi-tamahu...

anxious-feel-TE, quite go.secretly-TE, only men two retinue-PRT-make-TE, disguise-POL-TE, Naniha-PRT region-DAT go-POL-TE, ask-POL

'(he) felt anxious-TE, (he) went out secretly-TE, (he) had a retinue of two men-TE, (he) disguised (himself)-TE, (he) came to Naniha-TE, and (he) asked...'

(150) TE-linkage (*Genji*: 56)

sonokami, omohi-haberi-si yau, ['...'-to omohi-te] ['...'-nado-mo omohi-te] ['...'-to omohi-tamahe-te] [kotosara.ni nasake.naku turenaki sama-wo mise-te] ...

at.that.time think-POL-EVID way, '...'-COMP think-TE, '...'-PRT-also think-TE, '...'-COMP think-POL-TE, particularly relentlessly cold look-ACC show-TE

'at that time, (I) thought like this: (I) thought “...”-TE, (I) also thought “...”-TE, (I) thought “...”-TE, (I) behaved particularly cold (to her)-TE, ...'

(151) BA-linkage (*Taketori*: 46)

[kore-wo mi-te] ['...'-to ihe-ba] ['...'-to ihe-ba] [okina '...'-to ihe-ba] ['...'-to.te naho tuki izure-ba] [ide-wi-tutu nageki-omohe-ri]

this-ACC see-TE, '...'-COMP say-BA, '...'-COMP say-BA, old.man '...'-COMP say-BA, '...'-COMP+TE still moon show.up-BA, come.out-stay-TUTU lament-think-PERF

'(he$_i$) saw this-TE, (he$_i$) said "..."-BA, (she$_j$) said "..."-BA, the old man$_i$ said "..."-BA, (she$_j$) said "..." and now the moon showed up-BA, (she$_j$) came out and lamented'

(152) BA-linkage (*Genji*: 79)

[mi-tamahe-ba] [karabitu-datu mono-domo-wo oki-tare-ba] [midari.gahasiki naka-wo wake.iri-tamahi-te] [kehahi.si-turu tokoro-ni iri-tamahe-re-ba] [tada hitori ito sasayaka.ni.te husi-tari]

see-POL-BA, Chinese.chest-like thing-pl-ACC put-PERF-BA, messy inside-ACC go.through-POL-TE, sound-PERF place-DAT go-POL-PERF-BA, just alone quite small sleep-PERF

'(he$_i$) saw (inside)-BA, (they$_j$) had put Chinese chests-BA, (he$_i$) went through the messy chamber-TE, (he$_i$) went to the place where there was a sound-BA, (she$_k$), who was small, was sleeping just by (herself$_k$)'

In all of these examples, both TE and BA are used to encode plain sequentiality in most of the cases. The only difference that can be seen on the surface is reference tracking. Example (150) may not represent a pure temporal sequence of actions, but its sequential movement of thought is clear enough. The two examples of BA are both pure sequences of action, except the second clause of (152). But if we assume that the whole sequence is narrated from the viewpoint of the protagonist (='he$_i$'), the clause *karabitu-datu mono-domo-wo oki-tare-ba*, '(they$_j$) had put Chinese chests-BA' can have a sequential interpretation relative to the protagonist's experience.

From this plain sequentiality, TE and BA diverge in different directions, conditioned by their clause integration. To start with TE, it can be de-sequentialized to the effect of encoding *simultaneity* or *manner*. Events

combined with TE are within one and the same frame and are felt to be very close to each other, and consequently, the TE-marked clause can be interpreted as (either partially or totally) overlapping, or reduced to the manner that is semantically subsidiary to the main activity. The following illustrates TE-linkage that expresses simultaneous activities and may perhaps best be interpreted as manner:

(153) TE-linkage (*Taketori*: 20)
[tada munasiki kaze-ni makase-te] [ariku]
only aimless wind-DAT yield-TE wander
'(I) could but wander (on the sea) yielding to the aimless wind'

TE-linkage is thus highly cohesive, and there is either one participant (typically human agent) or none at all. In this context, what Chafe says about 'comma intonation' in spoken English is illuminating: 'The speaker is progressing from one idea to the next, but is at the same time circling around a central concept,' hence '[t]he comma intonation signals movement to another idea, but the absence of a connective shows that this idea remains within the same larger image and does not move significantly forward' (1988: 10). In a similar manner, clauses linked by TE form a unitary image with a coherent epistemic status.

In contrast, the discourse function of BA is characterized by the lack of this clause integration, which is at the basis of its DS function. Both structurally and functionally, the first part of BA-linkage is detached from the second part. At the clausal layer, this feature gives rise to the detachment of experience, and consequently the participant that is in control of the situation is different between the clauses linked by BA, hence the switching of the

subject. The DS function of BA-linkage may be augmented by its functional dissimilation from TE-linkage in the system, but discourse-level properties are more central. Put differently, BA marks *clausal topics*, which can be glossed 'given that / now that'. The de-sequentialized uses of BA tend to realize such semantic relations as *reason*, *disposition*, and *condition* (this last relation is limited to BA affixed to the irrealis ending of verbals). Such readings derive from the essential discourse function of BA (cf. Haiman 1978; Ohori 1988). Conceptually, the function of BA is to initiate the anchoring of some state of affairs in the speaker's mind. Suppose an expression requires a set of background assumptions for it to be understood with minimal effort and maximal contribution to communication. The clause marked by BA provides background assumptions which delimit the universe of discourse within which the relevance of the following clause is assured. Thus BA-linkage, when desequentialized, typically realizes reason and condition (including counterfactuals). Interestingly, exceptional, SS instances of BA-linkage tend to have these motivated semantic relations, which is understandable in view of the fact that reference tracking is a function of clause integration (cf. discussion of MJ data below). Also, the feature of detachment BA realizes is consonant with the fact that the events linked by BA can assume separate epistemic statuses, for detached events belong to different domains of experience, with independent judgments about the necessity / probability of the events.

Further, the primacy of the detachment of events is confirmed by the fact that even in exceptional, i.e. subject-retaining, cases of BA-linkage, the semantic role of the subject is not retained across clauses, thus lacking continuity of action. In (142), for example, the first clause has an Undergoer subject and the second clause has an Actor subject. Since continuity of

macrorole is an important aspect of clause integration, its absence indicates that the BA-marked clause is still detached in the subject-retaining construction. Two more examples of BA-linkage with a SS reading are given below from *Taketori*:

(154) BA-linkage (*Taketori*: 12)

[ono-ga nasa-nu ko nare-ba] [kokoro-ni-mo sitagaha-zu nan aru]

self-PRT make-NEG child PRED-BA will-PRT-PRT obey-NEG PRT PRED

'since (she$_i$) is not our child, (she$_i$) does not listen to (us)'

(155) BA-linkage (*Taketori*: 21)

[kono eda-wo ori-te sika-ba] [sarani kokoromoto.naku-te...]

this blossom-ACC break-TE-EVID-BA more feel.restless-TE

'since (I) broke this blossom, (I) felt even more restless, and...'

In (154), the zero-realized coreferential subject is Undergoer in the first clause and Actor in the second. In (155), the first clause has an Actor subject and the second has an Undergoer subject. In *Taketori* and *Genji*, this is by far the dominant pattern. Of all the instances of subject-retaining BA-linkage, 10 out of 13 in Taketori and 11 out of 14 in Genji lack action continuity (in the sense that the linked clauses are not controlled by the same individual).[6] In this way, even when the subject is maintained in BA-linkage, action continuity is not usually maintained, reflecting the basic discourse function of BA.

To summarize, the switch reference functions of TE and BA in OJ should better be understood in terms of the tightness of linkage, from which various syntactic and semantic properties derive. Japanese does not

grammaticize switch reference, but it has an analog of it, and here we find a clear case of the form-meaning correlation in clausal linkage in the sense that the retention/switching of the subject is conditioned by the tightness of linkage.

Middle Japanese

In Middle Japanese (MJ: 12-16C), there are several noticeable changes with the functions of TE and BA. One important change is that the 'switch reference' functions associated with them started to be blurred due to a change that occurred in BA. That is, while the SS function of TE was mostly retained, the DS function of BA became unstable. The following tables illustrate this point. *Heike* represents MJ (13C) and *Otogi* represents late MJ (15-16C).

(156) *Heike*

	TE	BA
SS	384 (91.9%)	28 (17.9%)
DS	34 (8.1%)	128 (82.1%)
Total # of tokens	418	156

(157) *Otogi*

	TE	BA
SS	305 (90.2%)	53 (31.4%)
DS	33 (9.8%)	116 (68.6%)
Total # of tokens	338	169

Notice that the rate of subject switching declines gradually in BA-linkage (recall that DS was 89.8% in *Taketori* and 92.2% in *Genji* in my count, and Akiba's and Fujii's counts indicated even higher rates). Although the preferred reading is still DS, the fact that the same vs. different ratio is roughly 1:3 in the examined late MJ texts indicates that BA became, at least in part, functionally defective as a device for reference tracking. In fact, the SS/DS ratio differs from text to text, but in most cases, the percentage of SS is well beyond 20% in most cases.

In TE-linkage, on the other hand, the subject is retained in more than 90% of the cases in both *Heike* and *Otogi*. There are many instances of nuclear juncture, where all the arguments are shared and the linked units form a unitary image (cf. (148) above). Further, a number of 'versatile verbs' (Matisoff 1969), i.e. verbs used as semi-auxiliaries when occurring with the main verb, became grammaticized in MJ. Indeed, this is a recurrent pattern of change in Japanese grammar and is not limited to MJ. Already in OJ, for example, verbs like *haberi* 'stay (in anticipation of serving)' was used as a politeness expression in the *V-TE-haberi* construction, along with the pattern *V/LINK-haberi*. In MJ, there are more examples of versatile verbs, such as *mi* 'see' which can mean 'try to' in the TE-construction (cf. 2.5). The remaining portion of this section will be devoted to the decline of switch reference function in BA-linkage.

Let us start by formulating the issues involved. In the above discussion, we have seen that BA-linkage is a clausal juncture and its DS function comes from the pragmatic detachment of the linkage. What then are the motivations for the weakening of DS function once associated with BA in OJ? Concerning the rise of switch reference, some speculations have been made (e.g. Haiman 1983b; Givón 1990), but I find it equally intriguing to

look into its diachronic decline. Since reference tracking is considered to be one reflex of the tightness of linkage, the weakening of DS function should be examined from the viewpoint of how the semantics/pragmatics of linkage changed with BA in MJ. My discussion is built on the following hypothesis about the historical aspect of clause linkage, formulated earlier in (79):

(158) One basic diachronic tendency about the grammaticization of clause linkage is from less to more tightly integrated linkage, both structurally and semantically.

To start, as far as the layer of linkage is concerned, there seems to be no positive evidence that BA ever came to encode the linkage on such layers as core or nucleus in MJ.[7] BA-linkage seems to have remained a clausal juncture. In terms of structural dependency too, BA is still coordination, unlike in ModJ where there is operator dependency. The problem, then, is semantics. BA-linkage in MJ, while remaining a clausal juncture, may be seen as moving toward a higher degree of semantic integration, the consequence of which includes the increase of SS instances.

The canonical function of BA in MJ, as in OJ, was to encode temporal sequence, or more precisely a sequence of two temporally arranged events. Let us first look at the examples that illustrate this function.

(159) MJ (Heike: 304)
[hattato niramahe-te.ohasi-kere-ba] [tada kie.ni-kie.use-nu]
intensely stare.at-POL-EVID-BA EMPH disappear-PERF
'(he) intensely stared at (it), and then (it) suddenly disappeared'

(160) late MJ (Otogi: 192)

[isogi sandai.tukamaturi-kere-ba] [mikado eiran.masimasi-te '...'-to-no senzi nari]

in.a.hurry visit-EVID-BA emperor see-TE '...'-COMP-PRT words PRED

'(he) visited the Palace in a hurry, and then the Emperor saw (him) and said "..."'

All these examples have in common the characteristic that two events are juxtaposed without any positive implication of causality or conditionality (cf. examples of chaining in (149)-(152)). The primary function of BA in (159) and (160) is to indicate that the two events happened to take place in that order and that the first events provide some background for the second events. In which way one event is relevant to another is left open, or is supplied from the linear order of clauses. Thus the clauses linked by BA evoke distinct images which assume separate perspectives, and they naturally tend to have different subjects.

In contrast, the following examples both illustrate a subject-retaining BA-linkage in MJ.

(161) MJ (Heike: 333)

[kayauno seibyau-domo-ga i-sahurahe-ba] [yorohi-no ni-san-ryau-ha i-tohosi-sahurahu]

such warrior-pl-NOM shoot-POL-BA armor-PRT 2-3-CLF-TOP shoot-pierce-POL

'whenever such warriors$_i$ shoot, (they$_i$) pierce two or three pieces of armor'

(162) late MJ (Otogi: 195)

[kono san-nin-no okina-koso tuma.ko-wo tora-re-te.sahurahe-ba]

this 3-CLF-PRT old.men-PRT wife & child-ACC take-PASS-POL-BA

[zehi sendati-wo mausu-besi]

eagerly guide-ACC offer-MOD

'since we three old men had our wives and children taken away (by the monster), (we) will eagerly guide (you)'

Note that in (161), the relation between the two events is more than temporal sequentiality, because it expresses disposition, and in (162), a reason interpretation is given, in addition to temporal sequentiality (which is less directly felt in this case).[8]

From these examples, it may be understood that the major difference between the DS and SS cases of BA-linkage lies in the difference in semantic and pragmatic integration. In (158), I hypothesized that one general tendency in the diachrony of clause linkage is the development from weaker to stronger clause integration. What is relevant here is the strengthening of dependency on the semantic side, given the discourse basis of the DS function of BA. Earlier it was argued that the subject-switching feature of BA-linkage comes from the detachment of the BA-marked clause. In this respect, the change toward higher dependency in MJ means that the interpretation of the linked clauses came to require greater consideration of their mutual relevance. The relative cohesion between the clauses linked by BA became stronger, and subject retention became more frequent as one of its consequences. In the present case, the BA-marked clause became semantically more *motivated* than before, and consequently the SS reading was induced more frequently.

At this point, it makes very good sense to appeal to what Traugott (1988, 1989) calls *pragmatic strengthening* as a crucial mechanism of language change. According to her view, language change, especially changes in lexicon and grammar, may be motivated by the general disposition of the speaker-hearer to render an utterance maximally relevant by active pragmatic inferences, and by the subsequent conventionalization of such inferences into the linguistic system. This process is captured by the dictum 'from less to more situated' (N.B. contextualized) (Traugott 1989). In the diachronic process of pragmatic strengthening, 'the later meanings presuppose a world not only of objects and states of affairs, but of values and of linguistic relations that cannot exist without language' (1989: 35). In the present context, the enhancement of 'situatedness' may be interpreted as the advancement of clause integration and the weakening of detachment as the primary discourse function of BA-linkage. In my terms, this tendency toward higher semantic integration is summarized in the following way, reproduced from 1.3:

(163) Less motivated (weaker control, relevance, etc.) > More motivated (stronger control, relevance, etc.)

From this point of view, the clauses linked by BA, precisely by virtue of being put together in the discourse context, may invite various sorts of pragmatic inferences. For example, the speaker-hearer tends to assume that the two events do not merely happen to be next to each other, but there is some reason for them to be juxtaposed. Thus in the sequence 'X happened, and then Y happened', the antecedent event X is often taken to be the cause or some sort of precondition for the following event Y (cf. Grice 1975; Sweetser 1990). Here the speaker-hearer's evaluation of the state of affairs and its place

in his/her belief system becomes part of the semantics of linkage. In subject-retaining BA-linkage, the antecedent clause puts greater constraints on the universe of discourse within which the consequent clause becomes relevant than it does in DS instances of BA-linkage. The BA-marked clause, when the subject is retained, is more closely related to the following clause in the sense that the former provides indispensable background for the latter to be informative.

Returning to the problem of reference tracking, then, when BA-linkage allows a semantically close relationship between the clauses, it becomes possible that both events involve some common participant who can be encoded as subject throughout the linked clauses. Note that one important aspect of the motivated relation between events is sharing of a participant. I argue, assuming that reference tracking is an important reflex of the tightness of linkage, that conventionalization of pragmatic inferences is the mechanism that is mainly responsible for the decline of the 'switch-reference' function of BA in MJ. Subject sharing may have gradually gained ground through pragmatic strengthening in MJ. That is, the pragmatic detachment embodied in BA-linkage became less effective, the motivation between clauses became reinforced, and continuity of participant became more frequent.

In the following, I will consider two aspects of BA-linkage that indicate the progress of clause integration, namely semantic relations and action continuity. First, concerning semantic relations, we have seen that BA-linkage has a variety of interpretations. Besides temporal sequence, there are various extensions from this relation. What is significant here is that the increase of SS instances of BA-linkage can in fact be understood as an increase of examples that realize motivated relations such as cause, reason, disposition, and condition. In fact, already in *Taketori*, seven of the 13 instances of

subject-retaining BA-linkage are clearly non-sequential, and the other examples can also have a causal interpretation (cf. examples of OJ SS-linkage (154)-(155) given earlier). A typical example is given below:

(164) (*Taketori*: 33-34)
[tatu-no kubi-no tama-wo e-tora-zari-sika-ba nan]
dragon-GEN neck-GEN jewel-ACC PRE-get-NEG-PERF-BA PRT
[tono-he-mo e-maira-zari-si]
mansion-to-PRT PRE-come-NEG-PERF
'since (we) could not get the dragon's jewel, (we) have not been able to come to your mansion'

Here, the semantic relation between the clauses involves sequentiality, but a causal interpretation can also be given, because the two events (the speakers' attempting to get the dragon's jewel on the one hand and their escaping from their lord on the other) did not take place *consecutively*, and yet the first event has current relevance to the second event. In *Genji* too, reason and conditional readings are dominant in subject-retaining BA-linkage. Of the 15 instances of SS-linkage, there is only one example of temporal sequence that is purely sequential (i.e. consecutive). All others express either reason/cause or conditional.

The dominance of motivated semantic relations in SS instances of BA-linkage in MJ is illustrated by the following tables. 'Sequential' means non-overlapping, consecutive events. A non-consecutive arrangement of events, especially when the antecedent event is a state, not an action, tends to have a causal reading, and is put into the 'Cause/Reason' category.

(165)

Heike	DS	SS
Sequential	86	5
Cause/Reason	27	13
Dispositional	4	5
Conditional	11	5
Total	128	28

(166)

Otogi	DS	SS
Sequential	74	11
Cause/Reason	20	21
Dispositional	8	6
Conditional	14	15
Total	116	53

Notice that in *Heike* and *Otogi*, motivated semantic relations occupy 82% and 79% of SS instances respectively. On the other hand, sequential readings account for 67% and 64% of all DS instances in *Heike* and *Otogi*. This fact indicates that the increase of SS instances did not happen randomly, and it was a consequence of an increase of cases that embody motivated semantic relations. In other words, the tendency to have a SS-reading in semantically motivated linkages remained the same in OJ and MJ, and when motivated relations became more frequent with BA-linkage, the number of SS instances increased accordingly. This is indeed good support for our hypothesis about the correlation between the strengthening of semantic dependency and the gradual increase of SS readings with BA-linkage.

The paths of semantic developments under discussion may be summarized in (167).

(167) [+realized, ±motivated]: Temporal sequence
> [+realized, +motivated]: Cause / Reason
> [±realized, +motivated]: Dispositional
> [-realized, +motivated]: Conditional

In 'Temporal sequence', the events are realized at some specific point in time with a minimum overlap, and the relationship between these events does not have to be positively motivated. On the other hand, in 'Cause' and 'Reason', the antecedent event has a continuous effect on the consequent event. (164) is such an example from OJ, and (162) is an illustration of the same kind of semantic relation from MJ. The following is another typical case of a causal interpretation:

(168) (*Heike*: 294)
[syusyau-ha kon'nen san-zai, imada itokenau-masi-masi-kere-ba]
majesty-TOP this.year 3-years.old yet young-be-POL-PERF-BA
[nanigokoro-mo nau zo mes-are-keru]
thoughts-PRT not.be PRT guide-PASS-PERF
'since His Majesty$_i$, three years old this year, was yet very young, (he$_i$) was led (to the new capital) without any thoughts (about it)'

Here, the first clause has a stative predicate, and the statement made there is effective in the second clause. In this sense, the first event is integrated into the second event, and a causal interpretation is given. As such, the referent of the zero subject in the second clause is His Majesty. When a DS interpretation is induced, the semantic relation most typically involves detachment.

When a SS interpretation is induced as in (168) as well as in (162) and (164), the detachment becomes weakened.

The development of dispositionals is also a product of pragmatic strengthening, which becomes increasingly common in MJ. In dispositionals, the two events may co-occur repeatedly at any point in time, unlike causals. They may not be realized at the time of utterance, but the relationship between the events is taken as more than accidental and thus as a recurrent pattern. (161) is such an example. The events linked by BA, the warriors' shooting and their piercing more than one armor at a time, can be true at any point in time, hence the notation [±realized] in (167). Dispositionals differ from conditionals in that the former do not usually involve hypotheticality. Below are two more examples of dispositional relation.

(169) (*Heike*: 326)

[ten-no atahuru-wo tora-zare-ba] [kahette sono toga-wo uku]

heaven-PRT give-ACC take-NEG-BA instead its punishment-ACC receive

'when (one$_i$) does not take what heaven gives, (s/he$_i$) instead receives its punishment'

(170) (*Otogi*: 199)

[wehi-te husi-taru mono-nare-ba] [waga.mi-no usuru-mo sira-nu nari]

drunk-TE sleep-PERF stuff-PRED-BA myself-PRT gone-PRT know-NEG-PRED

'when (the monster$_i$) is already drunk and asleep, (he$_i$) does not even know (he$_i$) is gone (=his power is lost)'

Both of the above examples are statements of facts, and hypotheticality is not included. But in any event, the events linked by BA tend to co-occur, and this strength of association is at the basis of the SS reading. Example (170) also seems to allow a causal interpretation, but its discourse context is a general description of the monster, and the events do not take place at any specific time. Since in dispositionals one event occurs in response to the other, it is easier to interpret the participants in the linked clauses as identical.[9] Cf. the English sentence *whenever he is sick, he drinks warm beer*, in which two *he*'s normally refer to the same person.

Next, conditionals are often seen in the SS-type linkage, for basically the same reason. Here too, two events are more closely integrated than in simple juxtapositions, and reference tracking tends to be SS as a function of clause integration. Two examples are given below.

(171) (*Heike*: 315)

siti-seki-no heifuu-ha takaku-tomo [odora-ba] [nadoka koe-zara-n]
7-foot-PRT screen-TOP tall-although leap / dance-BA PRT go.over-NEG-MOD
'although the seven foot screen / fence is tall, if (you) leap high, why can't (you) go over (it)?'

(172) (*Otogi*: 206)

[hito-no mi-wo dani bukusuru-nara-ba] [tonahe-n]
human-GEN body-ACC PRT eat-PRED-BA chant-MOD
'if (I) eat a human (=you), (I) will chant (=give you holy words)'

In (171), somebody's leaping is a necessary precondition for his going over the screen or fence, and likewise in (172), conditionality, which is partly supplied from the discourse context along with the volitional *n*, induces a SS-interpretation.

The second aspect of BA-linkage in MJ that correlates with the advancement of clause integration is action continuity. Earlier we saw that, in OJ, even when the subject is retained in BA-linkage, action continuity is not. I adduced this fact in support of the claim that the basic function of BA is to realize some kind of detachment, and that the tightness of linkage has various sorts of correlates, including action continuity. Then what is the situation in MJ? Of all the instances of subject-retaining BA-linkage, 9 out of 28 in *Heike* and 13 out of 53 in *Otogi* seem to involve action continuity.[10] There are certainly a number of noticeable examples of BA-linkage that involve action continuity in MJ, but the increase of such cases is not dramatic. In addition to (171) and (172), the following are examples which illustrate action continuity (Actor-Actor).

(173) (*Heike*: 319)

[kakute sansiti niti-no daigwan tuhini toge-sika-ba] [Nati-ni sen niti komori-keri]

thus 37 day-PRT austerities finally finish-PERF-BA Nati-DAT 1000 day stay.in.service-PERF

'thus (he_i) finally finished austerities of 37 days, and (he_i) stayed in Nati serving for 1000 days'

[N.B. *komori*, though glossed 'stay serving', is an activity predicate in that the subject is agentive and can participate in the nuclear juncture

V+(TE)+haberi, which creates a stative predicate from an action predicate. Stative predicates do not occur in this pattern.]

(174) (*Otogi*: 120)
[nezumi-wo tabe-sahurahe-ba] [mubyau-ni.si-te tobi-ariku koto, ...]
mouse-ACC eat-POL-BA healthy-PRED-TE jump-walk fact
'since (we [=cats]) eat mice, (we) are healthy and jump around'

(175) (*Otogi*: 214)
[miyako-he nobori-te-sahuraha-ba] [titi-haha-ni yokini todoke-te mawira-su-besi]
capital-to come.up-TE-POL-BA father-mother-DAT safely carry-TE go-POL-MOD
'if (we) come up to the capital, (we) will carry (you) safely to your parents'

In all these examples, my interpretation is that the linkage involves action continuity and the subject NP's, maintained across clauses, are Actors. The intransitive predicates in (173)-(175) are here considered to have agentive subjects, for reasons given above. Although we are dealing with classical texts and there is no way to check with informants, some of the examples of BA-linkage with action continuity might be paraphrased with TE, with due modifications of modality and verbal desinence.

Thus we have seen that the partial decline of the switch reference function associated with BA is a consequence of the strengthening of clause integration primarily on the semantic side. The increase of the examples of BA-linkage that express motivated semantic relations such as cause/reason

and disposition is in accord with the diachronic tendency of change from less to more situated, i.e. inference-intensive relations. Changes not only in reference tracking but also in semantic relations and action continuity reflect pragmatic strengthening and advancing clause integration. Admittedly, these are not changes in the layer of linkage or type of dependency. But in a more subtle way, the advancement of semantic integration went hand in hand with that of structural integration, and to this extent, our initial hypothesis has been supported.

In what follows, a few remarks are given concerning the wider implication of switch reference phenomena in OJ and MJ. Japanese may not be said to grammaticize switch reference, but it has an analog of it, which is at least partly motivated by the discourse-pragmatic characteristics of linkage. If this analysis is correct, then it adds a new insight into the nature of reference tracking systems across languages. Diachronically, the change that took place with BA may be seen as a decline of 'switch reference' into 'open reference' (the term due to Nichols 1983: 247). In her discussion of the Northeast Caucasus languages, Nichols divides desinence types of non-final verbs into restricted DS, restricted SS, and open reference. Unlike languages with typical switch reference systems, languages of the Northeast Caucasus 'exhibit overlap rather than an opposition of restricted same subject to restricted different subject' (1983: 259). Consequently, the distinction that matters is that between open reference and restricted reference. TE-linkage in Japanese may be seen as a kind of restricted SS marker. BA-linkage may be comparable to markers of open reference in that its primary function is not to encode the switching of subject as such, and discourse-functional detachment, which strongly induced a DS reading in OJ, became weakened in MJ.

Another point discussed by Nichols (1983) that might echo OJ and MJ (especially the former) is that there are hardly any surface syntactic relations that are distinct from semantic relations in Northeast Caucasian languages. As I remarked at the beginning of this chapter, syntactic relations do not seem to be firmly established (or establishable) in classical Japanese. Case markers are indeed not obligatory, and word order does not help a lot, since it is rare that more than two full lexical NP's are expressed in a single clause. I have spoken of 'subject' as a theory-bound notion, essentially drawing upon the semantic role and agentivity of NP's. From a broader perspective, it is speculated that analogs of switch reference can be found in languages that do not grammaticize syntactic relations strongly and/or consistently (as in for example, Eastern Pomo, according to Robert Van Valin p.c. and David Gamon p.c.), because reference tracking in such languages should best be regarded as one facet of clause linkage, along with many others that tend to covary. In this sense, I am ready to accept that the reference tracking function is an outcome of the complex interplay of factors, only part of which I have taken up so far. Below I reproduce the list of properties that Nichols identifies (1983: 264).

(176) Formal-functional clustering of properties into prototypes:

Restricted reference

typically same-subject

etymologically conservative

belongs to small, closed paradigm or set of forms

no independent temporal meaning

no cross-clause reflexivization

reduced surface valence

Open reference

typically different-subject

etymologically innovating or secondary

belongs to large, often productive set of forms

independent temporal meaning

cross-clause reflexivization possible

full surface valence

Of course, not all properties are relevant to OJ and MJ. For example, it is difficult to test cross-clause reflexivization based on the textual material. But the following remark from Nichols (1983: 264) is relevant to our discussion: 'In historical evolution of morphosyntactic forms, linkage/juncture/ binding and deixis become closer; the older the converb form, the more closely it is bound to the main clause.'

To the list of (176), I may add the behavior of operators: in SS-linkage (such as TE), two clauses tend to be within the scope of the epistemic modality marked on the main clause, while in DS-linkage (such as BA), the linked clauses tend to assume separate epistemic statuses. The feature of temporal meaning in (176) is comparable to TE and BA in that the former frequently links two temporally adjacent events and the latter links separate events. Action continuity may also be related to the availability of independent temporal meaning. As for the conservativeness of morphemes, it is not easy to analyze TE and BA from this viewpoint, because they both existed from early OJ. Etymologically, they have a roughly equal degree of transparency, because TE is supposed to come from the perfective auxiliary TU and BA from the topic marker WA (< *Fa* < **pa*). As such, the openness of the

paradigm does not have direct bearing on these markers, but two interesting facts may be pointed out. First, though both TE and BA have been used throughout the history of Japanese, the latter became restricted in its use in Pre-ModJ (see below). In ModJ, BA is only attached to what used to be the perfective ending, and the dominant semantic relation is conditional. TE in ModJ, in contrast, is as ubiquitous as ever. Second, the perfective origin of TE suggests that TE used to mark the Aktionsart of a predicate. If we assume that markers of Aktionsart belong to the core of a grammatical system while pragmatic particles belong to the periphery, it can be said that the origin of the marker for a tight, SS-type linkage is more central to the grammatical system of a language than that of the marker for a detached, DS-type linkage.

To summarize, the change in the reference tracking functions of TE and BA, which derive from the functions of clause linkage, is best understood as a result of the grammaticization of clause linkage toward a higher degree of clause integration. It has been shown that this change is motivated by the strengthening of pragmatic inferences, and the covariance of form and meaning is observed in the diachronic development of clause linkage constructions.

Pre-Modern Japanese

The transition from MJ to Pre-ModJ is around the 16th century. From the beginning of the 17th century, there ensued a considerable number of changes in Japanese grammar, along with many socio-cultural changes. While the political center moved to Edo (=modern Tokyo), leading to the rise of a strong dialectal area, Kyoto dialect, in which most OJ and MJ texts were written, also changed to a considerable extent. In the domain of clause linkage too, there were many changes due to the large-scale shift in the

grammar that took place in this period. The shift affected BA and TE as well, which we will discuss in that order.

To begin with BA, functional domains encoded by it became reduced in some respects and expanded in others.[11] For example, the contrastive or symmetrical function of BA-linkage, which is often found in ModJ (cf. (102)), became widespread only in Pre-ModJ, especially in the Edo dialect (according to Yuzawa 1936, 1954). The following is from 19C Edo text (reproduced from Yuzawa 1954: 624):

(177) nandemo syoobai-ni sei dasi-te-minee, oya-mo nikoniko sure-ba
anyway business-DAT energy put-TE-see parent-also smile do-BA
kakaa-mo yakimoti-ha-yaka-zu ka
wife-also jealous-TOP-become-NEG PRT
'anyway, put energy into (your) business, then (your) parents will smile at (you), and at the same time (your) wife will no more be jealous (about your fooling around)'

This is a natural extension from the basic function of BA-linkage to mark clausal topics. Although the linkage might seem to have been weakened in the sense that the linked clauses realize separate events, this is not really the case. In fact, the rise of a pattern like (177) is accounted for as a highlighting of some selected aspect. In order to obtain a contrastive linkage, the linked clauses must share something to be highlighted and compared. If we understand the contrastive use of BA-linkage in these terms, the diachronic process here is not exactly a loosening of linkage, but a formation of a semantic/pragmatic frame in which the two events have common traits or entities related to the same topic (in the present case, the hearer, glossed 'you').

Another important change with BA is that its sequential function which was prevalent in OJ and MJ was partly taken over by TO in Pre-ModJ. BA continued to be used for marking turn-taking as well as for semantically motivated relations such as reason and condition, but TO became very frequently used in Pre-ModJ. Though clause-linking TO is homophonous with complementizer (or quotative) TO and comitative TO, both of which have been in use since OJ, its direct antecedent form and function are not clear (cf. footnote 5 to 2.2). Clause-linking TO, which also tends to link clauses with different subjects, was not widespread even in late MJ, but in Pre-ModJ it became frequently used. According to Konoshima (1966), the marker TO came to be used as a sequential linkage marker in Pre-ModJ, roughly in the 18-19C. He observes that even in ModJ the dialectal difference is considerable with respect to the frequency of the use of TO, so its rise should be examined with great care. OJ and MJ had such composite forms as TOTE and TOMO, but their continuity to sequential TO is not certain. Yuzawa (1929: 288), examining MJ texts of 14-15C (*syoomono*, digests of classical Chinese texts), gives the following example:

(178) seken-ha nan.to mutukasikarau-to ... mama yo
world-TOP however hard-TO accordance PRT
'however hard the world may be, let it be'

This is dubious as a forerunner of sequential TO[12], whose existence in *syoomono* Yuzawa denies. Pre-ModJ examples of properly sequential TO, which continues untill the present, are given below.

(179) Kyoto / Osaka dialect (Yuzawa 1936: 517)

yo-ga akuru-to kaka.sama kaka.sama-to iu-te tazune
night-NOM break-TO mom mom-COMP say-TE look.around
'the night broke, and (she) looked around (for her mother), saying
“mom, mom”'

(180) Edo dialect (Yuzawa 1954: 597)
ima.ni o-sakana-ga kuru-to hito kuti ageru yo
now PRE-appetizer-NOM come-TO one bite give PRT
'now when the appentizer is brought here, (I)'ll give a bite (to you)'

Naturally enough, the sequential TO was, and is, used for conditionals and dispositionals. But, since TO became widespread in Pre-ModJ all of a sudden, there is no way to determine which use developed from which. It is even speculated that TO inherited former functions of BA as a whole. I am generally skeptical about the reality of chain shifts, but the above two changes with BA seem to fit the drag-chain model. On the one hand, former functions of BA came to be encoded by TO, and on the other, there was a rise of contrastive or symmetrical meaning with BA, which is the only relation of it not realized by TO.

Turning to TE, along with many lexicalized idioms, a variety of semantic relations were encoded by this marker in Pre-ModJ. As expected, the manner reading is very common, because it is the natural interpretation of two closely linked events with the same participant. Further, there are many instances of nuclear juncture, i.e. linkage constructions that form a unified predicate. But at the same time, there came to be a considerable number of instances of subject-switching TE-linkage. Even in OJ and MJ, there were a few examples of subject-switching linkage by TE (and V/LINK, for that

matter), but in most cases the linked clauses have subjects that are not positively individuated entities (for example weather). In Pre-ModJ (and in ModJ as well), however, we find examples in which the linked clauses have separate human subjects, as in the following (from Yuzawa 1936: 510).

(181) kaka.sama-ha kokoro wawasiu-te ani Naruonosuke sama-ha mamako-dya-to iu-te kuni-wo tikusitu.si
mom-TOP heart unstable-TE brother Naruonosuke TITLE-TOP stepchild-PRED-COMP say-TE home.country escape
'Mother was flamboyant, and Brother Narunosuke, saying that (he) was (after all) a stepchild, escaped from his home country'
[N.B. *sama* is something like a general-purpose title for expressing politeness]

In this example, the two clauses are clearly detached compared with the ordinary TE-linkage encoding chained events with a shared subject. Konoshima (1966: 180) observes that this type of juxtapositional TE-linkage became widespread in Pre-ModJ and ModJ. It seems particularly frequent in ModJ. If this change is really a new innovation, then it offers an interesting countercase to the proposed tendency for the grammaticization of clause linkage, namely from lower to higher clause integration. Presently, I do not know how to make sense out of it, and all I can think of is that the semantic openness of TE has something to do with it, and that the change with TE is a development of polyfunctionality, rather than a unidirectional change from tight to loose linkage. It might, however, be argued that subject-switching, juxtapositional TE-linkage came to be commonly used because of the general shift in the realm of clause linkage constructions in that period.

In this chapter, we have seen various diachronic aspects of clause linkage focusing on TE and BA. Concerning their 'switch reference' functions in OJ, evidence from the scope of modal auxiliaries has shown that the SS function of TE-linkage comes from its constructionally-embodied feature as a core juncture, while the DS function of BA-linkage, which is a clausal juncture, is primarily rooted in its discourse function as a marker of clausal topics. Also, the advancement of clause integration has been shown to be one crucial factor for the increase of subject-retaining BA-linkage in MJ. This firmly supports the position that the diachronic path clause linkage constructions take is typically from lower to higher clause integration, both structurally and semantically. One crucial mechanism here is the reinforcement of pragmatic inferences, which had an impact on the change from the 'switch' to 'open' reference with BA. The changes that took place in Pre-ModJ are somewhat different in nature, in that they are part of the large-scale shift in the grammar as a whole. The establishment of contrastive meaning in BA-linkage can be understood as an instance of pragmatic strengthening, while the rise of juxtapositional TE-linkage is a potential countercase to the proposed tendency.

Notes to 2.3.

1. As I discuss below, linkage by case markers can also be analyzed as 'internally-headed' relativization, which is another reason for excluding GA, NI, and WO from the discussion in this chapter.

2. For example, *taberu* is a neutral verb for eating, *itadaku* expresses the speaker's humbleness, and *mesiagaru* expresses the speaker's respect for the actor. Thus the identity of the subject is partially known from the verb being used.

3. Although *Naniha-ni* 'to Naniha' in (114) may be analyzed as a directional argument of *ide* 'come', it does not affect the point being made here, namely the realization of subjects and their monitoring.

4. Admittedly, any linkage construction possesses a cluster of features. The question is which feature is basic and which is derivative. My claim is that the difference in clause integration, both structurally and semantically, is the core property of TE and BA, and switch reference is derivative.

5. In this connection, it should be noted that *besi* in OJ, taken in isolation, is ambiguous between deontic and epistemic readings. It may mean obligation or high probability, depending on context, particularly the selection of the subject. For the first person, the reading is preferably deontic, and for the third person, the epistemic reading is taken. In the present example, since the subject is second person and the speaker (the sailor) has no authority to oblige the subject (lord Otomo) to perform something, *besi* must be interpreted as epistemic. This is the same with *mu*, which is in itself ambiguous between volition and supposition.

6. I am using the term 'action continuity' as a semi-technical term. It is to be admitted that the ordinary, intuitive notion of action continuity is

somewhat different from the notion adopted here (pointed out by David Gamon, p.c.). In an example like *He took off his clothes and fell down on the bed*, the subject switches from Actor to Undergoer, but still the two events are contiguous to each other. Perhaps it is better to invent a term like *con-trollability continuity* to express what is meant by action continuity here, though I use the latter term to avoid clumsiness.

7. Interestingly, even idioms that contain BA are 'detached' in a certain way. For example, *sareba* (< *sa+are+ba* that+be+BA, 'being so; thus') already lost its clausal status in OJ and was used as a sentence-initial connective. Yet it was still detached from the rest of the clause (cf. the gloss 'thus'), with no indication of argument sharing.

8. Note that the two events do not happen consecutively in this example. In this example, the kidnapping of the speaker's family belongs to the remote past, but the antecedent event has some continuing relevance to the subsequent event, and this relevance gives rise to a causal reading.

9. It should be remarked here that the boundary between dispositionals and conditionals is rather fuzzy. In OJ and MJ, conditionals were realized by BA attached to the irrealis ending of verbals while other functions were mainly realized by the V/PERFECTIVE+BA pattern. What is intriguing in this context is that this pattern came to acquire a conditional meaning toward late MJ, perhaps through pragmatic strengthening and generalization of meaning, and the V/IRREALIS+BA pattern became gradually obsolete (cf. Ohori 1988). Interestingly, counterfactuals came to be expressed by the V/PERFECTIVE+BA pattern only after it came to express hypotheticals.

10. I do not count examples like (168), which is a case of subject retention with the Undergoer-Undergoer pattern as having action continuity (there is no 'action' in the first place).

11. In addition, it need be mentioned that the bimorphemic forms TARABA and NARABA, already in use in the foregoing period, became reduced and TARA and NARA came to be used in the colloquial register, along with the reduction of *V(r)e-BA* into *V(r)-ya(a)* (e.g. *mireba* > *mirya(a)* and *kikeba* > *kikya(a)*).

12. In this example, TO is closer to TOMO in OJ and MJ. Certainly, the two clauses are arranged in the order of temporal sequence, unlike in complement construction, but the semantic relation is different from plain sequentiality.

2.4. Core and clausal junctures (III): Nominal head linkage and IHRCs

In most cases of nominal head linkage, the dependent clause functions as an adverbial in relation to the main clause. However, there are cases in which interesting problems occur concerning the encoding of arguments. Earlier it has been shown that reference tracking is one important aspect of clause integration. In this chapter, I will examine this issue, focusing on the development of TOKORO-complements and to a lesser extent that of nominal clauses, both of which are used as internally-headed relative clauses (IHRCs) or their analogs. Below we will see that the diachronic paths that these constructions took appear to be contradictory in terms of the advancement of clause integration, and then we will attempt to clarify their exact properties.

As demonstrated in 2.1, nominal head linkage is a variant of either relativization or noun complementation with the structure (182), which is also interpreted as (183) through the reanalysis of *N(-Po)* into a linkage marker (reproduced from 2.1).

(182) NP[Cl_1[(NP)...V] N](-Po), Cl_2[(NP)...V]

(183) Cl_1[(NP)...V]-LINK, Cl_2[(NP)...V]

The nouns that can be used in this construction differ in their degree of grammaticization (cf. the list in 2.2). Here, the ascriptive-identificational function of the relative clause is overshadowed by an adverbial function.[1] In ordinary relativization, the construction is used to specify a particular entity, namely the head noun, which further predication is made of. But in

nominal head linkage, the noun-modifying structure is used to encode some circumstances that pertain to the main clause, as in the following, where the noun *kuse* has a clause linkage function:

(184) Sigoto-ga aru kuse-ni, terebi bakari mi-te.iru
work-NOM be KUSE-DAT TV only watch-STAT
'Though (I) have work to do, (I)'m only watching TV.'

Here, the complement clause is not really used to pick up a particular *kuse* 'bad habit or disposition', but *kuse-ni* forms a linkage marker in its own right which expresses counterexpectation.

The path of grammaticization in this type of nominal head linkage is fairly straightforward, and the use of some nouns in this construction is a relatively late innovation. The use of oblique cases such as *ni* and *de* is understandable because the clause headed by a formal noun structurally forms an adjunct in relation to the main clause. In many cases, the lexical meaning of a head noun is more or less retained, as in TOKI. Exceptions include KUSE, which as a lexical noun means '(bad) habit or disposition' but as a nominal head means 'in spite of (the fact that)'. Also, the lexical meaning of MAMA (described as 'accordance' in 2.2) is not as clearly definable as other markers for nominal head linkage.

This being said, let us turn to other, more complicated constructions that belong to this category, namely TOKORO-complements (once called *Counter-Equi* construction, cf. Harada 1973; Hale and Kitagawa 1976-1977) and case-marked nominal clauses. In the former, the form TOKORO syntactically occupies the position of nominal head which is case-marked, while in the latter the nominal head is a nominalizer *no* and hence is not indeed a lexical

head. In the classical period (OJ through early Pre-ModJ), the nominalizer *no* was not used, and case markers were directly attached to the complement clause. Both TOKORO-complements and nominal clauses have a spectrum of uses, including the use as IHRCs (cf. Kuroda 1974-77, who discusses them under the name 'pivot-independent' relativization). What is remarkable about IHRCs is that the NP semantically linked to the matrix verb is a noun within the complement clause. Let us start with nominal clauses. Example (185) is an instance of IHRC from ModJ:

(185) [Taroo-ga suwaru] no-o tukamae-ta.
Taroo-NOM sit NO-ACC catch-PAST
'(I) caught Taroo who would sit down,' or '(I) caught Taroo as (he) would sit down.'

Here, the complement clause is nominalized by *no*, and is marked ACC. But the object of the matrix predicate *tukamae* 'catch' is not the whole complement clause, but *Taroo*. In this sense, there is a discrepancy between syntax and semantics of the construction. In IHRCs, the argument structure of the matrix predicate is saturated differently from simple clausal complementation: in the former, what is linked to the matrix predicate is a NP within the complement clause, but in the latter, the complement clause as a whole functions as an argument of the matrix predicate. Recently, there is an increasing body of work on IHRCs in different languages (cf. Nichols 1984a on many languages; Cole 1987 on Quechua; Williamson 1987 on Lakhota; Culy 1988 on Dogon and 1989 on Bambara; Fontana 1989 on ASL; Ishii 1989, Uchibori 1990, and Hirose and Ohori 1992 on Japanese).

In TOKORO-complements, the complement clause is lexically headed by TOKORO (the lexical meaning being 'locus, situation'), rather than by the nominalizer *no*. TOKORO-complements have multiple functions, one of which is an analog of IHRC (i.e. 'Counter-Equi').[2] Compare (186) and (187), the former being an ordinary relativization and the latter an analog of IHRC:

(186) [Taroo-ga suwaru] tokoro-o soozi.si-ta.
Taroo-NOM sit-PAST TOKORO-ACC clean-PAST
'(I) cleaned the place where Taroo would sit down.'

(187) [Taroo-ga suwaru] tokoro-o tukamae-ta.
Taroo-NOM sit-PAST TOKORO-ACC catch-PAST
'(I) caught Taroo who would sit down,' or '(I) caught Taroo as (he) would sit down.'

In both of these examples, TOKORO is marked ACC (also cf. the use of TOKORO as an adverbial nominal head linkage, given in 2.2). In (186), it is the object of the matrix verb *soozi.si* 'clean', with the interpretation 'cleaned the place where ...'. But in (187), TOKORO is not the object of *tukamae* 'catch', and what must be linked to it is *Taroo*, which is within the 'relative' clause (hence the literal translation, '(I) caught the place where Taroo would sit down' does not make sense). In the following, I will first review IHRCs in OJ and MJ, and then move on to TOKORO-complements.

In OJ, the following types of IHRC constructions are found. They are case-marked clauses and bears no overt morpheme that marks nominalization, unlike in ModJ (cf. the use of *no* in (185)).

(188) GA-linkage (*Taketori*: 23)

[Taketori-no okina sa.bakari katarahi-turu-ga] [sasuga.ni oboe-te neburi-ori]

Taketori-PRT old.man that.much talk-PERF-GA by.now feel-TE sleep-stay

'Old Taketori$_{i}$, who had talked so amicably (with Prince Kuramoti$_{j}$), by now felt (cheated by him$_{j}$) and pretended to be asleep,' or 'Old Taketori$_{i}$ had talked so amicably (with Prince Kuramoti$_{j}$), and by now (he$_{i}$) felt (cheated by him$_{j}$) and pretended to be asleep'

(189) WO-linkage (*Taketori*: 42)

[kono menowaraha-ha tahete miyadukahe-tukaumaturu-beku-mo

this girl-TOP at.all court.service-perform-MOD-PRT

ara-zu-haberu-wo] [mote.wadurahi-haberi]

be-NEG-POL-WO cannot.handle-POL

'(we) cannot handle this girl, who would not serve at the court at all,' or 'this girl would not serve at the court at all, and (we) cannot handle (her)'

(190) NI-linkage (*Taketori*: 14)

[go-nin-no naka-ni yukasiki mono-wo mi-se-tamahe-ran-ni]

five-CLF-PRT among pleasing thing-ACC see-CAUS-POL-MOD-NI

[on-kokorozasi masari-tari-to-te tukau-matura-n-to ...]

PRE-heart superior-PERF-PRT-PRT serve-POL-MOD-COMP

'of these five lords, (I) will serve (=wed) one who presents a pleasing thing (to me), assuming that (he) has the greatest affection,' or 'of these

five lords, who presents a pleasing thing (to me), (I) will serve (=wed) (him), assuming that (he) has the greatest affection'

It is only in the Pre-ModJ period (possibly late Pre-ModJ and with dialectal variations) that *no* came to be used in order for a case marker to be attached to a full clause. This change is related (though remotely) to a change in verbal morphology. In OJ and early MJ, the final ending (*syuusi-kee*) of verbals was distinct from the noun-modifying or nominalized ending (*rentai-kee*). But toward late MJ, triggered by another change in morphology, namely the decline of *kakari-musubi* (long-distance control of verbal desinence by a pragmatic particle), the final ending of verbals became identical to the noun-modifying or nominalized ending.[3] I surmise that in order to explicitly mark the nominality of a clause, the nominalizing particle *no* was inserted in Pre-ModJ.

Already in OJ, ACC and DAT case markers seem to have been used for non-relative clause linkage as well. We saw such examples in 2.3, reproduced below:

(191 [=(118)]) WO-linkage (*Taketori*: 14)

[okina-no inoti kehu asu to-mo sira-nu-wo] [kaku notamahu
old.man-GEN life today tomorrow PRT-PRT know-NEG-WO thus say
kindati-ni-mo yoku omohi-sadame-te tukahu-mature]
prince-DAT-PRT well consider-determine-TE serve-POL
'as this old man does not know whether his life (ends) today or tomorrow, (you must) conider carefully and serve (one of those) princes who say so (=that they want you).'

(192 [=(119)]) NI-linkage (*Taketori*: 20-21)

[ni san niti bakari mi-ariku-ni] [tenzin-no yosohohi si-taru
two three day about see-walk-NI nymph-GEN appearance do-PERF
on'na yama-no naka yori ide-ki-te ...]
woman mountain-GEN inside from show.up-come-TE
'as (I) walked around seeing things (on the land) for a few days, a
woman who appeared like a nymph came out of the mountain, and ...'

In (191), though the accusative WO is attached to the antecedent clause, *okina-no inoti kehu asu to-mo siranu*, 'this old man does not know whether his life (ends) today or tomorrow', this clause does not contain or even evoke any NP that can be interpreted as object of the following clause, *omohi-sadame-te tukahu-mature*, '(you must) consider carefully and serve'. Note that the complement of the predicate *omohi* 'consider' is not the contents of the preceding clause, but it is indefinite and hence not overtly realized. This analysis is supported by the fact that this predicate is combined with *sadame* 'determine'. Indeed, *omohi-sadame* is a unitary predication and its un-realized object is, judging from the context, the addressee (=Kaguyahime)'s marriage, or more precisely, which lord she should marry. Likewise, example (192) defies a relative reading, for the NI-marked clause, or any NP within it, cannot be the indirect object (or whatever) of the matrix predicate. In the clause *on'na yama-no naka yori ide-ki-te* ..., 'a woman came out of the mountain, and ...', there is no missing argument. Even if NI were analyzed as a directional argument of *ide-ki* 'come out' (which is difficult anyway, because *ide* 'show up; come out' is a verb that specifically expresses source, not goal), there would be no individuated NP interpretable as the goal of *ide-ki*. Rather, NI at best should be interpreted as marking the whole clause as

the locus or situation in which a nymph-like woman appeared. These examples have 'flat' structures, which I consider to be loose adjunction (or possibly apposition), because there does not seem to be firm syntactic dependency between the clauses such as embedding.

One very important thing about the opposition between IHRC and adjunction is that, while both types of constructions were possible with the accusative WO and the dative NI in OJ, only the IHRC-type construction was possible with the nominative GA until late OJ, and adjunction (or apposition) with GA became established only from late OJ to early MJ (Ishigaki 1955 is an extensive study of this development). The following is an example of non-IHRC GA-linkage from *Uji Shui* (12C), taken from Ishigaki (1955: 44):

(193) [Nagato Zensi to ihi-keru hito-no on'na hutari ari-keru-ga]
Nagato Zensi COMP say-EVID person-PRT woman two be-EVID-GA
[ane-ha hito-no tuma-ni.te.ari-keru]
elder.sister-TOP person-GEN wife-PRED-EVID
'a man called Nagato Zensi had two daughters, and the elder one was married'

Here, it is impossible to give a relative-like gloss to the GA-marked clause. Semantically, there is some connection between *on'na hutari* 'two women [=daughters]' in the first clause and *ane* 'elder sister' in the second, but this relationship is not syntactically encoded. Hence even if one gives a gloss like 'two daughters that a man called Nagato Zensi has' to the first clause, it does not occupy any argument position in the second clause (which is filled by *ane-ha* 'elder sister').

While IHRCs and adjunctions co-existed for WO- and NI-linkages already in OJ, Kuroda (1974-77) and Akiba (1977, 1978), based on the development of GA-linkage, propose the following diachronic scenario for the development of IHRCs into non-relative linkage generally.

(194) IHRC:

NP[Cl_1[(NP)...V]]-Po, Cl_2[(NP)...V]

(a complement of the V in Cl_2 is within Cl_1, as in (188)-(190))

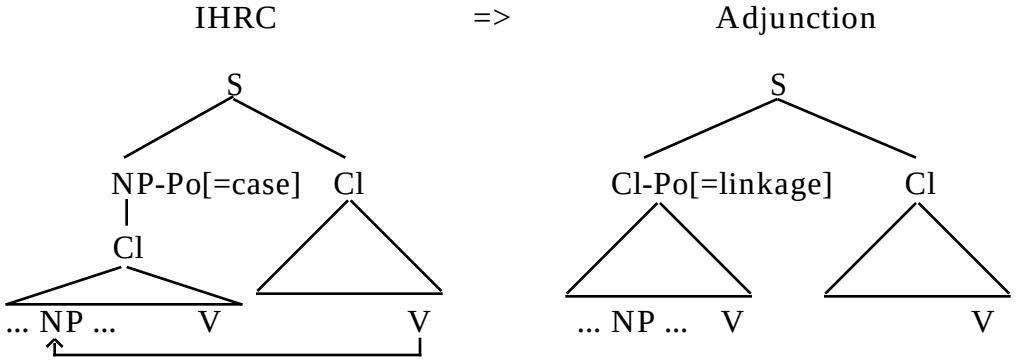
=> 'Flat' or adjoined linkage:

Cl_1[(NP)...V]-Po, Cl_2[(NP)...V]

(no NP within Cl_1 is linked to the V in Cl_2, as in (191)-(193))

See the following tree diagrams, adapted from Akiba (1977: 615-616), which illustrate the reanalysis proposed above.

(195)



Although there are some potential problems with this scenario, I will provisionally accept it in the following discussion. I will return to the implication of this change later.

Let us now look at the development of TOKORO-complements, one of whose uses includes a pattern akin to the IHRC such as (187). Interestingly, even though both case-marked nominal clauses and TOKORO-complements have an IHRC function in ModJ, they have different historical developments. Unlike case-marked nominal clauses (whether *no* is used or not) such as (185) and (188)-(190), lexicality of the nominal head TOKORO 'place; occasion' is still retained in this construction. Although IHRCs are possible structures for both TOKORO-complements and nominal clauses, it is important to notice that each of them should be seen as families of constructions, and their overlap is--significant as it is--only partial.

Having this in mind, I will examine TOKORO-complements from OJ to Pre-ModJ below. TOKORO is a native Japanese word and in OJ it is mostly used as a lexical noun (according to *Iwanami Classical Japanese Dictionary*, its earlier meaning is 'raised spot, such as grave or bed'). Example (196) from OJ is a straightforward case.

(196) (*Taketori*: 17)

miko-mo onazi tokoro-ni komori-te, ...

prince-also same TOKORO[=place]-DAT hide-TE

'Prince (Kuramoti) also hid in the same place (as his men), and ...'

TOKORO also occurs as the head of a noun-modifying (i.e. relative) construction as in (197). Here, the meaning of TOKORO is still purely locational and there seems to be no semantic shift.

(197) (*Genji*: 91)

kakure-tara-n tokoro-ni naho wi-te-ike

hide-PERF-MOD TOKORO[=place]-DAT still bring-TE-go

'still bring (me) to the place (the lady) may be hiding'

At the same time, however, TOKORO had an extended or grammaticized use already in OJ. Though a locational meaning was retained to some extent, it was used as a general-purpose complementizer which can be glossed 'state of affairs; characteristic; point'. Thus in (198), it is difficult to tell whether the TOKORO-complement is relativization or complementation.

(198) (*Genji*: 60)

en-ni konomasiki koto-wa, me.ni.tuka-nu tokoro aru-ni, ...

refined.taste-DAT like fact-TOP pleasing-NEG TOKORO be-PRT

'... that (she) (too much) liked refined taste was not pleasing, ...'

Literally, this example may be glossed as 'concerning the fact that she too much liked refined taste, there was a character that was not pleasing' (TOKORO, bearing no overt case marker, is the subject of the existential predicate *aru* 'be', which is commonly the case in OJ). Thus TOKORO in this example is generalized to allow the gloss 'character' (or possibly 'point'). In this sense, it is functioning as the head of noun complementation. Although it can also be analyzed as a head of relativization, the identificational function of the preceding clause is not strongly felt. In passing, it may also be mentioned that in *Genji*, there is an example such as (199), where TOKORO is used, perhaps via metonymic extension, as a kind of pronoun (cf. English *one*).

(199) (*Genji*: 60)

sate mata onazi koro makari-kayohi-si tokoro-ha hito-mo tati.masari
by the way same time go.up-visit-EVID TOKORO-TOP person-also person
'by the way, the one (=woman) I used to visit at the same time was wonderful as a person'

Yet as far as I could see, *Genji* does not contain an example of TOKORO-complements in which the matrix (=right-hand) predicate takes a NP inside the TOKORO-headed clause for its argument, as in (187). In OJ, whenever the pattern *NP[Cl-TOKORO]* is marked by the accusative WO, the interpretation is either relativization or complementation, not an analog of IHRC. Examples are given below, from first several books of *Genji*.

(200) (*Genji*: 72)
nayamasiki-ni usi-nagara hiki-ire-tu-bekara-n tokoro-wo (motome yo)
tired-PRT cow-NAGARA pull-bring.in-PERF-MOD-MOD TOKORO-ACC look.for PRT
'since (I) am tired, (look for) the place that (we) may be able to enter while bringing in the cow-carriage [i.e. without getting off from the cow-carriage]'
[N.B. This is an elliptical sentence in conversation, and *motome yo* is augmented as the matrix predicate, after the editor's note.]

(201) (*Genji*: 180)
obosaren tokoro-wo-mo habakara-zu, uti-ide-haberi-nuru.
think TOKORO-ACC-PRT consider-NEG PRE-come-POL-PERF

'Not considering / being afraid of (your) thinking (that I am rude[?]), (I) have come here.'

(202) (*Genji*: 292)

sode kahesu tokoro-wo hito-wore kesiki.bakari mahi-tamaheru-ni, ...
sleeve wave TOKORO-ACC one-CLF just.a.little dance-POL-NI
'(Genji) danced shortly a scene in which (he) waved sleeves, and ...'

In these examples, the matrix predicates, *motome* 'look for' (though this is not expressed in the text) in (200), *habakara* 'consider / be afraid of' in (201), and *mahi* 'dance' in (202), all take the whole lower clauses headed by TOKORO for their complements. No NP within the TOKORO-complement is accessed by the matrix predicate. Examples (200) and (201) are instances of relativization. The former is head-external, with TOKORO, glossed 'place' as head, while the latter is headless, and TOKORO may indeed be glossed 'what', resulting in the translation, 'Not considering / being afraid of what (you) think'. Example (202) represents noun complementation. Here, TOKORO does not exactly mean locus, and *sode kahesu* 'wave sleeves' expresses the content of TOKORO, here translated as 'scene'.

At this point, it must be pointed out that in OJ at least, the overwhelming majority of TOKORO-complements stand either in an oblique or subject relation to the matrix predicate. As such, they are most frequently marked by the dative *ni* (either directional or locative), or by the directional *he*.[4] The NP[Cl-TOKORO]-WO pattern represents only a small fraction of the whole set of TOKORO-complements. This is very natural in view of the fact that TOKORO has a locational meaning as its core sense, and is most compatible with markers for direction and location. When the meaning of

TOKORO is generalized and used as a kind of complementizer, the complex NP can stand as a subject. Example (197) we saw earlier is a straightforward example of dative-marked TOKORO. Example (203) also illustrates a locational use of TOKORO in the relative clause construction, but TOKORO here can be interpreted as referring to a situation.

(203) (*Genji*: 88)

hitome-mo shigeka-ran tokoro-ni bin.naki hurumahi ya arahare-n
people's.eyes-PRT frequent-MOD TOKORO-DAT undesirable behavior PRT known-MOD
'at the place where people's eyes are all around, (my) undesirable (=ill-mannered) behavior will be known'

The use of TOKORO here may be comparable to the English *where*: even if one removes 'at the place' from the above translation and starts it with 'where people's eyes are all around,' the resulting sentence will be as good.

To summarize, in OJ, while TOKORO was grammaticized as a general-purpose complementizer, the matrix predicate did not take any NP inside the lower clause for its complement, as nominal clauses given in (188)-(190) do.[5]

This situation starts to change in MJ. In *Heike*, the majority of TOKORO-complements are also those standing in either subject or oblique relation to the matrix predicate. TOKORO-complements marked DAT account for roughly half of all instances. However, of those complements marked ACC, there are a few instances that can be interpreted as an analog of IHRC like (187). The following is an unproblematic case.

(204) (*Heike*: 290)

Inohayata tuto yori oturu tokoro-wo tot-te-osahe ...
Inohayata (onomatopoeia) come.close fall.down TOKORO-ACC take-TE-hold
'Inohayata came close (to the monster), and captured (it) as (it) fell down, and ...'

In this example, the object of the matrix predicate *tot-te-osahe* 'capture' cannot be the lower clause as a whole, because the former is a kinetic action and its object is normally a sentient individual, rather than a place. Hence (204) can be paraphrased as '..., and captured (it) which had fallen down'. Of course there are other types of TOKORO-complements, including those bearing the accusative *wo*, that must be analyzed as either relativization or noun complementation. One problem in determining whether IHRC-like patterns were established in TOKORO-complements comes from the existence of textual variants. Sometimes, the edited versions exhibit crucial differences from our viewpoint. For example, though (204) is found in different editions, some TOKORO-complements are marked DAT in one edition while they are marked ACC in another. The following is one such example, which I quote in some length.

(205) (*Heike*: 308)
sono noti Tohi, Tutiya, Wokazaki-wo hazime.to.si.te sanbyaku-yo-ki
after that Tohi, Tutiya, Wokazaki-PRT following 300-odd-CLF
Isibasiyama-ni tatekomot-te-sahurahu *tokoro-wo* Kagetika mikata-ni
Mt. Isibasi-DAT entrenched-TE-POL TOKORO-ACC Kagetika ally-DAT
kokorozasi-wo zonzuru mono-domo issen-yo-ki-wo inzotu.si-te
vow-ACC have man-pl 1000-odd-CLF-ACC carry-TE

osiyose-te sanzanni seme-sahurahe-ba, ...
come.over-TE vigorously attack-POL-BA
'after that, following Tohi, Tutiya, and Wokazaki, 300-odd warriors got entrenched in Mt. Isibasi[-TOKORO-ACC], and the 1000-odd men who have vowed to Kagetika and his allies (I) carried, and came over and vigorously attacked (those entrenched in Mt. Isibasi), and then ...'

If the TOKORO-complement here is taken to be an analog of IHRC, what is relevant is that the long string that stands between the verb *seme* 'attack' and *tokoro-wo* is cosubordinated to *seme-sahurahe*. Thus the barebone structure of (205) under this interpretation is:

(206) sanbyaku-yo-ki Isibasiyama-ni tatekomot-te-sahurahu *tokoro-wo*
300-odd-CLF Mt. Isibasi-DAT entrenched-TE-POL TOKORO-ACC
sanzanni seme-sahurahe-ba, ...
vigorously attack-POL-BA
'(I and my men) vigorously attacked the 300-odd warriors who got entrenched in Mt. Isibasi'

In a variant of this example, from Iwanami (ed. by Ichinosuke Takagi et al.), the TOKORO-complement is marked DAT. It is therefore the directional complement of *inzotu.si-te osiyose-te* 'carried and came over', which is thought to be peripheral in the analysis of (206). See the following.

(207) (*Heike*: Iwanami ed.: 345)
sanbyaku-yo-ki Isibasiyama-ni tategomot-te-sahurahu *tokoro-ni*
300-odd-CLF Isibasi-DAT entrenched-TE-POL TOKORO-DAT

issen-yo-ki-wo inzotu.si-te osiyose-te

1000-odd-CLF-ACC carry-TE come.over-TE

'(I) carried 1000-odd warriors and came up to where 300-odd warriors got entrenched in Mt. Isibasi'

Thus it may be claimed that in *Heike*, the use of TOKORO-complements as an analog of IHRC (i.e. with the matrix predicate taking a NP inside the complement clause) was not firmly established. Besides the rarity and shakiness of examples, there is some fuzziness in interpretation. Even in (206), though the object of *seme* 'attacked' is interpreted as the entrenched warriors, the verb can also take a locus for its object, meaning 'attacked where warriors got entrenched'. In this sense, TOKORO-complements should not be analyzed as core juncture, which is defined by syntactically-encoded argument sharing (such as in Equi). My earlier rejection of the term *Counter-Equi* is now clear (cf. footnote 2): it is not a syntactically conditioned deletion, but the complement NP of the matrix predicate is identified by the combination of lexical semantic information and pragmatic inferences. Even though the dependency of the TOKORO-bearing clause to the matrix clause involves penetration into the former, the construction is still subordination at the clausal layer.

In late MJ, TOKORO-complements that allow an IHRC-like interpretation seem to have been established as a construction in their own right. See the following examples.

(208) (*Otogi*: 199)

Syuten Douzi-ni sake-wo mori, wehi-te husi-taru tokoro-wo mi-te,

Syuten Douzi-DAT liquor-ACC give drunk-TE sleep-PERF TOKORO-ACC see-TE

omohi.no.mama.ni uti-tamahe

with.ease kill-POL

'(you) give drink to Syuten Douzi, and watching (him) as (he) is drunk and asleep, kill (him) easily,' or '... watch and kill (him), who is drunk and asleep'

(209) (*Isopo*: 453)

aru hito asa-no tane-o maku tokoro-o mi-te, tubame kore-wo kanasimi-ou-ta

certain person hemp-GEN seed-ACC sow TOKORO-ACC see-TE sparrow this-ACC lament-meet-PAST

'as a man sowed hemp seeds, sparrows saw it and lamented to each other,' or 'seeing a man who sowed hemp seeds, sparrows lamented it to each other'

(210) (*Isopo*: 490)

karasu ... asi-ni kakat-te tobu koto-wo e-nan-da tokoro-wo

crow foot-DAT catch-TE fly thing ACC can-NEG-PRED TOKORO-ACC

waranbe-domo sono mama yot-te tukamae-ta

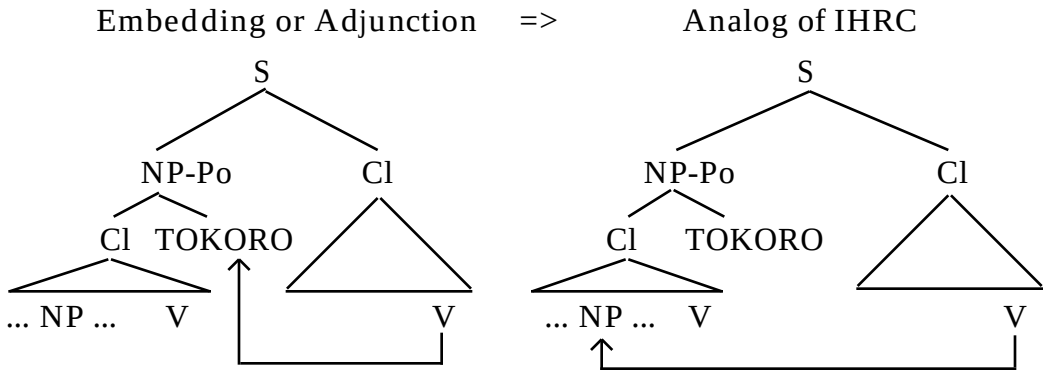
kid-pl it as.is come-TE catch-PAST

'as the crow's foot was trapped and could not fly, kids came along and caught it as it was,' or 'kids came came along and caught the crow as it was, whose foot was trapped and could not fly'

In the first example, the object of *uti* 'kill' is *Syuten Douzi*, but this predicate is not adjacent to the TOKORO-complement, and it comes after *mi-te* 'seeing, watching'. This is a nice example of the pragmatic nature of the connection between the matrix predicate and its complement. In this sense, (208) is only half-baked as an analog of IHRC. Example (209) is interesting in the sense that what sparrows see can be either the whole scene or *aru hito* 'a man'. In contrast, example (210) is properly an instance of IHRC-like linkage, because the object of *tukamae* 'catch' can only be *karasu* 'crow'. Notice its similarity to (187), which also has the matrix predicate *tukamae*. From these examples, it seems correct to say that IHRC-like TOKORO complements were in use in late MJ (Inoue, Akira 1968).

The development of TOKORO-complements examined so far is opposite from the change from IHRCs to adjoined linkage with nominal clauses marked by GA (and by extension by WO and NI) given in (195). A tree representation is given below.

(211)

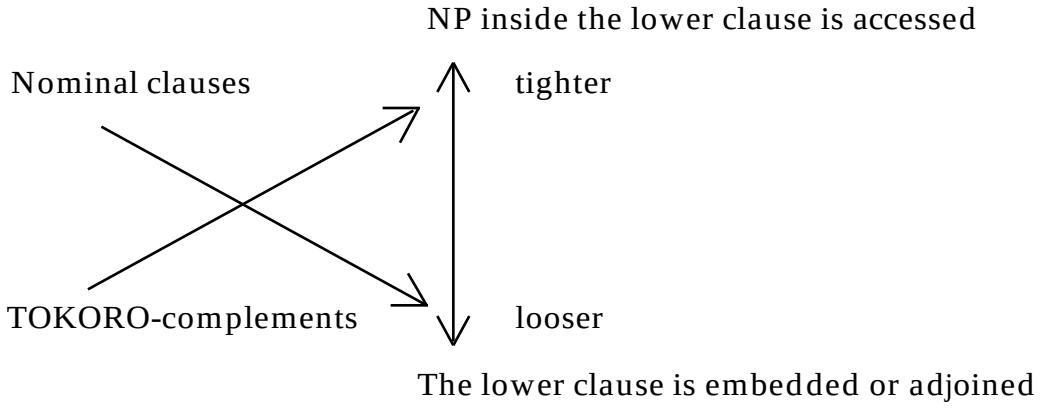


Here embedding and adjunction are combined, because in either case the matrix predicate is related to the TOKORO-complement as a whole. The difference lies in whether the complement clause functions as an argument

of the matrix predicate (including directional argument) or as an adverbial clause that describes circumstances for the main clause.

Now the crucial problem is that if both (195) and (211) correctly capture the historical change with IHRCs, then nominal clauses and TOKORO-complements show a discrepancy in terms of the change in clause integration. In the former, assuming that the penetration into the lower clause in search of a semantic argument is an index of advanced clause integration, (195) represents loosening of linkage, because 'flat' or adjoined linkage emerged from head-internal relativization. On the other hand, the change with TOKORO-complements as in (211) represents tightening of linkage for the same reason, i.e. a coreferential relation, even though pragmatically bridged, is an indication of clause integration. This situation is summarized in the following diagram.

(212)



This is not to say, importantly, that nominal clauses ceased to encode head-internal relativization and TOKORO-complements no longer encoded relativization and noun complementation in MJ. Rather, the changes with them are cases of the rise of polyfunctionality, i.e. expansion of functional domains.

In the remainder of this chapter, I will discuss how to make sense of these apparently contradictory changes from this point of view.

To start with, for TOKORO-complements, the change certainly fits our hypothesis about the diachrony of clause linkage. Although the IHRC-analog of TOKORO-complements remains clausal subordination, the *interlacing* of clauses (Lehmann's 1988 term, cf. 1.2) is an unmistakable mode of advanced clause integration. That this type of construction is not a core-level juncture is exemplified by the late MJ example in (213). It does not satisfy the definition of core juncture, i.e. the syntactically required argument sharing. Rather, the integration between the lower and higher clauses are pragmatic in nature (to give the context, the citation is longer):

(213) (*Otogi*: 205)

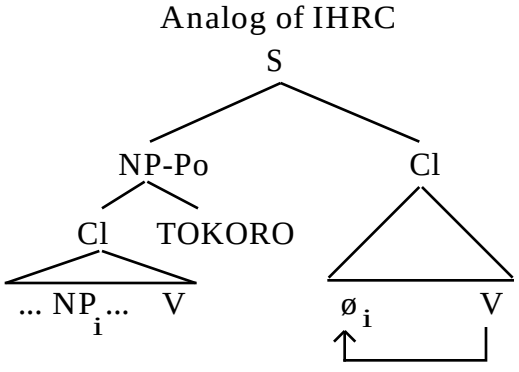
Ibaraki yagate kokorohe-te, on'na-no sugata-ni sama-wo kahe,
Ibaraki then know-TE woman-GEN frame-DAT looks-ACC change
Tuna-ga atari-ni tati.yori, motodori muzu.to tori,
Tuna-PRT side-DAT come topknot firmly take
tukan-de ko-n.to.se.si tokoro-wo, Tuna kono yosi miru-yori-mo,
grab-TE come-VOL TOKORO-ACC Tuna this happening see-PRT-PRT
san zyaku go sun suruti.to nuki, Ibaraki-ga kataude-wo
3 foot 5 inch quickly pull.out Ibaraki-PRT arm-ACC
mizu.mo.tamara.zu uti otosu.
in.a.flash chop down
'Ibaraki (=a monster) then knew (what to do), and transformed itself into a woman, and came close to Tuna (=a famed warrior), and tried to grab his topknot firmly and take him away-TOKORO-ACC, Tuna,

seeing all this, quickly pulled out his three-and-five sword, and chopped off Ibaraki's arm in a flash.'

Here, the relevant portion may be glossed, 'Tuna chopped off Ibaraki's arm, who tried to grab his (=Tuna's) topknot and take him away,' or 'As Ibaraki tried to grab his (=Tuna's) topknot and take him away, Tuna chopped off his (=Ibaraki's) arm.' In either way, a relative-like interpretation is possible, but in the Japanese original, the object of the matrix predicate *uti-otosu* 'chop down/off', namely *Ibaraki-ga kataude* 'Ibaraki's arm', is indeed outside the TOKORO-complement. In this sense, though an IHRC-like interpretation is possible in many cases, it is confirmed that, along with the foregoing examples, the interlacing between the clauses is pragmatic.

This point suggests that the change depicted in (211) may not really be a *syntactic* restructuring. If the possibility for the matrix predicate to access a NP internal to the TOKORO-complement is pragmatically motivated, the advancement of interlacing is not purely a matter of grammatical structures. From this point of view, example (213) may evidence the emergence of pragmatically controlled zero anaphor in the matrix predicate, as in (214).

(214)



Judging from the evidence given so far, this analysis seems to be more adequate than the scenario in (211). Thus the change with TOKORO-complements is indeed an establishment of a closer pragmatic tie between the matrix predicate and the contents of the complement clause. The change in TOKORO-complements is still seen as an advancement of clause integration, but it is again strengthening of a pragmatic connection, as we saw in relation to 'switch reference' in 2.3. In OJ, the matrix V had an effect on the situation as a whole, hence the complementation reading. But later in MJ (esp. late MJ), the matrix V came to be connected not only to the situation as a whole, but also to some salient entity within that situation. Thus the semantic structure of the TOKORO-construction is such that the matrix V has some effect on the situation depicted in the TOKORO-marked clause, and the nature of this relationship is determined by the semantics of the matrix V and the speaker's pragmatic inferences. Conceptually, this change is understood in such a way that the link between the matrix predicate and the situation depicted in the complement clause became reinforced to the effect of allowing the link between the matrix predicate and some entity within the complement clause. In some sense, this is a metonymic extension, because an entity within a scene is picked up instead of the whole. Since, as remarked earlier, non-IHRC uses did not become obsolete in later period, it is concluded that the change is in essence a rise of polyfunctionality. As such, the following generalization is obtained from the data on TOKORO-complements.

(215) In the rise of polyfunctionality in a grammatical construction, the strengthening of a pragmatic tie among its elements is an important factor for restructuring of the semantics of construction, e.g. the way participants are encoded.

In the present case, the rise of IHRC-like pattern (i.e. the possibility of a matrix predicate that takes an individual, not a proposition, for its complement) is a result of the strengthening of semantic/pragmatic integration between the linked clauses, namely the establishment of coreferential relation across clauses. The linking between a NP within the TOKORO-complement and the matrix predicate is not syntactic, but participant continuity can be seen as one aspect of the tightening of claue linkage.

Turning to the change with IHRCs, if the scenario in (215) is correct, it seems to present a strong counterexample to the diachronic tendency in clause linkage that I have proposed and defended in this study. That is, the change from IHRCs to coordination (or adjunction) appears to exemplify loosening of tightly linked clauses into a 'flat' linkage. In the IHRC construction, some element in the lower, case-marked clause is linked to an argument slot of the matrix predicate, and in this sense the linkage involves clause-internal syntax. On the other hand, the non-relative linkage does not involve any argument encoding across clauses, and the semantic relation is best rendered with 'and' or 'but'. Thus, the rise of coordinate or adjoined linkage from IHRCs can be seen as a case of weakening, rather than advancing, clause integration.

However, I find a few problems with this scenario, which should be considered if the loosening of linkage is taken to be real. First, the scenario is historically attested only with GA. According to Ishigaki (1955), GA was not used for adjoined, 'flat' linkage until late OJ (though Ishigaki does not use the term IHRC), but this is not the case with WO and NI, because with these markers, IHRCs and adjoined linkage coexisted in OJ. Thus the proposed scenario for the change with nominal clauses in general, as given in (195), is a

hypothesis based on an extrapolation from the attested change with GA-linkage. Consequently, it is arguable that the apparent loosening of linkage only holds for GA-linkage. Even if it is correct to analyze the rise of adjoining linkage with GA as loosening of linkage, it may be a special case with GA, not a general tendency with nominal clauses.

This point indeed seems to have support when we come to consider the second problem with the scenario in (195). Upon a closer look, the status of GA as a nominative case marker is unstable in OJ and MJ. Most commonly, the subject was either unrealized or zero-marked in these periods (otherwise, it was marked TOP without any case marker[6]). This is not the case for WO and NI, which occur frequently as case markers in OJ texts. In *Taketori*, for example, there is no difficulty in finding an example of these markers, but as far as I could see, there is no example of GA used as a subject marker. When it is attached to a NP, its function is to mark some kind of associative relation, along with *no* (usually glossed GEN), as in *wa-ga kata*, 1sg-GA(=associative) place/way, 'my home; here'. In OJ (especially early OJ), a great majority of the occurrence of *ga* has this function.

Thus, the argument goes, what is special about GA is that its status as a case marker (namely NOM) was established later than other case markers such as WO and NI. The rise of non-IHRC linkage with GA can be seen as triggered by the establishment of its case-marking function, and consequently may not represent a general tendency of the grammaticization of clause linkage. On the other hand, with TOKORO-complements, because the emergence of IHRC analogs was in MJ, there is no doubt about the status of case markers as such. My conclusion is, tentative as it is, that the change with TOKORO-complements represents a general tendency of the diachrony of clause linkage, while that with nominal clauses has only limited relevance to

our understanding of general tendency, in the sense that the change with GA may well be considered to be a special case in the paradigm of case markers. In any event, however, the change with GA presents an interesting problem about our conception of what constitute parameters of clause integration.[7]

In this chapter, to summarize, we have analyzed two nominal head linkage constructions, namely TOKORO-complements and case-marked nominal clauses. In the former, in addition to ordinary embedding, analogs of IHRCs emerged in MJ, which indicates advancing clause integration in the sense that the matrix predicate takes a NP within the complement clause for its argument, hence representing interlacing between the linked clauses. It was shown that this change is due to the strengthening of a tie between clauses that is pragmatically motivated. On the other hand, with nominal clauses (which in OJ and MJ was marked by noun-modifying desinence), GA-linkage seems to have loosened in late OJ and MJ in the sense that adjoined or appositional linkage developed out of IHRCs. Although there still are indeterminacies that must be further examined, it was argued that this change is particular to GA, and is not generalizable to the whole class of nominal clauses. The general tendency toward higher clause integration proposed in the theory part is supported for TOKORO-complements, but GA-linkage offers a counterexample, though its relevance seems restricted.

Notes to 2.4

1. Here, I assume that the basic function of relative clauses is defined in terms of lambda calculus: to identify the denotatum of a relative construction as an individual which satisfies the ascriptions given in the relative clause.

2. Example (187) used to be called Counter-Equi because in the framework of classical transformational grammar, it was assumed that the upper clause had a lexical object in the deep structure and that it was Equi-deleted, controlled by a NP in the lower clause. See the following representation:

(N-1) [Taroo$_i$-ga suwaru] tokoro-o ø$_i$ tukamae-ta.
Taroo-NOM sit-PAST TOKORO-ACC catch-PAST
'(I) caught Taroo as (he) would sit down.'

However, I do not adopt the term Counter-Equi, because this construction is in fact not an Equi-like pattern in that the control relation is not uniquely determined. In (N-2), the object of the matrix predicate *tukamaeta*, 'catch' can be either *neko*, 'cat' or *nezumi*, 'rat'.

(N-2) [Neko-ga nezumi-o oikake-te.iru] tokoro-o tukamae-ta.
cat-NOM rat-ACC chase-STAT TOKORO-ACC catch-PAST
'(I) caught Taroo as (he) would sit down.'

One could talk about control and deletion, but the nature of argument encoding in TOKORO-complements is clearly different from that of ordinary Equi constructions. In the latter, the control relation is uniquely determined

by the lexical properties of the matrix predicate, but this does not seem to be the case in the former.

3. In OJ, for example, the following patterns were normal (*warahi*= 'laugh', and *keri*=EVID/PERF):

(N-3) a. ... V/FINAL (e.g. ... *warahi-keri*)

b. ... PRT ... V/N-MODIFYING (e.g. ... *zo* ... *warahi-keru*)

In (N-3a), *warahi-keri* is in the proper final form, and in (N-3b), the desinence is in the noun-modifying form, conditioned by the preceding particle *zo*. This sort of alternation was very rigidly maintained in OJ. But as the control of this morphological alternation declined, V/N-MODIFYING became natural as a sentence-final form of verbals in late MJ and Pre-ModJ. Since noun-modifying ending, which had been the desinence in the complement clause of IHRCs, became final ending as well, it is speculated that the necessity for independently marking the nominality of a complement clause increased. The use of nominalizer *no* is considered to be one way to achieve this function.

4. Also, the locative/instrumental *de* was used in conjunction with TOKORO. Although this issue does not relate to the problem of reference tracking, the use of *tokoro-de* as a weak concessive linkage marker (illustrated in (103) in 2.2) seems to have developed out of its locational use.

5. In ModJ as well, TOKORO is used in the following construction as a general complementizer:

(N-4) Anata-ga warat-te.iru tokoro-ga mi-tai.

2sg-NOM smile-STAT TOKORO-NOM see-wish

'(I) would to like to see you smile,' lit. '(I) would like to see the locus/ occasion that you are smiling.'

6. Case markers (i.e. morphemes that encode syntactic relations) and pragmatic particles such as *wa* (=TOP; transcribed *ha* for classical Japanese) do not cooccur in subject NPs (hence **NP-ga-wa/ha*). Functional explanations may well be given to this restriction, but here, I only mention it as a fact of Japanese grammar that is true at any period. The point being made here is that in OJ, GA occurring next to subject NP is very rare and its status as a case marker is not stable.

7. In passing, I may mention that only GA survived as a 'flat' linkage marker into ModJ. WO and NI are not used in ModJ as linkage markers. This is why GA was taken up as a marker of the verbal head linkage in 2.2.

2.5. Nuclear junctures

This type of linkage is crucial in the grammar of Japanese, since many important grammatical functions (aspects, directionals, honorifics, etc.) are realized by complex predicates. The template (216) is quite commonly instantiated in the spoken register as in (217):

(216) Setting / Lexical NP + Complex Predicate + Pragmatic Particle(s)

(217) Asita kopii-si-te-oi-te-age-masu yo.
tomorrow copy-do-TE-put-TE-give-POL PRT
'(I)'ll make a copy (of it) (for you) tomorrow.'
[In ordinary conversation, *si-te-oi-te* often becomes *si-toi-te*]

Setting can be a spatio-temporal adverbial or a lengthy and highly expressive connective. In (217), *asita* 'tomorrow' expresses a setting. The string *kopii-si-te-oi-te-age-masu* forms a complex predicate, in which three verbs plus one auxiliary are stacked together. The second verb *oi*, provisionally glossed 'put' has an aspectual function, which should better be paraphrased as 'put / keep / prepare something in anticipation of some future condition'. The third verb *age* 'give' is indeed something close to a benefactive suffix, which can be glossed 'do something (normally a favor) for somebody' (for details, see below). The exact formulation of the internal structure of the complex predicate is not attempted here, but we can at least draw a distinction between verbs and auxiliaries: verbs can form predication by themselves, while auxiliaries cannot. Causatives and passives, as well as the politeness auxiliary *masu*, can also be seen as nuclear junctures, but I do not take this position in

this study. The primary reason is simply that these markers do not stand alone as a main verb. In the following, I will concentrate on the juncture of verbs only.[1] Nuclear juncture under this definition can be realized by either V/-Link or TE. See the following examples:

(218) V/LINK-linkage

Taroo-wa Hanako-o sasi-korosi-ta.

Taroo-TOP Hanako-ACC stab/LINK-kill-PAST

'Taroo stabbed Hanako to death,' lit. 'Taroo stab-killed Hanako.'

(219) TE-linkage

Taroo-wa miti-ni kuruma-o tome-te-oi-ta.

Taroo-TOP street-DAT car-ACC park-TE-put-PAST

'Taroo kept the car parked on the street,' lit. 'Taroo park-put the car on the street.'

Note that in both of these examples all the arguments are shared, as well as such operators as tense.

In some cases, nuclear junctures involve *versatile verbs* (cf. Matisoff 1969), that is, basically a closed set of verbs which can function both as a main verb (when used independently) and as a semi-auxiliary verb (when combined with other verbs). According to Matisoff (1969: 71) 'Lahu versatile verbs serve to provide in a uniform surface way the sort of information that in the surface grammar of languages like English is handled by a formally disparate array of subordinating devices: complementary infinitive, *-ing* complements, modal auxiliaries, adverbs, prepositional phrases, even whole subordinate clauses.' Versatile verbs realize various functional domains, but

in Japanese they most commonly encode Aktionsart. Structurally, in the V_1+V_2 juncture, versatile verbs occupy the second slot in Japanese (unlike, for example, in Lahu, where either slot can be filled by the head verb).[2] See the following examples that display advancing grammaticization (the linkage marker here is TE):

(220) Heya-ni iru
room-DAT stay
'(I) am in the room.'

(221) Isu-ni suwat-te-iru
chair-DAT sit-TE-stay
'(I) am sitting on a chair.'

(222) Sake-o yame-te.iru
alcohol-ACC stop-STAT
'(I) am abstaining from alcohol.'

In (220), *iru* 'stay' is the predicate of the whole sentence, and there is nothing more. In (221), the predicate is composed of serialized verbs linked by TE. Here *iru* starts to be grammaticized into a stative marker, but its locational meaning 'stay' is retained. Strictly speaking, since *suwaru* is glossed 'sit down', *suwat-te-iru* literally means 'stay in the state of having sat down'. But in (222), the first and semantically main verb *yame* 'stop' (citation form *yameru*) is not a locational verb, and *iru* is truly functioning as an aspectual marker (hence the gloss STAT for *te.iru*). Note the oddness of the literal translation, 'stop-stay alcohol.' One crucial difference here, which is partly

observed in (222), is that one's 'staying' is extended from a spatial to a temporal domain.

Since linking devices for nuclear junctures are exhausted by simply giving TE and V/LINK, below I will give a list of versatile verbs in ModJ that fit the above definition, with brief comments on their syntax and semantics. It will be noted that some verbs (e.g. *iku* 'go' and *kuru* 'come') exhibit semantic extensions that can be found in other, even typologically different, languages.[3] The linking patterns are indicated in parentheses (TE and V/LINK tend to be interchangeable for non-auxiliary uses, but when the verb becomes grammaticized, they are not):

(223) AGERU: 'offer' (TE) > 'X do(es) the favor of doing something to Y', or simply V-BEN, where X (marked NOM) is closer to the ego than Y (marked DAT). When the recipient of favor (=Y) is at the same time the patient of the activity, its case is determined by the verb that denotes the main activity, not by AGERU; *Haha-ga tonari-no ko-to ason-de age-ta*, mother-NOM neighbor-GEN kid-WITH play-TE-give 'Mother did the favor of playing with the neighbor's kid'; AGERU also has the meaning 'raise', and in its versatile use (linking device V/LINK) means 'finish up (with satisfaction)', *kaki-ageru*, write-raise 'write up';

ARU: 'be' (TE) > 'have put X in the state of', *otya-o yooi.si-te-aru*, tea-ACC prepare-TE-be '(I)'ve prepared the tea'; instead of the ACC *o*, NOM *ga* is also possible, and hence *te.aru* is sometimes called intransitivizer;

AU: 'meet; face' (V/LINK) > reciprocal, *naguri-au*, hit-meet 'hit each other'; Syntacticians devoted to the study of anaphors always take up *otagai*, a lexical noun normally translated 'each other', for the analysis of reciprocals in Japanese, but the fact is that the language has an alternative way of encoding the same function using complex predication. When the activity is inherently reciprocal, the synthetic (=lexical) version is fine, but the analytic (=syntactic) version is not (the citation form of *daki* and *dai* is *daku*):[4]

(a) Taroo-to Hanako-wa daki-at-ta.
Taroo-AND Hanako-TOP hold-meet-PAST
'Taroo and Hanako held (=embraced) each other.'

(b) ??Taroo-to Hanako-wa otagai-o dai-ta.
Taroo-AND Hanako-TOP each.other-ACC hold-PAST
(The intended reading is the same as (a)).

DASU: 'put out' (V/LINK) > 'start to do', *kaki-dasu*, write-put.out 'start to write';

IKU: 'go' (TE or V/LINK) > 'be in the transition of'; *oi-te-iku*, old-TE-go 'grow old'; *atatakaku-nat-te-iku*, warm-become-TE-go 'get warmer'; *horobi-iku*, perish-go 'die out' (normally *horibi-yuku*, for stylistic reason, that is, *yuku* is the classical form of *iku*, and nuclear juncture by V/LINK-linkage is generally felt to be uncolloquial);

IRU 'be; stay' (TE) > 'be in the state of', or STAT, *kusat-te-iru*, rot-TE-stay 'be rotten' (in Japanese, *kusat* (citation form *kusaru*) is a punctual verb, which should be glossed 'go rotten' more exactly);

ITADAKU: polite form of MORAU;

KAKERU: 'hang (over)' (Vt) (V/LINK) > 'be in the early stage of'; *yomi-kakeru*, read-hang.over 'have just started to read'; Its simplex counterpart, KAKARU 'hang (over)' (Vi) is also used as a semi-auxiliary when the main verb is intransitive;

KANERU: 'hold two (or more) positions at the same time' (V/LINK) > 'be unable to do something'; *kotae-kaneru*, answer-do.both 'be unable to answer'; Since there is a large gap between the lexical meaning of KANERU and its semi-auxiliary meaning, it would seem interesting to look into its path of grammaticization. On the other hand, it is possible that, with examples of KANERU in the semi-auxiliary sense already attested in early OJ, the two uses of this verb may reflect two different lexical entries;

KIRU: 'cut' (V/LINK) > 'finish doing something (after serious efforts)'; *yomi-kiru*, read-cut 'finish reading';

KOMU: 'get into' (V/LINK) > 'get involved in; promote', *yomi-komu*, read-get.into 'read in depth'; *hie-komu*, cold-get.into 'become truly cold'; KOMU is no longer used as a main verb, though its causative counterpart, KOMERU 'put into' is;

KUDASARU: polite form of KURERU;

KURERU: 'give' (TE) > 'Y do(es) the favor of doing something to X', where X (marked DAT) is closer to the ego than Y (marked NOM). When the recipient of favor (=X) is at the same time the patient of the activity, its case is determined by the verb that denotes the main activity, not by KURERU. The V-TE-KURERU pattern may also be glossed V-BEN (cf. AGERU); *Tomodati-ga watasi-o hagemasi-te-kure-ta*, friend-NOM I-ACC encourage-TE-give-PAST 'My friend did the favor of encouraging me';

KURU: 'come' (TE or V/LINK?) > 'be in the transition of' (cf. IKU, which differs from KURU with respect to the encoding of view-point), *hayat-te-kuru*, fashionable-TE-come 'become fashionable; come into fashion'; V/LINK-linkage sounds archaic and I find it very hard to make up a natural example;

MAKURU: 'roll up' (Vt) (V/LINK) > 'do something energetically (and at times repetitively)'; *rokku-o kiki-makuru*, rock-ACC listen-roll.up 'listen to the rock music like crazy';

MIRU: 'see' (TE) > 'try to do'; *tabe-te-miru*, eat-TE-see 'try to eat, have a bite';

MORAU: 'receive' (TE) > 'X receive(s) the favor of doing something from Y', where X (marked NOM) is closer to the ego than Y (marked

DAT). When the recipient of favor (=X) is not identical with the patient of the activity, its case is determined by the verb that denotes the main activity, not by MORAU. Thus it may be glossed V-BEN, rather than V-TE-MORAU; *Titi-ga isya-ni mi-te-morat-ta*, father-NOM doctor-DAT see-TE-receive-PAST 'Father$_i$ received the doctor's favor of seeing (him$_i$)';

OKU: 'put' (TE) > 'do something with some purpose in mind, or as a preparation for something'; *yon-de-oku*, read-TE-put 'read something in preparation for something';

SASIAGERU: polite form of AGERU;

SIMAU: 'put/keep (in the right place)' (TE) > 'get something done', or simply PERF; *yon-de-simau*, read-TE-keep.in.place 'have just read something'; Ono (1989ms) extensively deals with cognitive motivations for the versatile uses of OKU and SIMAU;

SOKONAU/SOKONERU (possibly doublets): 'lose; damage' > 'fail to'; *kekkon.si-sokonau/sokoneru*, marry-lose 'fail to marry,' i.e. 'miss the right time for marriage'; SOBIRERU is also used in the same context, though it is a different lexical item from SOKONAU/SOKONERU. Like KOMU, SOBIRERU is not used as a main verb. The pre-grammaticized meaning of SOBIRERU is uncertain;

TUKERU: 'put on; attach' (V/LINK) > habitual, *iki-tukeru*, go-attach 'frequent' (Vt);

YARU: vulgar form of AGERU.

The type of dependency in nuclear junctures is not easy to determine. The reason is simple: nuclear operators such as aspects and directionals are themselves realized by the complex predication with TE- or V/LINK-linkage, not by affixes. As such, it is by definition difficult to perform a syntactic test for the possibility of the occurrence and dependence of nuclear operators. At present, it is perhaps safest to consider non-auxiliary nuclear junctures such as (218)-(219) to be coordination. However, this does not hold for semi-auxiliary uses of versatile verbs, because we here find the problem of *valency mismatch*.[5] For example, *yame-te-iru* 'stop-TE-stay' in (222) is a combination of Vt and Vi, and *nobi-kit* 'grow-cut' in (224) is that of Vi and Vt:

(224) Ki-no eda-ga nobi-kit-ta.
tree-GEN branch-NOM grow-cut-PAST
'The tree's branches have fully grown out.'

In this example there is no NP that fits the object slot of *kit* 'cut' (citation form *kiru*). Thus it is impossible to consider it to be coordination. For those predicates that have paired simplex (Vi) vs. causative (Vt) forms, e.g. KAKARU (Vi) vs. KAKERU (Vt) (both 'hang over'), it is always the causative verb that allows valency mismatch. The simplex one, on the other hand, does not allow such a mismatch. In (225), the first example shows that the simplex verb does not combine with Vt while the causative one does to modify its Aktionsart. The second example shows that both simplex and

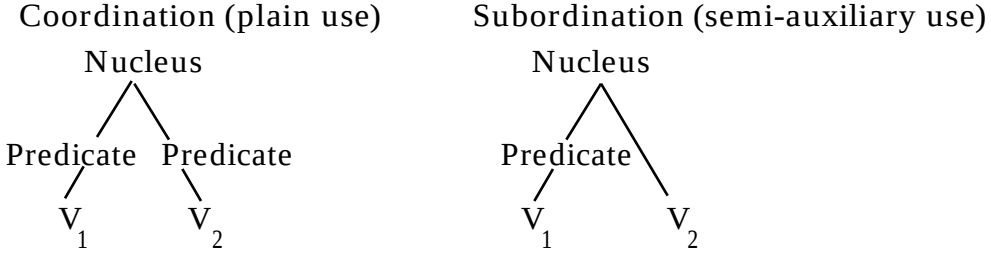
causative verbs can be put after Vi even though there is valency mismatch in the latter case:

(225) (a) Taroo-ga hon-o yomi-*kakaru / kakeru-to, ... [Vt-*Vi / Vt]
Taroo-NOM book-ACC read-hang.over-TO
'Taroo (had) barely started to read the book, and then ...'

(b) Hune-ga sizumi-kakaru / kakeru-to, ... [Vi-Vi / Vt]
ship-NOM sink-hang.over-TO
'The ship (had) barely started to sink, and then ...'

I propose, provisionally, that linkage involving valency mismatch may be analyzed as an instance of nuclear subordination. Formal treatments aside, it seems fitting to see Vi+Vt linkage in such a way that Vt is affecting the *modi essendi* of Vi rather than any 'missing' object NP. If this observation is valid, then the plain and auxiliary uses of versatile verbs can be differentiated in terms of the type of nexus, namely coordination or cosubordination vs. subordination. This point can be schematized as in (226). In the plain use, both verbs have the status of the predicate, i.e. determine the argument encoding of the whole clause, but in the semi-auxiliary use, only one verb does.

(226)



In nuclear coordination, the two predicates are simply put next to each other, and the argument slots of V_1 and V_2 always match. Semantically, this linkage realizes a firmly packed serial actions, as in (218) and (219) (cf. the notion of 'fortuitous concatenation' in Matisoff 1969). In nuclear subordination, on the other hand, the argument slots of only one predicate (normally V_1) are relevant to the structure of the whole clause, and the other predicate (normally V_2) is semantically the modifier of V_1, which gives elaborations on its Aktionsart.

Like nominal head linkage, nuclear junctures offer a number of interesting issues, for example their phrase structure representation (cf. McCawley and Momoi 1986; Sells 1990). Diachronically too, the rise of nuclear junctures and their semantic motivations are interesting problems (cf. Ono 1989ms, which extensively deals with the grammaticization of OKU and SIMAU). It may be speculated that some deep-rooted metaphors are at work here. For example, the metaphor AN EVENT IS A CONTAINER (or possibly TIME IS SPACE) seems to be underlying the aspectual use of *iru* as we saw in (220)-(222). In the same vein, *aru*, *komu*, *oku*, and *simau* may be accounted for by this metaphor, although I leave the investigation of their cognitive basis to the future.

In the following, I will examine the grammaticization of the versatile verb in terms of the advancement of clause integration, focusing on one verb, *miru* 'see'. As we saw in (223), when used as a semi-auxiliary verb, it may be glossed as 'try to'. In ModJ, it can participate in the linkage involving valency mismatch, and my purpose in the analysis below is to discern, first, the phases of semantic extension and, second, the transition from juxtaposition to incorporation. My hypothesis is formulated as follows:

(227) The versatile verb originated in the core juncture and acquired its semi-auxiliary status by semantic extension and the tightening of linkage into the nuclear juncture.

This innovation seems to be a recurrent pattern throughout the history of Japanese. Already in OJ, some verbs were versatile. For example, *tamahu* meant 'give' when used as a full verb (commonly linked by TE) and functioned as a politeness marker when used in nuclear juncture (commonly linked by V/LINK). Others acquired semi-auxiliary functions in MJ or even later. Now, based on the tendencies proposed in 1.3, the above hypothesis for the rise of versatile verbs may be more specifically given in the following way:

(228) Core juncture (non-object-sharing) > Core juncture (object-sharing) > Nuclear juncture (without valency mismatch) > Nuclear juncture (with valency mismatch)

The emergence of valency mismatch is understood as a development of coordination into subordination. As it stands, this scenario has the following prediction: Valency mismatch comes only after the establishment of nuclear juncture as a structural type. In the present case, since *miru* is a transitive verb, its combination with an intransitive verb comes after the establishment of *miru* as a versatile (i.e. semi-auxiliary) verb. Another, equally important, question is at which stage the semantic extension took place and how. As usual, the investigation of the intermediate stage of change is of particular interest to the understanding of grammaticization. I will attempt to focus on these points in the following analysis.

To begin, in OJ, the verb *mi* 'see; look at' functioned as a full verb in many cases of TE-linkage, as in (229):

(229) OJ (*Taketori*: 16)
Kaguyahime ayasigari-te miru-ni, hati-no naka-ni humi ari
Kaguyahime feel.strange-TE see-PRT bowl-GEN inside-DAT letter be
'Kaguyahime felt strange and looked at (it), and inside the bowl was a letter'

In this example, the second predicate *miru* (< OJ citation form *mi*) 'looked at' denotes an independent activity, which is distinct from *ayasigari* 'felt strange'. Notionally, the perception 'inside the bowl was a letter' is given as a consequence of Kaguyahime's looking at the inside of the bowl, not her feeling strange. To this extent, *ayasigari-te miru* does not form a unitary predicate and consequently (229) is an instance of core juncture. It may also be possible that (229) embodies object-sharing because the first clause can be seen to have 'the bowl' for its object rather than something else (e.g. the act of someone's bringing the bowl). Yet we have practically no way of verifying this claim simply because argument-dropping is so common in Japanese regardless of the period. There are 10 occurrences of *V-te miru* in *Taketori*, but none of them can be seen as an instance of nuclear juncture. But it may be worth pointing out that there is already object-sharing core juncture in *Taketori*. The following is a line that immediately follows (229):

(230) OJ (*Taketori*: 16)
Hiroge-te mire-ba, ...
open-TE look.at-BA

'(She) opened (it) and looked at (it), and then'

Here 'it' refers to the letter mentioned in (229). Unlike (229), it is no demanding task to assume that the object of both *hiroge* 'open' and *mire* 'see' is the letter.

In other OJ texts, however, there are examples that can be seen to have undergone some semantic shift. Although the first three books of *Genji*, at which I took a close look, do not contain any versatile use of *mi*, *Syogakukan Kokugo Daijiten* (Syogakukan comprehensive Japanese dictionary) contains the following examples from OJ.

(231) (*Kokin Waka-shu*, 9/10C)

Ori-te mi-ba oti zo si-nu-beki, akihagi-no eda-mo tawawa.ni okeru siratuyu

break-TE see-BA fall PRT do-PERF-MOD autumn.bush.clover-GEN branch-PRT fully be white.dew

'If (I) break-and-see (they) will fall down, the white dewdrops all covering the branch of the autumn bush clover.'

(232) (*Tosa Nikki*, 9/10C)

Otoko-mo su-naru nikki-to.ihu.mono-wo on'na-mo si-te mi-n

man-also do-PRED diary-so.called-ACC woman-also do-TE see-MOD

'(I), as a woman, will also do-and-see (=try to keep) a diary, which men usually do.'

(233) (*Izumi Shikibu Nikki*, 11C)

iza miyako-he-to ki-te sasohi-mi yo

now capital-to-PRT come-TE invite-see PRT

'now come to the capital and invite-and-see'

In (231), the gloss could also be, 'if (I) give a try to (the act of) breaking ...' and likewise in (232), *si-te mi* may be glossed, '(I) will try to keep a diary'. The last example is peculiar in that the linkage is by V/LINK, not by TE. Semantically, the idea behind the use of *mi* in these examples may be rephrased in English as 'V-TE, see how it turns out', hence the reading akin to the prospective Aktionsart. But at the risk of overgeneralization, I might say that the nuclear juncture with valency mismatch is not widespread in OJ. Besides the scarcity of the versatile use of *mi* in *Taketori* and *Genji*, examples of *mi* which realize semi-auxiliary fuctions do not seem to involve valency mismatch. In (232), both *su* 'do' and *mi* 'see' are transitive, and the analysis of the linkage as plain, coordinate nexus is not completely impossible (in which case the shared object of *si-te-mi* would be *nikki* 'diary'). Example (231) is an interesting case. Logically speaking, the object of the first predicate *ori* 'break' is the branch of the bush clover, but it is unnatural that the object of the second predicate *mi* is the same branch which the speaker breaks. What he wants to see is the result of his breaking the branch which bears dewdrops. In this sense, this example more suitably illustrates the existence of a versatile or semi-auxiliary use of *mi(ru)* in OJ. Yet it is worth pointing out that in either case, the meaning of *mi* does not shift too far from visual perception. Examples analogous to those given from MJ below are unlikely in OJ.

During the MJ period, the verb *mi* underwent further delexicalization and its use as a versatile verb seems to have become widespread. In *Heike*, there are examples like (234):

(234) (*Heike*: 317)

kikoyuru taki-ni sibaraku uta-re-te mi-n-to.te, takimoto-he koso mairi-kere

famous waterfall-DAT awhile beat-PASS-TE see-MOD-COMP bottom-to PRT go-EVID

'(he) thought about being beaten in the famous waterfall awhile, and went to the bottom of it,' lit. '(he) wished to be.beaten-and-see in the famous waterfall.'

Here, the meaning of *mi* is not limited to visual perception, but is extended so as to cover the subject's experience in general, in this case his standing below a great waterfall (hence the gloss 'thought about'). *Mi* is thus used to encode the acquisition of general experiential information, which appears to evidence an interesting cognitive synecdoche (namely SEEING IS EXPERIENCING, cf. Lakoff and Johnson 1980). It may not be very natural to gloss *mi* in this example with 'try', but semantic extension is certainly under way. Example (235), also from *Heike*, shows further semantic extension:

(235) (*Heike*: 328)

Sari.nagara.mo ukagau-te koso mi-me.

however ask-TE PRT see-MOD

'However, (I) will try to ask (for his [=the resigned emperior's] favor).'

In this example, what the speaker hopes to know is not simply how it would be to see the resigned emperor. Rather, he is interested in the result of asking a favor of him. In this sense *mi* is less lexical because its meaning is more abstract and becomes the modifier of *ukagau* 'ask'. This shift well illustrates

the tendency toward a higher degree of clause integration. However, one problematic fact is that the particle *koso* (usually considered as an 'emphatic' or 'focus' particle) occurs between the two linked predicates. This particle, syntactically, triggers long-distance morphological alternation (traditionally called *kakarimusubi*), so the inflectional form of *me* in *mi-me* is not the final but the perfective ending, even though the sentence ends with it. This occurrence of *koso* between *ukagau* 'ask' and *mi* 'see' indicates that they may not form a completely unitary predication. Because of this fact, it can be problematic to analyze (235) as an instance of genuine nuclear juncture, even though the semantic extension is clear enough. Or it may be speculated, alternatively, that the grammaticization of nuclear junctures does not shut off the intervention of pragmatic particle completely. Under this assumption, (235) is a unitary predication and is syntactically the endpoint of the change of *mi* into a versatile verb, and no more clause integration is expected. This view seems to make better sense than the one given earlier, for the linkage type here is *subordination*, which involves embedding. Because of this asymmetry between the linked predicates, it is not unnatural to put a focus particle on *ukagau*, which is governed by *mi*, just like putting a focus particle on the object NP governed by a verb.

In late MJ, along with the examples that exhibit a similar degree of delexicalization as (234) and (235), we find the following example, which illustrates the meaning of *mi* as 'try' in a more straightforward way:

(236) (*Isopo*: 418)

kono koto-wo nantozo keiryaku.si-te miyo

this affair-ACC somehow handle-TE see/try

'try to handle this affair somehow'

Here, *miyo* (the imperative form of *mi*) no longer denotes an independent activity, but rather it forms a unitary predication with *keiryaku.si* 'handle'. As a result, *keiryaku.si-te-miyo* denotes a single activity, which can only be translated as 'try to handle'. Acquisition of experiential information, which I have associated with the versatile use of *mi* above, is not strongly felt here. In some way, *mi* marks the doer's commitment to the achievement of something, hence 'try to'. Example (234) is still paraphrasable as 'stand below a great waterfall and see what it is like', but in (236), what the speaker is interested in is how to handle the affair, not its outcome. In this sense, though *keiryaku.si* and *mi* are both transitive verbs, the object of the latter is not *kono koto* 'this affair', and the linkage is clearly subordination.

Returning to the hypotheses given in (227)-(228), it may be said that the varieties of the versatile uses of *mi* as is attested in ModJ originate in OJ but were fully established in MJ (cf. (234)-(236)). Concerning the prediction made earlier in relation to (228), namely that nuclear juncture with valency mismatch comes after the establishment of semi-auxiliary use (where there may not be any valency mismatch), it seems to be supported. For example, in the MJ example (234), the first predicate is in the passive form, so strictly speaking the linkage is Vi+Vt and the object slot of Vt *mi* is not saturated. An example of more explicit valency mismatch is given below from late MJ:

(237) (*Isopo*: 445)

hukun-da-wo sute-te mizu-no soko-he atama-wo ire-te-mire-ba, ...
hold.in.the.mouth-PERF-ACC throw.away-TE water-GEN bottom-to head-ACC put.in-TE-see-BA

'(the dog) threw away what (it) held in its mouth, and put-and-see (=gave a try to putting) its head into the bottom of the water, and ...'

Here, though both *ire* 'put in' and *mi* 'see' are Vt, the object of the former is already given in the form of a lexical NP as *atama-wo* 'head-ACC'. Clearly, what the dog saw is not his head, but the outcome of dipping his head into the water.

However, the scenario of (228) does not seem to be maintained in its entirety. The reason is that the object-sharing core juncture may not be a crucial step in the development of versatile verbs. Nuclear junctures of whatever sort derive from the subject-sharing core juncture. But the development from serialization to incorporation (i.e. from coordination to subordination) can be understood without postulating the intermediate stage of object-sharing core juncture. Chronologically, the object-sharing linkage existed in OJ as (231)-(233) show, but my point is that it is irrelevant to the rise of the semi-auxiliary use of *mi(ru)* with valency mismatch. An alternative analysis, which I do endorse, is that truly subordinate nuclear junctures (i.e. those involving valency mismatch) originate in the core juncture where the object of the second predicate is a pragmatically controlled zero anaphor. Initially, the antecedent of this anaphor may have been found in the preceding clauses, but after the strengthening of the connectedness between the clauses linked by TE, the argument slot of the second predicate may have come to be saturated with something inferrable from the context. See the following schematic representation:[6]

(238) [... V_1 + ... ø V_2], where the antecedent of ø is easily identifiable
=> [... V_1 + ... ø V_2], where the antecedent of ø is only vaguely inferred

As the juncture is tightly integrated, the inferred content can be the outcome of the realization of the first predicate, or simply the first predicate itself. Through this process, the first predicate became subordinate to the second predicate, because the former was interpreted as the latter's object. Let us substantiate this claim with the following example from OJ, which is a plain core juncture in which *mi* is not a versatile use.

(239) (*Taketori*: 46)
Kaguyahime-no aru tokoro-ni itari-te mire-ba, ...
Kaguyahime-PRT be place-DAT go-TE see-BA
'(he) went to where Kaguyahime was, and saw (her), and then, ...'

Here the object of *mi* is Kaguyahime and the connection between the presumed anaphor and Kaguyahime is pragmatically controlled. But suppose a pragmatic reanalysis took place and the object of *mi* were the situation that has some significant connection to *itari* 'go (to Kaguyahime's place)'. In such a case, the unrealized object of *mi* would be the outcome of visiting Kaguyahime, and the resulting interpretation would be (though this is not natural with (239) in context), '(he) tried going to where Kaguyahime was,' or '(he) went to where Kaguyahime was, and saw how it turned out'. This is a kind of pragmatic reanalysis, which I suspect may be the starting point of nuclear juncture with valency mismatch. Thus the scenario of (228) should be revised as follows:

(240) Core juncture (the object of V_1 identifiable) > Core juncture (the object of V_2 generalized) > Nuclear juncture (without valency mismatch) > Nuclear juncture (with valency mismatch)

Overall, it is perhaps correct to say that in the grammaticization of *mi* (and by implication versatile verbs in general), semantic extension is at the heart of change and stabilization or integration of form as a unitary predicate follows it. Here too, it has been shown that one important aspect of the diachrony of clause linkage is the development from lower to higher clause integration. The rise of nuclear junctures, exemplified by *mi(ru)*, is semantically and pragmatically motivated, and the semantic extension seems to have gone hand in hand with the tightening of linkage from coordination to subordination. Among the various possible motivations for the development of versatile verbs, the primary one is the pragmatic reanalysis of the relation between the linked predicates. This is an interesting kind of development in that the change in grammatical structure is pragmatically driven. In this sense, the foregoing discussion provides a model case for our hypotheses about the diachronic aspects of clause linkage, because the rise of nuclear junctures exemplifies advancing clause integration in terms of both the layer of linkage and the nature of dependency.

Of the verbs listed in (223), some, such as *kakeru* 'hang (over)' > 'be in the early stage of', do not seem to have acquired their aspectual use until late OJ, although they are attested as lexical verbs in these periods. Interestingly, the semantic extension based on the metaphor SEEING IS EXPERIENCING is seen in other verbs of visual perception as well. For example, the verb *goranzuru* 'see' (*go*=prefix; *ran*=Sino-Japanese word for 'see; watch'; *zuru*= 'do'), which is a polite form of *mi*. As far as I could see, this verb is not versa-

tile in OJ, but in MJ, its semi-auxiliary uses are frequently found. Two solid late MJ examples are given below:

(241) (*Otogi*: 121)
madumadu anzi-te-mo-goranze-rare-sahurahe
in.the.first.place think-TE-PRT-see-POL-POL
'try to think (of what I say) in the first place'

(242) (*Otogi*: 196)
kono kahakami-wo nobora-se-tamahi-te goranzeyo
this upper.part.of.river-ACC go.up-POL-POL-TE-see
'try to go up this river,' or 'why don't you go up this river?'

Other verbs, for example *makuru* 'roll up' > 'do something energetically and repetitively', do not seem to function as semi-auxiliaries even in MJ. Of course it is not always easy to determine the exact date of a historical change , but the source I looked at indicates that *makuru* got grammaticized either in Pre-ModJ. On the other hand, verbs like *au* 'meet; face' > 'do something to each other (reciprocal)' and *kiru*, 'cut' > 'finish doing something' seem to have been in use since OJ. Regardless of the period, the emergence of versatile verbs is a recurrent path of grammaticization in Japanese, and its pattern nicely fits the general tendency of the diachrony of clause linkage (also cf. Matisoff 1991 for a discussion of recurrent patterns of grammaticization in Tibeto-Burman, which exhibits interesting parallels).

In this chapter, we have examined an exemplary case of the grammaticization of clause linkage, namely the development of nuclear junctures,

which is a recurrent pattern of historical change in Japanese. It has been argued that versatile verbs are nuclear subordination, and its emergence is motivated by metaphoric extensions and strengthening of pragmatic connections between the linked units. We took a close look at the verb *mi* 'see; give a try' focusing on the rise of valency mismatch, and it has been demonstrated that changes in syntactic structures are driven by the changes in semantics and pragmatics.

Notes to 2.5

1. In Japanese, adjectives have verbal characteristics and they can function as predicates without the support of a copula. As such, V+Adj concatenation also forms complex predication, as in the following:

(N-1) Kono giron-wa wakari-yasui.

this argument-TOP understand-easy

'This argument is easy to understand (=follow).'

Equivalents of '*tough*-constructions' are generally realized in this way (e.g. *V+zurai*, 'difficult'; *zurai* is *turai* in isolation).

2. There are, however, marginal instances in which V_1 is weakened and V_2 is semantically the main verb rather than vice versa, as in the following:

(N-2) Nimotu-o tori-matome-ta.

baggage-ACC take-put.together-PAST

'(I) packed (my) baggage.'

Here, the first verb *tori* 'take' is semantically weak, and modifies the manner of the second verb. In (N-3), this point is more clearly illustrated:

(N-3) Itidoo sikiten-o tori-okonat-ta.

all ceremony-ACC take-perform-PAST

'(They) performed / participated in a ceremony together.'

In this example, people do not really 'take' a ceremony. In some sense, *tori* comes close to a directional prefix.

3. Parallels abound in East and Southeast Asia. See Matisoff (1969) on Lahu, and (1974) on Kachin, and more comprehensively, Goral (1986), which is a cross-linguistic study of select Southeast Asian languages.

4. Another wrinkle about the lexical reciprocal which may be of interest for syntacticians is that in the *V-au* construction, relations that are not directly transitive can also be encoded. In (N-4), reciprocality holds between the agent and the goal. In (N-5), even though the verb *nageki* 'deplore; complain' is transitive, reciprocality holds between the agent and the goal, rather than between the agent and the patient.

(N-4) Yoota-to Ai-wa hohoemi-at-ta.

Yoota-and Ai-TOP smile-meet-PAST

'Yoota and Ai smiled at each other.'

(N-5) Gakusee-tati-wa kyoozyu-no taiman-o nageki-at-ta.

student-PL-TOP professor-GEN laziness-ACC complain-meet-PAST

'The students complained about the professor's laziness to each other,' or simply 'the students all complained about the professor's laziness.'

As expected, it is very difficult to paraphrase these examples with the analytic strategy employing *otagai* 'each other'. This is probably because of a restriction that reciprocals with *otagai* must be truly reciprocal, i.e. involving an explicit transitive relation.

5. This point was first pointed out to me by Charles Fillmore (p.c.).

6. In this connection, one might think of Bolinger (1977a)'s discussion of 'ambient *it*'. Since zero anaphors in Japanese can be, and in fact in most cases are, pragmatically controlled, the 'antecedent' of a zero can be any entity or proposition that can be inferred from the overall situation. Incidentally, this sort of pragmatic generalization seems to support the view that the metaphoric extension of meaning crucially involves discourse-based inferential processes (cf. Sweetser 1988).

2.6. Sentential junctures

When we come to the combining of full sentences, where the structural integration between the linked units is by definition the weakest, the grammatical correlates of the semantic relation, which we have discussed in 2.2-2.5, become rather hard to identify. In sentential junctures, linking devices are semantically transparent and linkage markers do not form a really closed set. There, syntactic constraints are minimized and the linkage is best seen in terms of rhetorical structures. What matters here is the discourse function of linking expressions rather than the structural relationship between clauses. Many sentential adverbials (NEVERTHELESS, FURTHER-MORE) and what Leech and Svartvik (1975) call 'linking signals' (ON THE OTHER HAND, PUT DIFFERENTLY, AS A MATTER OF FACT), as well as enumeration devices (FIRST, SECOND, ..., LAST), belong to this category. Further, as Beaugrande and Dressler (1981) suggest, it is even conceivable that interjections can function as linking devices (e.g. ALAS! signalling counterexpectation). Japanese, unsurprisingly, possesses all of these types of linking devices, some of which we will see below. For a recent attempt at systematizing the local organization principles of discourse, cf. the series of works by Mann and Thompson (e.g. 1988).

Since linking expressions for sentential juncture can hardly be enumerated, I will focus on the borderline cases between clausal and sentential junctures. Although this phenomenon does not appear to have grave impact on the theoretical issues under discussion, its very existence may be worth pointing out. As I remarked at the beginning of 2.2, some sentence-initial connectives come from clausal juncture, as in (243)-(244) (=(100)-(101)):

(243) Kane-ga nai-nimokakawarazu, hataraka-nai.
money-NOM have.not-NIMOKAKAWARAZU work-NEG
'(I) have no money, but (s/he) doesn't work.'

(244) Kane-ga nai. Nimokakawarazu, hataraka-nai.
money-NOM have.not NIMOKAKAWARAZU work-NEG
'(I) have no money. But (s/he) doesn't work.'

We might call this type of marker *detached* connectives, because an expression as in (243), which occurs clause-finally and is distributionally bound to the predicate, is separated from the preceding clause and comes to have its own life as in (244).[1] Matsumoto (1988) discusses this issue from the diachronic viewpoint, which should be referred to for further information. Admittedly, it is not very easy, contra Matsumoto, to prove that NIMO-KAKAWARAZU in (244) is a 'free' morpheme, but at least it is freer than in (243). Example (245) better illustrates the separation of the clause-final marker:

(245) A: Simekiri-made zikan-ga nai yo.
deadline-until time-NOM not.have PRT
B: Demo, daitai deki-te.iru-n.des.yo?
DEMO almost done-STAT-PRED
'A: (I) have no time for the deadline.
B: But (it)'s almost done, isn't (it)?'

Here DEMO (DE=PRED, MO=PRT, cf. below) occurs utterance-initially, expressing contradiction. Although DEMO can occur in clause final position in other contexts, Japanese morphosyntax disallows it to cooccur with *zikan-ga nai*, 'have no time' (hence **zikan-ga nai-demo*; cf. *zikan-ga naku-te.mo*). This means that DEMO in Speaker B's utterance is used as an independent connective, regardless of the clause-final form of Speaker A's utterance. In English written texts, in addition to the rather archaic sentence-initial FOR, the (non-restrictive) relative pronoun WHICH often occurs sentence-initially, or even paragraph-initially as in (246):

(246) ... But be prepared: Your Mac will be tied up for much longer periods than is usual for QuickDraw printing, and none of these solutions free your Mac from RIPing.

Which brings us back to the PostScript option, an issue further complicated by the fact that PostScript clones now compete head-to-head with Adobe-sanctioned printers...

(from *MacUser* October 1990, p. 97)

But detached connectives involve a more radical reanalysis because they involve a change in morphological boundary in addition to on in syntax.

Below, I will discuss the nature of detached connectives, by way of answering the following question:

(247) Under what conditions can a particle that usually marks the end of a subordinated clause appear at the beginning of a sentence?

In terms of the morphological classification of linking devices I gave earlier in (99) (namely zero, monomorphemic, polymorphemic, and phrasal), the overwhelming majority of detached connectives belong to one of the last two categories. Of all the monomorphemic markers, only TO and GA can stand out as sentence-initial connectives (further, their occurrence is rather limited). GA is more frequently accompanied by the predication marker DA when occurring as a sentence-initial connective. For most detached connectives, especially phrasal ones, we can identify two basic types: one type contains the complementizer TO and the other type contains the predication marker DA. Also, TOKORO, which originally is a lexical noun and is turned into a complementizer, forming a nominal head construction, occurs in detached connectives, as in TOKOROGA 'but' and TOKORODE 'by the way'.

In this connection, Matsumoto (1988) remarks that there may have been an intermediate stage with an anaphoric expression. This is in fact a recurrent pattern in the rise of sentence-initial connectives throughout the history of Japanese, regardless of whether they originate in clause-final linkage markers or not. For example, TE has never become a detached connective in itself, but SOSITE < SOO+SI+TE (so+do+TE) 'doing so' > 'and then' is a commonly used connective.[2] Thus DEMO in (245) may be accompanied by *sore* (roughly 'it' or 'so') with the same meaning, as in the following:

(248) Sore-demo, daitai deki-te.iru-n.des.yo?
it-DEMO almost done-STAT-PRED
'Being so [=yet], (it)'s almost done, isn't (it)?'

Here, the expression *sore-demo* literally means 'even being so', and the use of *demo* as a clause-initial connective is the step that follows the omission of an anaphoric element. Notice that *sore* as an anaphoric expression is referential (=linked to the content), not substitutional (=linked to the form) in the sense of Halliday and Hasan (1976). In this sense, the gloss 'being so' is inaccurate, because *so* in English is for substitutional function only. This means that detached connectives with anaphoric expressions are used in relation to (and oftentimes in opposition to) the preceding discourse context, which provides a basis for the separation of clause-final linking expressions. According to Matsumoto (1988), many detached connectives came into existence, or at least are first attested, in pre-ModJ, around 17C. But even today, the same process seems to be taking place. Examples are (from casual observation, the first being my own utterance, and the second being my sister's):

(249) Tuuka, tada.no baka-zya-nai?
TUUKA mere fool-PRED-NEG
'Rather, (s/he) is a mere fool, isn't (s/he)?' (in Kansai dialect, *tuuka* is pronounced *tyuuka*)

(250) Dasii, o-kyuuryoo-mo ii-si.
DASI PRE-salary-also good-SI
'Right, and the salary is good too.'

Neither of thee would be uttered by an older speaker. TUUKA comes from TO+IU+KA (COMP+say+Q, lit. 'rather than saying so'), and DASI from DA+SI (PRED+SI, lit. '(it) is, and...'). Below, I will examine detached connectives with TO and DA that are already established in ModJ, in that order.

Consider first the following examples of the connectives with TO (*mo* is a 'scalar' particle, translatable as 'also, even, as much as'; *wa*, glossed TOP, should be interpreted broadly, including a contrastive use):

(251) *Markers containing TO*:

TOIUNOWA: TO+IU+NO+WA (COMP+'say'+NZ+TOP) 'that is to say'

TOIUYORI(WA): TO+IU+YORI+(WA) (COMP+'say'+YORI+TOP; YORI is translatable as 'more / less than') 'rather than that'

TOSURUTO: TO+SURU+TO (COMP?+'do'+TO) '(if so) then'

TOWAIUMONONO: TO+WA+IU+MONO+NO (COMP+TOP+'say'+ 'thing'+??; the identity of NO is uncertain) 'even so; nevertheless'

Structurally, the separation of a complementizer is not surprising in Japanese because when the complementizer TO occurs, the preceding clause can have a fully inflected predicate (also cf. TOKORO). Even when TO is separated, the complement clause still remains a full clause. This factor may underlie the rise of such markers as NISITEMO and NIMOKAKAWARAZU (cf. (243) & (244)), since the function of NI here comes close to that of a complementizer and the preceding clause can be tensed.

The second class of examples, i.e. those involving the predication marker *da* (or its polite counterpart *desu*, both usually glossed as copular 'be') and its inflected form *de*, are given below (to digress, DAKARA, DATTE, and DEMO, due to their frequency, are sometimes used to caricature unsophisticated young people):

(252) *Markers containing DA/DE*:

DAGA: DA+GA (PRED+GA) 'but' (also DESU+GA)

DAKARA: DA+KARA (PRED+KARA) 'therefore' (also DESU+KARA)

DATTE: DA(T)+TE (PRED+TE) 'but' (stronger adversity)

DEMO: DE+MO (PRED+MO) 'but' (weaker adversity)

DEWA: DE+WA (PRED+TOP) 'then'

Unlike TO, the separation of the predication marker is initially vexing, because without it, a clause does not seem to be complete. In this sense, markers in (252) represent a more radical reanalysis than those in (251) do. But a closer look at the nature of predication in Japanese shows that the separation of *da* is indeed licensed. When expressing the identificational proposition, *A is B*, where A and B are nominals, Japanese need not use the predication marker *da* (a fact which seems to have been overlooked despite the current interest in predication). In (253), which is introspection-based but is intended to represent the spoken register, the clause-final slot can be filled with zero, *da*, or a pragmatic particle such as *yo*:

(253) A, kore 10CC-no raibu ø / da / yo.
Oh, this 10CC-GEN live ø / PRED / PRT
'Oh, this is 10CC's live performance.'

The point here is that Japanese allows a nominal or verbless predicate construction. Thus *da* is structurally not an absolute necessity for a complete predication (and the common rendering of this form as 'copula' is perhaps misguided, at least partly). Viewed in this way, *da* can be seen to bear an additional explicit assertive function. So when occurring utterance-initially, *da* means something like 'being so'. An important point to be noted in this

connection is that detached connectives with *da* mostly indicate either reason or concession. This is understandable if we consider that these semantic relations presuppose something as factual, which may be invoked by *da*.

To give a tentative conclusion, two preconditions for the rise of detached connectives are that the preceding clause be able to form a predication without a clause-final linkage marker and that the semantic relation be relatively open.[3] The possibility of 'copula'-less nominal predication is an important aspect of these preconditions. Apparently these are not the only conditions for the occurrence of detached connectives, but they at least characterize most commonly observed patterns. Diachronically, the rise of detached connectives might offer a counterexample to the unidirectionality of grammaticization, namely from less to more bound morphemes. However, it is probably necessary, in order to properly locate the emergence of detached connectives in the whole picture of the development of clause linkage, to draw a distinction--or to posit a continuum--between central and peripheral areas in the whole functional domain of clause linkage. It may be argued that as long as a construction is part of the grammatical system of a language, its common path of development is from less to more closely integrated linkage. The development we have seen in this chapter is a process whereby lexical items which do not form a closed set are obtained out of non-lexical items which do form such a set. Detached connectives clearly belong to the periphery of clause linking constructions, and their rise may be justified by rhetorical motivations, which in the present case compete with those promoting the integration of linkage.

In this chapter, we have looked at which conditions there are for the development of detached connectives. It has been shown that in certain

classes of detached connectives, namely those begin with TO and DA/DE, what is common is that the preceding part can form a complete predication. Although detached connectives seem to be a countercase to our hypotheses about the diachrony of clause linkage, they rather put a constraint on them in the sense that one can talk about advancing clause integration only when the construction in question is in the realm of grammatical structures rather than rhetorical structures.

Notes to 2.6

1. I once called this type of markers as *planarian* connectives in an earlier version of this study, after the way a planarian divides itself into two parts, both having their own lives. Although this is an interesting analogy, I avoid using the term here as it seems too esoteric.

2. Lahu has an exact parallel of *sosite*: *qhe te l* , this-do-LINK 'having done this' > 'and then' (*te* is a highly grammaticized verb), as pointed out to me by James Matisoff (cf. Matisoff 1973).

3. Another commonly used detached connective is KEREDOMO (reduced to KEDO in conversation), which expresses contradiction or concessivity. KERE, once an evidential auxiliary, is obsolete by itself (it no longer appears in other inflected forms). Although in OJ and MJ it was attached to the linking ending of verbals, in ModJ KERE only occurs as a part of KEREDOMO, and the preceding verb is indeed in the final ending. Thus, synchronically, our proposed condition is maintained. Diachronically too, it is speculated that the detachment of KEREDOMO was preceded by the obsolescence of KERE as an auxiliary.

2.7. Some cross-linguistic observations

In this chapter, I will present brief remarks on cross-linguistic aspects of clause linkage constructions. However, since no systematic sampling is attempted, the following discussion will be limited to a pre-theoretical, 'food for thought' level, without either drawing typological generalizations based on a small number of languages or using the data merely to flatter some authoritative (or fashionable) view. Languages on which monographs relating to clause linkage are written include: Barai (Olson 1981), Bengali (Klaiman 1986), Chinese (Hansell 1987), Dravidian languages (Steever 1988), Georgian and Abkhaz (Hewitt 1987), Indo-European (Holland 1984, 1986), Korean (Kim 1987), Newari (Genetti 1986, 1991), Conchucos Quechua (Stewart 1988), Turkish (Watters 1987), and various Australian languages (Austin 1988).

In what follows, I will take up a small number of issues concerned with constructions that are instantiated in Japanese either canonically or non-canonically. Since I subscribe to a 'bottom-up' approach to language typology, what interests me most are subtle differences found in typologically similar languages with respect to a particular set of features. Japanese has many similarities to Turkic, Dravidian, and Tibeto-Burman languages, as well as Korean. I am especially interested in whether these languages exhibit the following phenomena, and if they do, how they differ among each other, as well as from those languages that have canonical instantiations of the constructions in question.

The first issue is concerned with switch reference and more generally the mechanism of reference tracking:

(254) Do other languages have linkage markers that embody some kind of reference tracking functions like TE and BA in OJ? Also, how would real switch reference systems be looked at in terms of the typology of clause linkage?

As I have shown in this study (2.3), reference tracking is a function of the typology of clause linkage in some important respects. The answer to the first question is thus most likely to be positive. In Kim (1987), it is reported that in Korean some conjunctive morphemes are correlated with the SS/DS distinction (e.g. *mj ns* 'simultaneity' for SS, and *nte* 'discontinuity' for DS). From a broader perspective, as Kim (1987) and Iwasaki (1988) suggest, reference tracking that clause linkage constructions embody may be seen in terms of discourse continuity, some of whose key facets I have discussed in the foregoing discussion.

Switch reference systems are normally found in verb-final languages. Interestingly, Li (1989ms) offers an example of switch reference that he claims to be encoded by conjunctive markers in a verb medial language, namely Green Hmong (Miao-Yao family). However, his presentation is rather brief, and upon a closer look, the reference tracking function he discusses may indeed be shown to be accounted for by such factors as the layer of linkage, or by a cluster of features as described by Nichols (1983) (cf. (176) above). When we turn to 'real' switch reference systems, an intriguing issue is their diachronic and/or areal diversity, which may shed light on the nature of non-canonical switch reference systems as well.[1]

The next two issues relate to the functions of case-marked clauses. The first question (255) is mostly concerned with case markers for peripheral

grammatical relations and the second one (256) with those for core grammatical relations.

(255) Do other languages have case markers that also serve in clause linkage, e.g. the dative marker for the purpose clause? If so, what are the general tendencies and motivations for the case marker-linkage marker parallels?

(256) Do other languages have anything like nominal head linkage? In what way do Japanese IHRCs (including TOKORO-complements) differ from IHRCs in other languages?

As remarked in 2.2 and 2.3, there are certain parallels between case markers and linkage markers in Japanese, such as *ni* (DAT-purpose), *kara* (ABL-reason), and *(no)ni* (DAT-adversity/concessivity), as well as NOM *ga*, ACC *wo*, and DAT *ni* in non-IHRC nominal clauses in OJ and MJ. Ohori (1991b) is a study on the nature of such parallels across languages, which the reader is referred to for detailed discussions and references. Genetti (1991) offers a detailed discussion of the development of subordinators from postpositions in Newari and other Tibeto-Burman languages in Nepal. Craig (1991) gives a comparable case under the name 'grammaticalization chains' based on the data from Rama (Mesoamerica). Also, Haspelmath (1989ms) discusses grammaticization of purpose clauses. Indo-European absolutes (cf. Holland 1986) are another class of constructions in which case-marked clauses function as adverbial or appositional clauses. Ohori (1991b) argues that at the basis of the extension from case markers to linkage markers is a gestalt-preserving

cognitive mechanism, and that therefore case markers for core grammatical relations are not easily turned into subordinators.[2]

As for IHRCs, it is disputable whether Japanese has canonical instantiations. Jhang (1991ms) shows that Korean also has IHRC-like constructions, but there seems much to be clarified concerning their nature. Cross-linguistically, it is true that IHRCs are nominalized clausal complements, which is the case in Japanese (marked by the noun-modifying ending in OJ and MJ and by the nominalizer *no* in ModJ) and Korean (marked by *kes*). According to Mazoudon (1976), Tibetan too has head-internal relativization, marked by the nominalizer *the* (also cf. Matisoff 1971 for Lahu nominalization and relativization). Turkish, however, does not seem to have IHRCs or their analogs.

When we consider the nominal nature of IHRCs, the head-marking vs. dependent marking distinction (Nichols 1984a, 1986) becomes especially important, for it relates to the way argument structures are fulfilled. According to Nichols (1984a), one possible precondition for the existence of (and preference for) IHRCs is that the language is a head-marking type. This is in fact the case in such languages as Navajo and Lakhota (both North America), to name a few. In these languages, argument slots of a predicate is marked by pronominal affixes on the head verb, and consequently there is no marking of grammatical relations on argument NPs. In dependent-marking languages, however, the case relation assigned by the matrix predicate is marked on the argument NPs. When these languages have IHRCs, the case marker required by the matrix predicate is put on the complement clause, not the relativized NP internal to it, hence a discrepancy between syntax and semantics:

(257) [Neko-ga sinobi.kon-de-ki-ta] no-o tukamae-ta.

cat-NOM sneak.in-TE-come-PAST NO-ACC catch-PAST

'(I) caught a cat which sneaked in.'

Note that in this example, syntax requires that the ACC *o* be marked on the complement clause, while semantically it is *neko* 'cat', not the whole clause, that is the object of *tukamae* 'catch'. This fact has important consequences on the syntax and semantics of IHRCs, some of which are discussed in Hirose and Ohori (1992). Serious typological studies on IHRCs are thus highly wanted.[3]

Obviously any one of the above questions would require a long monograph to be satisfactorily answered, so this chapter has been no more than a rough summary of the relevant data, which I believe is nevertheless worth pursuing.

Notes to 2.7

1. Jacobson (1967) already discussed this issue, but given the broadening of data and scope of research since then, it would be very interesting to attempt a comparative study of switch reference systems within a dialect group (for example Quechua).

2. Exceptions are, of course, accusative absolutes in Indo-European, let alone GA- and WO-linkages in Old Japanese. But it should also be noted that in these constructions, case-marked clauses tend to have IHRC-like interpretations, which brings us to the consideration of the question (256).

3. In addition, it would be interesting to examine the functions of non-canonical relatives in each language. For example, relativization in English can paraphrase an event sequence for which coordination is best suited, as in the following example:

(N-1) I saw an old lady, who then walked up to me.

Also cf. Schuetze-Coburn (1984), who offers an interesting discussion from spoken German. Lambrecht (1986, 1988) gives a detailed account of French 'presentational cleft' constructions that reach into the domains of both relativization and complementation.

3. Concluding Remarks

Through the foregoing chapters, our hypotheses formulated in 1.3 have been supported to a large extent, and even in cases where there seem to be exceptions, they are indeed welcome elaborations on our hypotheses and thus enrich our understanding of the diachronic aspects of clause linkage. In what follows, I will summarize major findings of this study and attempt to put them in a broader theoretical context.

First of all, our essential commitment throughout this study has been that the grammatical structure in natural language is functionally motivated. Another, more specific hypothesis has been that one fundamental tendency in the grammaticization of clause linkage is from lower or looser to higher or stronger clause integration. Already in the discussion of the typology of clause linkage in the Theory Part, especially 1.1-1.2, it was shown that morpho-syntactic properties tend to cluster in a given construction, exhibiting a correlation with the relative tightness of clause integration as defined in the RRG terms of juncture and nexus.

In the Analysis Part, we looked at form-meaning correlations in clause linkage constructions in detail, from a synchronic perspective in 2.2 and from a diachronic perspective in 2.3-2.6. In 2.2, the clustering of morpho-syntactic properties was examined, based on a set of conjunctive particles in Modern Japanese. In 2.3, the 'switch reference' system in Old Japanese was examined, and it was shown that reference tracking functions realized by TE and BA are indeed part of the overall properties of linkage constructions and that their difference comes from that in clause integration. The weakening of the subject-switching function of BA in Middle Japanese was explained as a result of the advancement of clause integration with BA-linkage. In 2.4, we

examined the development of TOKORO-complements that is analogous to head-internal relativization. While the change in nominal clauses seems to be that from IHRCs to a 'flat', adverbial or appositional, linkage, The change in TOKORO-complements is understood as the strengthening of a link between the matrix predicate and the complement clause. In 2.5, the grammaticization of versatile verbs was examined, and it was shown that their development is best analyzed as a change from core to nuclear junctures, where structural and semantic integration between clauses went hand in hand. Also, it was shown that what is crucial in this process, especially in the rise of valency mismatch, is the generalization of the interpretation of unrealized arguments. In 2.6, we saw an interesting case of historical change in clause linkage, namely the rise of detached connectives, which offers a counterexample to our hypothesis.

What emerges from these analyses is that the advancement of clause integration in terms of the layer of linkage is clearly detected (cf. 2.5), while that in terms of the type of dependency is not, as far as the examined Japanese data are concerned. However, there are more subtle kind of changes, i.e. advancing clause integration in terms of semantic/pragmatic interpretations (cf. 2.3 and 2.4). Hence it is concluded that at the heart of the diachronic processes we have examined is strengthening of pragmatic inferences as Traugott (1989, inter alia) argues. The sharing of referents as discussed in 2.3 and 2.4 is a reflex of the establishment of a stronger pragmatic tie between the linked clauses. Conventionalization of pragmatic inferences is in fact seen in the rise of nuclear juncture as well, especially in the generalization of the interpretation of unrealized arguments. From these considerations, the general tendency toward a higher degree of clause integration is motivated by our disposition to actively interpret the message and to conventionalize the

inferences eventually. This change in the semantic/pragmatic properties of constructions leads to a change in their morpho-syntactic correlates, and consequently the linkage type too may undergo a change. Of course, while there is generally a unidirectional tendency in the diachrony of clause linkage, there are changes that go counter to the general tendency, as in the rise of detached connectives. This is perhaps best understood as a result of competing motivations in natural language, and in this case motivations at the level of rhetorical structures overcome those at the level of grammatical structures to move toward a higher degree of clause integration.

Finally, from a very broad perspective, the present study seems to support the view that language is a historical product. To understand language in terms of the semantic/pragmatic motivations that have shaped its structures is perhaps best suited to obtain a global picture of what natural language really is.

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