The Nature of Adjectival Inflection in Japanese

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Abstract of the Dissertation

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This thesis is a study of the inflection appearing on adjectives in Japanese. The goal of this work is to investigate the structure of adjectival constructions in Japanese and its relation to adjectival inflection. In pursuing this goal, I examine standard Japanese in comparison with other world languages, as well as several dialects spoken in Japan.

Chapter 1 reviews the general patterns of inflection appearing on attributive adjectives in world languages, including English, Spanish, German, Russian, Icelandic, Swedish, Romanian, Igbo, Jukun (a Central Nigerian language) and Balanta. Comparative study suggests that inflection on adjectives in their noun-modifying function typically falls into one of the following categories: (i) agreement, (ii) case-marking, (iii) definiteness marking, (iv) incorporated/reduced relative clause material, (v) long- and short-form morphology, and (vi) adverbial marking. A simple question is: which category does Japanese adjectival morphology belong to?

Chapter 2 introduces the specific data of adjectival forms in Japanese, with special attention to inflection. Japanese is unique in that it contains two morphologically distinct types of adjectives, which I call “true adjectives” (TAs) and “nominal adjectives” (NAs). I discuss the two types from morphological, syntactic and semantic perspectives, and review the main literature on the topic, which ranges from Japanese traditional grammarians in the early twentieth century to generative grammarians in the framework of Chomsky’s (1970) classic feature-decomposition theory.

Chapter 3 examines the nature of the attributive adjective inflection in Japanese, taking up the possibilities sketched out in Chapter 1, and introducing the most widely accepted analysis. Traditionally, grammarians and linguists have assumed that Japanese

attributive adjective inflection represents incorporated/reduced relative clause material (Kuno 1973, among many others). However, I show that this idea is not sufficient to analyze all prenominal adjectives in Japanese. I present crucial semantic data that undermine the traditional analysis. I also give evidence from distributional patterns. The traditional analysis is based almost entirely on data from standard Japanese, but there is in fact great morphological variation in Japanese dialects, and the inclusion of these patterns directly challenges the traditional view. Dialect data are introduced from previous published work as well as my own field notes.

Chapter 4 further explores the nature of the inflection on attributive adjectives in Japanese. Detailed examination in the previous chapter eliminates all but one analytical possibility: case-marking ((ii) above). I argue that the status of Japanese as a case-marking language, as well as the historical development of Japanese adjectival inflection, makes the case-marking analysis plausible. I then discuss the remarkable similarity between Japanese adjectival inflection and the so-called *Ezafe* marking on adjectives and other nominal modifiers observed in Indo-Iranian languages such as Persian, Kurdish and Zazaki. Ezafe has been convincingly argued to be a case-marking phenomenon (by Samiian 1994), hence the parallelism lends further support to a case analysis. In the remainder of the chapter, I extend the case marking analysis of prenominal inflection to the other adjectival constructions in Japanese, including (primary) predicatives, small clauses, secondary predicatives, and adverbials.

Chapter 5 constitutes a technical argument for the case-marking hypothesis. Japanese contains an elliptical construction in which a small set of Japanese true adjectives of space and time appear to license a null space/time nominal precisely when inflected with the morpheme *–ku*. Case-marking is known to license empty nouns in Dutch (Kester 1996), and Japanese *–ku* inflection appears to form a class with *–i* inflection insofar as *–i* and *–ku* can alternate in certain circumstances. I argue that if *–ku* is analyzed as a case-marker, like *–i*, then the Japanese null nominals can be assimilated to the Dutch ones: both instances can be viewed as licensing of a null nominal by case-marking.

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List of Symbols

∅	zero

Abbreviations in glosses (in alphabetical order)

3PS.	3rd person singular
ACC.	accusative case
COM.	common (gender)
COMP.	complementizer
COP.	copula
DAT.	dative case
DEF.	definite
FEM.	feminine (gender)
GEN.	genitive case
HON.	honorification
INDEF.	indefinite
INSTR.	instrumental case
LOC.	locative case
LONG.	Long-Form
MAS.	masculine (gender)
NEG.	negative
NEU.	neuter (gender)
NOM.	nominative case
PL.	plural (number)
PRES.	present tense
PST.	past tense
Q	question
SG.	singular (number)
SHORT.	Short-Form
SUB.	subject

Abbreviations for languages (in alphabetical order)

BA.	Balanta
CH.	Chinese
DU.	Dutch
FA.	Farsi (Persian)
GE.	German
HA.	Hausa
IC.	Icelandic
IG.	Igbo
IT.	Italian
JP.	Japanese
JU.	Jukun
KU.	Kurmanji (Kurdish)
LA.	Latvian
NS.	Northern-Saami
OCS.	Old Church Slavic
OR.	Old Russian
PS.	Proto-Slavic
RO.	Romanian
RU.	Russian
SC.	Serbo-Croatian
SL.	Slovenian
SP.	Spanish
SU.	Sursilvan (dialect of Romantsch spoken in Switzerland)
SW.	Swedish
ZA.	Zazaki (Dimili)

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Chapter 1
Patterns of Adjectival Inflection in Attributive Modification

1.1 Introduction

Current syntactic theory suggests that significant amounts of inter- and intra-language variation can be traced to variation in "functional elements", closed class items which, in many languages, are expressed with inflectional morphemes. By studying distributional differences in such elements, and accompanying differences in syntactic structure, linguists hope to discover the parameters that fix the space of possible variation in natural language, and that children use to identify and internalize their grammars during acquisition.

This thesis is a case-study in parametric variation, investigating the structure of adjective constructions in **Japanese** and its relation to adjectival inflection. To pursue this goal, the first question to address is what kind of properties adjectives in the world's languages have in common. According to Baker (2003), there are three syntactic environments in which only an adjective can appear. First, "adjectives can be direct attributive modifiers of nouns, but nouns and verbs cannot be" (p.191) (1):

(1) a. a **smart** woman (A)
b. *a **genius** woman (N)
c. *a **shine** coin (V) (Baker 1991: 191)

Second, "adjectives can be the complements of degree heads like *so*, *as*, *too*, and *how* in English, but neither nominal nor verbal projections can be" (p.191) (2):

(2) a. Mary is *too* **smart** for her own good. (A)
b. *Mary is *too* a **genius**/a *too* **genius** for her own good. (N)
c. *If you polish it, the coin will *too* **shine** in the dark to miss. (V)
(Baker 1991: 191)

Finally, "adjectives can be resultative secondary predicates, unlike nouns and verbs" (p.191) (3):

(3) a. They beat the metal **flat**. (A)
b. *They beat the metal a **sword.** (N)
c. *They polished the coin **shine**. (V) (Baker 1991: 191)

In this chapter, we mainly concern the most distinctive characteristic of adjectives: attributive modification. In many languages, adjectives can be used as modifiers, but what kind of inflectional patterns do adjectives in attributive modification typically have?

When an English adjective modifies a noun, it usually appears pre-nominally. It remains uninflected no matter what kind of noun it modifies. For example, whereas simple (countable) common nouns in English exhibit contrast in number (singular vs. plural) by suffixation, adjectives do not show number agreement with the nouns. In (4), the adjective *bright* modifies both the singular noun *star* and the plural noun *star**s*** without any overt morphological agreement:

(4) a. the **bright** star
b. the **bright** star**s**

Thus, adjectives in English do not have a rich inflectional system.[1] This is not surprising, given that English is <u>not</u> a highly inflected language. On the other hand, the adjective in many world languages has a rich inflectional system. In this chapter, I will observe a few types of adjectival inflection, including:

- φ-agreement
- Case-marking
- Definiteness
- Long-Form and Short-Form
- Incorporated/reduced relative clause material
- Adverbial

Each type of inflection on attributive adjectives is compared with predicative (and sometimes with secondary resultative predicative) adjectives.

1.2 φ-Agreement

In some languages, an adjective agrees with the noun it modifies in φ-features (person, number and gender). The following definition of "agreement" is from Steele (1978), cited in Kester (1996):

> The term *agreement* commonly refers to some systematic covariance between a semantic or formal property of one element and a formal property of another. For example, adjectives may take some formal indication of the number and gender of the noun they modify.
> (Steele 1978: 610)

[1] There are only two kinds of inflectional suffixes on adjectives in English. They are the comparative *–er* (ia) and the superlative *–est* (ib):
(i) a. the bright**er** star b. the bright**est** star

In general, person distinguishes among first, second, and third person; number distinguishes between singular and plural; gender distinguishes among masculine, feminine, and neuter.[2]

Adjectives may show φ-feature agreement with the noun they modify in pre/post-nominal positions and also with the subject in predicative positions. The examples of attributive adjectives in Spanish in (5) show the adjective *alto* 'tall' agreeing with the preceding noun in number and gender:

(5) a. el chico alt**o**
the.MAS.SG boy tall.MAS.SG
'the tall boy'

b. la chica alt**a** SP.
the.FEM.SG girl tall.FEM.SG
'the tall girl'

c. los chicos alt**os**
the.MAS.PL boys tall.MAS.PL
'the tall boys'

d. las chicas alt**as**
the.FEM.PL girls tall.FEM.PL
'the tall girls'

(Kester 1996: 59)

Consider also the adjectives in predicative positions (6):[3]

(6) a. El chico es alt**o**.
the.MAS.SG boy is tall.MAS.SG
'The boy is tall.'

b. La chica es alt**a**. SP.
the.FEM.SG girl is tall.FEM.SG
'The girl is tall.'

c. Los chicos son alt**os**.
the.MAS.PL boys are tall.MAS.PL
'The boys are tall.'

d. Las chicas son alt**as**.
the.FEM.PL girls are tall.FEM.PL
'The girls are tall.'

Again, the adjective *alto* 'tall' agrees with the subject in gender and number. Thus, the adjective in Spanish is inflected, depending on the φ-features of the noun it modifies in postnominal positions and of the subject in predicative positions.

1.3 Case-marking

The second type of adjectival inflection in the world's languages is case-marking. In some languages, an adjective agrees with the noun it modifies in case such as nominative (NOM), accusative (ACC), dative (DAT), genitive (GEN) and instrumental (INSTR).

In many Germanic languages adjectives inflect according to the case of their associated nominal. Examples in (7) show that adjectives in German are inflected differently for each case: nominative, accusative, dative and genitive:

[2] There are some languages with dual (referring to 2), trial (referring to 3) and paucal (referring to a few) numbers. Also, in some languages masculine and feminine are united as common gender. In Bantu languages there exist genders as many as 16. I am grateful to Alice Harris for pointing this out to me.

[3] I am grateful to Susana Huidobro for the data in (6) and the discussion.

(7) ‘good wine’

a.	gut**er**	Wein	b.	gut**en**	Wein	GE.
	good.**NOM**	wine		good.**ACC**	wine	
c.	gut**em**	Wein	d.	gut**en**	Weines	
	good.**DAT**	wine		good.**GEN**	wine	(Kester 1996: 160)

However, the case agreement is limited to the adjectives in prenominal position in this language. When an adjective appears in predicative position, it remains uninflected showing no agreement with the case of the subject. Examples in (8) show that, whereas the attributive adjective *rot* ‘red’ exhibits the case agreement with the nominative female singular noun *Tür* ‘door’ in (8a), the primary predicative adjective and secondary resulatative adjective *rot* ‘red’ remain uninflected in (8b,c):

(8) a. Die rot**e** Tür ist offen. GE.
the red.NOM.FEM.SG door is open
‘The red door is open.’ (Kester 1996: 157)

b. Die Tür ist rot_.
the door is red
‘The door is red.’

c. Johann strich die Tür rot_.
‘John painted the door red.’ (Kester 1996: 157)

Case-marking is also seen by the familiar concord relations in Slavic. For example, in Russian attributive adjectives agree with its associated noun in case, as shown in (9):[4]

(9) ‘a/the smart girl’

a.	umnaja	devuška	RU.
	smart.**NOM**.FEM	girl.NOM	
b.	umnuju	devušku	
	smart.**ACC**.FEM	girl.ACC	
c.	umnoj	devuški	
	smart.**GEN**.FEM	girl.GEN	
d.	umnoj	devuške	
	smart.**DAT**.FEM	girl.DAT	
e.	umnoj	devuškoj	
	smart.**INSTR**.FEM	girl.INSTR	

On the other hand, primary and secondary predicative adjectives also agree in case with the nominal of which they are predicated (see Babby (1998), Bailyn (1995)). The primary predicate adjective *golodnyj* ‘hungry’ agrees in case with the subject *Ivan* in (10a); the subject-oriented secondary predicate *golodnyj* ‘hungry’ is inflected for nominative case in (10b); the object-oriented secondary predicate *syruju* ‘raw’ is inflected for accusative case, agreeing with the noun *rybu* ‘fish’ in (10c):

[4] I am grateful to Christina Bethin and Masha Vassilieva for the Russian data in (9) and (10).

(10) a. Ivan byl golodnyj. RU.
Ivan.NOM was hungry.**NOM**
'Ivan was hungry.'

b. Ivan vernulsja domoj golodnyj.
Ivan.NOM returned home hungry.**NOM**
'Ivan returned home hungry.' (Babby 1998)

c. Ivan el rybu syruju.
Ivan.NOM ate fish.ACC raw.**ACC**
'Ivan ate fish raw.'

However, the pattern of adjectives in Russian is in fact more complicated than what we see in examples (9) and (10). It allows only a certain type of adjectives to be inflected for case, as I will discuss in more detail later.

There are languages in which adjectives are <u>always</u> overtly marked for case (as well as number and gender). Consider the following examples in Icelandic (11) and (12):[5]

(11) a. Rauda hurdin er opin. IC.
red.**NOM**.SG.FEM door-the.NOM.SG.FEM be.SG open.NOM.SG.FEM
'The red door is open.' (Kester 1996: 156)

b. Jón braut rauda hurdina.
John broke red.**ACC**.SG.FEM door-the.ACC.SG.FEM
'John broke the red door.'

(12) a. Hurdin er raud. IC.
door-the.NOM.SG.FEM is red.**NOM**.SG.FEM
'The door is red.'

b. Jón máladina hurdina rauda.
John painted door-the.ACC.SG.FEM red.**ACC**.SG.FEM
'John painted the door red.'

In (11a,b), the attributive adjective *raudur* 'red' agrees in case with its noun *hurd-in* 'the-door'. In (12a,b), the primary and secondary adjective *raudur* 'red' agrees in case with its noun *hurd-in* 'the door'.[6]

Thus, adjectives in some languages inflect according to the case of their associated nominal; whereas case agreement takes place <u>only</u> between attributive adjectives and their associated nouns in a language such as German, adjectives are always inflected for the case of their associated noun in a language such as Icelandic.[7]

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[5] I am grateful to Hannes Vilhjalmsson for the Icelandic data and for discussion.

[6] The reason why the adjective *raudur* 'red' takes different inflection in (11a) and (12a) (*raud**a*** vs. *raud*) is that the adjective needs an additional marking ***-a*** for the definiteness of its noun ***hurd-in*** '**the**-door' in (11a), while it does not in (12a).

[7] According to Roberge (1989) and Kester (1996), in Sursilvan (the Sursilvan dialect of Romantsch) the morpheme *–s*, a remnant of the Latin singular nominative, appears with masculine, singular adjectives in predicative positions (i), but not in pronominal positions (ii):

1.4 Definiteness

In some languages, an adjective is inflected for the definiteness of the noun that it modifies. Consider examples in Romanian. Whereas the indefinite article *un* is morphologically independent from a noun (13a), the definite article *–ul* is realized as a form of enclitics (13b):

(13)	a.	**un**	om	'a man'	b.	om**ul**	'the man'	RO.
		a	man			man-the		(Giusti 1994: 241)

When an adjective modifies an indefinite noun, it can appear either prenominally or postnominally. As shown in (14), the adjective *batrîn* 'old' appears before or after the noun *om* 'man' without any morphological change:

(14) 'an old man'

	a.	un	**batrîn**	om	b.	un	om	**batrîn**	RO.
		an	old	man		an	man	old	(Giusti 1994: 242)

When an adjective modifies a definite noun, it can also appear either prenominally or postnominally; however, unlike the case of indefinite, two different morphological patterns become possible. In (15a), where the adjective *batrîn* 'old' <u>precedes</u> the noun, the definite article *ul* is cliticized to the adjective (i.e., *batrîn***ul)** while the noun remains uninflected. In (15b), where the adjective <u>follows</u> the noun *om* 'man', the definite article *ul* is cliticized to the noun (i.e., *om***ul)** while the adjective remains uninflected:

(15) 'the old man'

	a.	batrîn**ul**		om	b.	om**ul**		batrîn	RO.
		old-the		man		man-the		old	(Giusti 1994: 242)

Thus, adjectives in Romanian can be inflected for definiteness of the nominals, but not with indefinite nominals.

Swedish adjectives show similar, but more complicated patterns. In Swedish, like in the other Mainland Scandinavian languages, nouns are specified for gender and show a morphological contrast in number, and definite and indefinite articles are morphologically identical. Definite and indefinite articles for common nouns (such as *bil* 'car' and *bok* 'book') are both *en*, and those for neuter nouns (such as *hus* 'house' and *glas* 'glass') are both *ett*. Whereas these articles are morphologically independent from a

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(i) a. Il cavagl ei vegl-**s**.
the horse is old.MAS.SG
'The horse is old.'

b. La casa ei vegl**ia**. SU.
the house is old.FEM.SG
'The house is old.'

(ii) in cavagl vegl
a horse old.MAS.SG
'an old horse'

(Roberge 1989)

noun in the instance of indefinites (16), they are realized as a form of enclitics in the instance of definites (17):[8]

(16) *Indefinite*

a.	**en** bil	'a car'		SW.
b.	**ett** hus	'a house'	(Kester 1996: 15)	

(17) *Definite*

a.	bil**en**	'the car'		SW.
	car-the			
b.	hus**et**	'the house'		
	house-the		(Kester 1996: 15)	

When an adjective modifies a noun, it appears prenominally and exhibits overt agreement with its associated noun in number and gender; however, crucially adjectival agreement involves two morphologically different paradigms, depending on the indefiniteness/definiteness features of the DP (Kester 1996). In the indefinite paradigm, while each gender (common and neuter) takes different adjectival inflection in singular (18), the distinction is lost in plural (19):

(18) *Indefinite, singular*

a.	en	stor_	bil	b.	ett	stor**t**	hus		SW.
	a.COM.SG	big.COM.SG	car		a.NEU.SG	big.NEU.SG	house		
	'a big car'				'a big house'				

(19) *Indefinite, plural*

a.	stor**a**	bilar	b.	stor**a**	hus		SW.
	big.COM.PL	cars		big.NEU.PL	houses		
	'big cars'			'big houses'			

On the other hand, the definite paradigm is morphologically poor. As shown in (20) and (21), it contains only one morpheme *–a*, which indicates that an adjective in definite DPs does not agree with its associated noun in number and gender. However, interestingly, while the definite articles are encliticized to the nouns, the use of the definite adjective *stora* 'big' requires an additional pre-adjectival definite article (*den* for singular common nouns (20a), *det* for singular neuter nouns (20b), *de* for plural common and neuter nouns (21a,b)):

(20) *Definite, singular*

a.	den	stor**a**	bilen	SW.
	the.COM.SG	big.COM.SG	car-the.COM.SG	
	'the big car'			

[8] Traditionally *indefinite* and *definite* are called *strong* and *weak* (respectively).

b. det stor**a** huset
the.NEU.SG big.NEU.SG house-the.NEU.SG
'the big house' (Kester 1996: 64)

(21) *Definite, plural*
a. de stor**a** bilarna SW.
the.COM.PL big.COM.PL cars-the.COM.PL
'the big cars'
b. de stor**a** husen
the.NEU.PL big.NEU.PL houses-the.NEU.PL
'the big houses' (Kester 1996: 65)

This phenomenon is traditionally called *double definiteness* (Delsing 1993, Giusti 1994, Kester 1996, among others).[9]

According to Kester (1996), double definiteness is triggered not only by definite features of adjectives but also by their syntactic position. The unmarked position of an adjectival modifier is pronominal (22a), but adjectives also occur postnominally. (22b) shows that adjectives in postnominal apposition take the indefinite endings although they modify the definite noun *dagen* 'the day':

(22) a. den kall**a** klar**a** dagen 'the cold clear day' SW.
the cold clear day-the
b. Den här dagen, kall_ och klar_, känns some riktig svensk vinter.
'This day cold and clear , feels like real Swedish winter.'
(Kester 1996: 67)

As Kester (1996) summarizes, adjectival agreement in Swedish involves two different paradigms. The definite paradigm is only found with prenominal adjectives that are part of a definite DP, whereas the indefinite paradigm is found in all other cases: in indefinite DPs and with postnominal adjectives.[10]

[9] In Romanian, double definiteness is not observed although there exists such an article *cel* 'the'. *Cel* 'the' is the adjectival article, and occurs with a numeral adjective or when the adjective is nominalized (Giusti 1994: 243-244):
(i) a. **cei** trei oameni 'the three men' b. **cel** batrîn 'the old [one]' RO.
the three men the old

[10] Adjectives in predicative position also take the indefinite paradigm (Kester 1996) (even though the arguments that they are predicated of are definite):
(i) a. Bilen är stor_. 'The car is big.' b. Huset är stor**t**. 'The house is big' SW.
car-the is big.COM.SG house-the is big.NEU.SG
(Kester 1996: 79)

1.5 Long- and Short-Forms

In several Slavic languages, there are two different types of inflectional suffixes observed in adjectives. These suffixes are called Long-Form and Short-Form.[11] As expected from the terminology, the Long-Form suffix is longer than the Short-Form one. For example, in Russian most adjectives have Long-Forms and Short-Forms, and the morphological process to form one from the other is transparently productive, as shown in (23):

(23)

	LONG-FORM		SHORT-FORM		RU.
	Masculine	*Feminine*	*Masculine*	*Feminine*	
a.	nov**ij**	nov**aja**	nov	nov**a**	'new'
b.	trudoljubiv**ij**	trudoljubiv**aja**	trudoljubiv	trudoljubiv**a**	'industrious'

Then, questions arise as to why any language requires these two different types of suffixes for adjectives, to what makes Long-Forms and Short-Forms different from each other, and to whether either of them is different from the adjectival inflection in the other world languages. As we saw in section 1.3, some of them are similar to agreement marking in that they show number, gender or case agreement with their associated nouns in DPs or with their arguments in predicate position. On the other hand, they are unique in that the distribution of Long-Forms and Short-Forms can be restricted and in that the choice of Long- or Short-Form suffixes makes the semantics of adjectives different. The following subsections discuss some of the distinctive characteristics of Long-Form and Short-Form adjectives.

1.5.1 Predicative vs. Attributive

This subsection presents a case where Long-Form and Short-Form adjectives have different distributions. In Russian, whereas Long-Form adjectives are inflected for all cases (nominative, accusative, genitive, dative, instrumental, and locative), Short-Form adjectives preserve only the nominal endings of the nominative case. We saw earlier in (9) that an adjective *umn-* 'smart' is inflected for the case and gender of its associated noun, as repeated as (24). These adjectives are all Long-Forms:[12]

(24) 'a/the smart girl'

a.	umn**aja**	devuška	RU.
	smart.NOM.FEM	girl.NOM	
b.	umn**uju**	devušku	
	smart.ACC.FEM	girl.ACC	
c.	umn**oj**	devuški	
	smart.GEN.FEM	girl.GEN	

[11] I am grateful to Franc Marušič for discussion of the material in this section.

[12] Long-Form is also called "normal" form in Cubberley (2002).

d. umn**oj** devuške
smart.DAT.FEM girl.DAT
e. umn**oj** devuškoj
smart.INSTR.FEM girl.INSTR

When an adjective *umn-* 'smart' modifies a singular masculine genitive noun, then it would be *umn**ogo***; when it modifies a plural feminine nominative noun, then it would be *umn**ije***, and so on.

On the other hand, Short-Form adjectives preserve only the nominal endings of the nominative case. (25) shows the adjective *umn-* 'smart' in Short-Forms, agreeing in number and gender:

(25) *Short-Form* 'smart'
a. umn(∅) (SINGULAR MASCULINE) RU.
b. umn**a** (SINGULAR FEMININE)
c. umn**o** (SINGULAR NEUTER)
d. umn**i** (PLURAL)

The distribution of these two forms seems to be neither identical nor complementary. Whereas both Short-Forms and Long-Forms can appear in copular predicative constructions (26), only Long-Forms are possible in prenominal positions (27) (Babby 1973, 1975; Siegel 1976; Bailyn 1994):

(26) 'The girl was smart.'
a. Devuška byla umn**aja**. RU.
girl.NOM was.FEM smart.NOM.SG.FEM.**LONG**
b. Devuška byla umn**a**.
girl.NOM was.FEM smart.SG.FEM.**SHORT**

(27) 'smart girl'
a. umn**aja** devuška RU.
smart.NOM.SG.FEM.**LONG** girl.NOM

b. *umn**a** devuška
smart.SG.FEM.**SHORT** girl.NOM

Furthermore, although both Long-Forms and Short-Forms are allowed in predicative position (as shown in (26)), there is a semantic difference. For example, whereas (26a) means that "the girl was (particularly) intelligent compared with other ones; in other words, the girl was an intelligent one" (relative reading), (26b) means that "the girl was intelligent" (absolute reading). Consider more examples in (28). In (28a), where the adjective 'interesting' takes the Long-Form *interesn-**yi***, the lecture is interesting in general or inherently. On the other hand, in (28b), where the adjective takes the Short-Form *interes(e)*, the lecture is interesting explicitly for specialists:

(28) a. Èt-ot doklad Ø RU.
this.NOM.SG.MAS lecture.NOM.SG.MAS (be.3PS.PRES)
očen′ interesn-**yj**.
very interesting.NOM.SG.MAS.**LONG**
'This lecture is very interesting.'
b. Èt-ot doklad Ø
this.NOM.SG.MAS lecture.NOM.SG.MAS (be.3PS.PRES)
interes(e)n (tol'ko dlja specialist-ov).
interesting.SG.MAS.**SHORT** only for specialist.GEN.PL
'This lecture is interesting (only to specialists).'
(Cubberley 2002: 212)

The semantic distinction of these two forms explains why predicative adjectives must be in their Short-Forms in order to state something absolute such as scientific laws (Babby 1975; Siegel 1976). In (29), only Short-Form is possible since the infiniteness of space is absolute:

(29) 'Space is infinite.'
a. Prostrantsvo beskonechno. RU.
space.NOM infinite.SG.FEM.SHORT
b. *Prostrantsvo Ø beskonechnoe.
space infinite.NOM.SG.FEM.LONG (Babby 1975: 191)

As Siegel (1976) concludes, "Long-Forms actually are generated only prenomially and Short-Forms only in predicate position (p.308)." Therefore, the Long-Form adjective *umn-aja* in (26a) is more appropriately glossed as 'an intelligent one', rather than 'intelligent', with the structure (30):

(30) Devuška byla [$_{NP}$ [$_{AP}$ umn**aja**] Ø] RU.
girl.NOM was.FEM smart.NOM.SG.FEM.LONG
'The girl was an intelligent <u>one</u>.'

Thus, the Long-Form adjectives in Russian are in attributive constructions, where they modify a null noun. The table (31) summarizes the distributional difference between Long-Forms and Short-Forms in Russian:[13]

[13] Siegel (1976) notes that there is a class of Russian adjectives with no Short-Form called "relational adjectives" (e.g., *byvshij* 'former'). They are predictable since they have no absolute reading. This fact is important in later discussions. I will return to this issue in Chapter 3.

(31) Russian Long-Form & Short-Form

	Predicative	Attributive
Long-Form	Yes (but in NP)	Yes
Short-Form	Yes	No

1.5.2 Definite vs. Indefinite

We saw in section 1.4 that adjectives in some languages are inflected for definiteness of a noun that it modifies. Long-Form in Slavic languages also marks an adjective to show definiteness of its associated noun, while Short-Form does not. For example, in Serbo-Croatian, one of the languages spoken in the former Yugoslavia, adjectives have both Long-Form and Short-Form, and one Form is distinguished from its counterpart either morphologically or phonologically (by vowel lengthening or accent). (Unlike Russian) only Short-Form adjectives are possible in predicative position (32):[14]

(32) a. Òvāj grâd je nȍv. SC.
this city be.3PS.PRES new.SG.MAS.**SHORT**
'This city is new.'
b. * Òvāj grâd je novī.
new.NOM.SG.MAS.**LONG** (Browne 2002: 327)

Furthermore, both Long-Forms and Short-Forms are possible in prenominal position, but they contrast semantically: whereas Long-Forms have definite reference (33a), Short-Forms have indefinite reference (33b):

(33) a. nȍvī grâd b. nȍv grâd SC.
new.NOM.SG.MAS.**LONG** city new.NOM.SG.MAS.**SHORT** city
'<u>the</u> new city' '<u>a</u> new city' (Browne 2002: 327)

Both Long-Form and Short-Form adjectives are naturally inflected for all cases (nominative, accusative, genitive, dative, locative, and instrumental) as well as number and gender (masculine, feminine and neuter).

[14] Long-Form could be used in predicative position when an adjective lacks its Short-Form (Browne 2002: 352):
(i) Màrtin je mâlī. 'Martin is small.' SC.
Martin be.3PS.PRES small.NOM.SG.MAS.

The table (34) summarizes the difference between Long-Forms and Short-Forms in Serbo-Croatian.[15] [16] [17]

(34) Serbo-Croatian Long-Form & Short-Form

	Predicative	Attributive
Long-Form	No	Yes (definite)
Short-Form	Yes	Yes (indefinite)

[15] According to Bailyn (1994), the distinction of definiteness between Long-Forms and Short-Forms is maintained only in the masculine nominative. It is lost for most speakers in other cases and definiteness is determined by context.

[16] Standard Slovenian also has Long- and Short-Form adjectives with the definite vs. indefinite opposition (Priestly 2002) (i):

(i) a. nov**i** pəs b. nov pəs SL.
new.NOM.SG.MAS.LONG dog new.NOM.SG.MAS.SHORT dog
'the new dog' 'a new dog'

In colloquial Slovenian, when adjectives are inflected for the other cases, the definiteness vs. indefinitenss distinction is expressed with *ta* and *en*, which act as definite article and indefinite article, respectively. Examples in (ii) show 'the new dog' and 'a new dog' in genitive case. In (iib), *en* is inflected for genitive case, *enega*:

(ii) a. ta novega psa 'the new dog' SL.
DEF new.GEN.SG.MAS dog.GEN.SG.MAS
b. enega novega psa 'a new dog'
INDEF.**GEN** new.GEN.SG.MAS dog.GEN.SG.MAS

Ta is originally a demonstrative 'this', and as a demonstrative it is inflected for number, gender and case. If it is used for reference of definiteness, it does not show agreement, as in (iia). According to Franc Marušič (p.c.), *ta* is interpreted only as demonstrative in noun phrases without an adjective:

(iii) **ta** pəs 'this/#the dog (NOM)' SL

On the other hand, *en* is originally cardinal 'one', and it takes adjectival declension, showing number, gender and case agreement.

[17] Latvian, a Baltic language spoken in Latvia, is another language in which adjectives show the definite vs. indefinite opposition by inflection; however, interestingly, simple definiteness is expressed only in noun phrases containing an adjective since the language has no definite article (Budina-Lazdina 1966; Lyons 1999). Consider examples in (i). In (ia), a common noun *koks* 'tree' is ambiguous with respect to definiteness: it could be either 'a tree' or 'the tree'. When it is modified by an adjective *liels* 'big', it has an indefinite reference (ib). Furthermore, when it is modified by the definite adjective *liel**ai**s* 'big', the whole phrase has a definite reference (ic):

(i) a. koks 'tree', 'a tree', 'the tree' LA.
b. liels koks 'a big tree'
c. liel**ais** koks 'the big tree' (Lyons 1999: 84)

However, it is not clear to me yet whether these two indefinite and definite markings could be considered as Long-Forms and Short-Forms.

1.5.3 The History of Long-Form and Short-Form

We observed a couple of interesting characteristics of Long-Form and Short-Form adjectives found in Slavic languages, but the patterns of these two forms are too complicated to unify (especially contrastively). There are cases in which Long- and Short-Form suffixes carry the definite vs. indefinite distinction, but it seems to be circumscribed. Furthermore, even though a language has both Long- and Short-Forms, the latter tend to be less productive than the former.

I suggest that historical analysis can provide a clue to understand each Form better; what appears to be complicated might actually result from many simplifications that adjectival declension has undergone in the course of the history.

1.5.3.1 Proto-Slavic

In Proto-Slavic, the reconstructed ancestor of the Slavic languages, adjectives were inflected for number (singular, dual and plural), gender (masculine, feminine and neuter) and case (nominative, accusative, genitive, dative, instrumental, locative and ablative). Most adjectives were either definite or indefinite (Schenker 2002: 91). Indefinite adjectives were inflected according to "the nominal *-ŏ-* (masculine and neuter) or *-ā-* (feminine) types". These *-ŏ-* and *-ā-* were among the thematic vowels appearing in Proto-Indo-European nominal (including nouns and adjectives) stems.

Consider Proto-slavic nouns first. As shown in (35) and (36), a Proto-Slavic masculine noun *orb-ъ* 'slave' (derived from the Proto-Indo-European *orbh-**ŏ***-) and a feminine noun *žen-a* 'woman' (derived from the Proto-Indo-European *gwen-**ā***-) are inflected for case and number:

(35) *Masculine Nouns* 'slave'

a.	orb-**ъ**	NOMINATIVE/ACCUSATIVE	SINGULAR	PS.
b.	orb-**a**	GENITIVE	SINGULAR	
c.	orb-**omъ**	INSTRUMENTAL	SINGULAR	
d.	orb-**i**	NOMINATIVE	PLURAL	(from Schenker 2002: 87)

(36) *Feminine Nouns* 'woman'

a.	žen-**a**	NOMINATIVE	SINGULAR	PS.
b.	žen-**o**	ACCUSATIVE	SINGULAR	
c.	žen-**y**	GENITIVE	SINGULAR	
d.	žen-**ojo**	INSTRUMENTAL	SINGULAR	
e.	žen-**y**	NOMINATIVE	PLURAL	(from Schenker 2002: 87)

These noun endings (bold-faced in (35) and (36)) are also used as indefinite adjective declension, which are obligatorily marked for case, number and gender. That is:

When an adjective modifies:		The adjective takes:	(INDEFINITE)
• a masculine noun	→	the nominal *-ŏ-* type inflection,	
• a neuter noun	→	the nominal *-ŏ-* type inflection,	
• a feminine noun	→	the nominal *-ā-* type inflection.	

For example, a Proto-Slavic adjective *star* 'old' is inflected as in (37):

(37) *Indefinite Adj.* 'old' Modified noun (MASCULINE) eg. 'slave' (from (35))

a.	star-**ъ**	NOMINATIVE/ACCUSATIVE	SINGULAR	orb-**ъ**	PS.
b.	star-**a**	GENITIVE	SINGULAR	orb-**a**	
c.	star-**omъ**	INSTRUMENTAL	SINGULAR	orb-**omъ**	
d.	star-**i**	NOMINATIVE	PLURAL	orb-**i**	

(from Schenker 2002: 87)

(38) *Indefinite Adj.* 'old' Modified noun (FEMININE) eg. 'woman' (from (39))

a.	star-**a**	NOMINATIVE	SINGULAR	žen-**a**	PS.
b.	star-**o**	ACCUSATIVE	SINGULAR	žen-**o**	
c.	star-**y**	GENITIVE	SINGULAR	žen-**y**	
d.	star-**ojo**	INSTRUMENTAL	SINGULAR	žen-**ojo**	
e.	star-**y**	NOMINATIVE	PLURAL	žen-**y**	

(from Schenker 2002: 91)

As shown above, indefinite adjectives take the identical inflectional ending with the noun it modifies, agreeing in case, number and gender. For example, 'an old slave' (in nominative) is *star–ъ orb–ъ*, where both are inflected according to the nominal *-ŏ-* type, as shown in (37a).

On the other hand, definite adjectives are formed by adding the "anaphoric pronoun" *j-* to the forms of the indefinite adjective (as in (37) and (38)).[18] That is:

When an adj. modifies:		The adj. takes:	(DEFINITE)
• a masculine noun	→	the nominal *-ŏ-* type inflection + mas. anaphoric pronoun,	
• a neuter noun	→	the nominal *-ŏ-* type inflection + neu. anaphoric pronoun,	
• a feminine noun	→	the nominal *-ā-* type inflection + fem. anaphoric pronoun.	

[18] There is a natural correlation between anaphora and definiteness found in some languages. For example, in Hausa, the most widely spoken Chadic language in Africa, definite article suffixes *–n* /*–r* are principally used for anaphoric definiteness (Lyons 1999), as shown in Example (i):

(i) To, ashe ya bar hula-r-sa a wuri-n da aka yi karo-**n**, HA.
OK really AUX leave cap-DEF-his at place-DEF REL AUX do collision-**DEF**
sai wani yaro ya ga hula-**r**.
then a box AUX see cap-**DEF**
'OK, he had left his cap where the collision had happened, then a boy saw the cap.'
(Lyons 1999: 52)

Lyons (1999) analyzes that, while the definite noun phrase *hular* 'the cap' has its antecedent *hularsa* 'his cap' in the same sentence, "the previous mention of *karon* 'the collision' is considerably further back in the discourse (p.52)."

For example, the singular masculine anaphoric pronoun in nominative case is *jь*. So, when an adjective *star-* 'old' modifies a definite masculine noun in nominative case, it is followed by the indefinite adjectival ending (*-ъ*), followed by the anaphoric ending (*-jь*), producing *star-ъ-**jь***. (39) and (40) below show more examples:

(39) *Definite Adj.* 'old' Modified noun (MASCULINE) cf. anaphoric pronoun

a.	star-**ъ**-**jь**	NOMINATIVE SINGULAR	jь	PS.
b.	star-a-**jego**	GENITIVE SINGULAR	jego	

(from Schenker 2002: 90-91)

(40) *Definite Adj.* 'old' Modified noun (FEMININE) cf. anaphoric pronoun

a.	star-a-**ja**	NOMINATIVE SINGULAR	ja	PS.
b.	star-o-**jo**	ACCUSATIVE SINGULAR	jo	
c.	star-o-**jo**	INSTRUMENTAL SINGULAR	jejo	
d.	star-e-**ji**	LOCATIVE SINGULAR	jeji	

(from Schenker 2002: 91-91)

Some definite adjectival formation is straightforward: an anaphoric pronoun is added to an indefinite adjective with agreement of case, number and gender, while the others (such as (40c,d) go through phonological changes.

We have seen the formation of indefinite and definite adjectival endings. For example, the indefinite nominative feminine singular ending is *–a*, and the definite nominative feminine singular ending is *-a-ja*. These are exactly what we see as the markings of nominative feminine singular Short- and Long-Form adjectives in Modern Russian, as seen in (26) (repeated as (41)):

(41) 'The girl was smart.'

a.	Devuška	byla	umn**a**.	RU.
	girl.NOM	was.FEM	smart.SG.FEM.**SHORT**	
b.	Devuška	byla	umn**aja**.	
	girl.NOM	was.FEM	smart.NOM.SG.FEM.**LONG**	

Consider now what are the syntactic features of Long-Form and Short-Form adjectives in Proto-Slavic. Besides agreeing in number, gender and case with their associated nouns, both Long- and Short-Form adjectives appear prenominally (42):

(42)

a.	sъ	dobr**ъjь**	učenik**ъ**	b.	si	dobr**aja**	učenic**a** PS.
	this	good.SG.**MAS**.LONG	pupil		this	good.SG.**FEM**.LONG	pupil
	'this good pupil'				'this good pupil'		

(Schenker 2002: 109)

On the other hand, it is hard to test which form is possible in predicative position due to the limited availability of data; however, given that any Short-Form appears in that position in modern Slavic languages, they are probably possible predicatively in Proto-

Slavic. Example (43) from Old Church Slavic shows the Short-Form adjective *slepъ* 'blind' appeared in a predicative position in the about tenth-century Slavic:

(43) beaxo videli prezde iko **slepъ** (SHORT) … OCS.
'They had previously seen that he was blind, …' (*Marianus*: John 9.8)

Then, what about Long-Form adjectives? I do not know the answer at this point, as Huntley (2002) saying that "[in Old Church Slavic] reliable examples of Long-Form adjectival predicates do not happen to be attested (p.167)."

1.5.3.2 Diachronic change: the case of Russian

We saw that Slavic Long-Form and Short-Form suffixes are originally derived with the references of definiteness and indefiniteness (respectively). We also saw that they have a robust case-marking system although the other syntactic features are not clear yet. Then a question arises as to how one language has been changed with one feature remained but not the other through the history.

Take Russian as an example. As discussed in 1.5.1, Russian has Long-Form and Short-Form adjectives in parallel (except for a few exceptions). Whereas the former could appear both prenominally and predicatively, only predicative position is possible for the latter. Short-Form adjectives have lost the indefinite reference and the agreement for case (or only agreement with nominative case survived at most). On the other hand, Long-Form adjectives do not necessarily have the definite reference. Thus, it is not too much to say that Russian Long-Form and Short-Form adjectives are unique.

In Old Russian the distribution of Long-Form and Short-Form is quite different from Modern Russian (Bailyn 1994). First, Long-Form adjectives in Old Russian are <u>not</u> used in copular constructions; they appear only prenominally. Second, Long-Form adjectives are systematically interpreted as definite, as shown in (44):

(44) a. A velik**yi** kъnjazъ … OR.
and great.**LONG** prince
'And <u>the</u> great prince …'
b. … plakaašesja o dobrorodbněmb tělě i čstbněmb razumě
cried.3SG about noble.**LONG** body and pure.**LONG** mind
vzddasta ego …
age his
'… [he] cried about <u>the</u> noble body and pure mind of his youth…'
(Bailyn 1994: 19)

On the other hand, Short-Form adjectives can be used attributively as well as predicatively, and have indefinite reference, as shown in (45):

(45) a. povelě iskopati jamu velik**u** i glubok**u**. OR.
ordered to-dig hole great.ACC.**SHORT** and deep.ACC.**SHORT**
'[He] ordered [them] to dig <u>a</u> great and deep hole.'

b. Vьpade vь nedegь krěpьkь.
fell-3SG into ailment strong.**SHORT**
'He fell into a serious sickness.' (Bailyn 1994: 17)

These examples also show some important fact about Short-Form adjectives in Old Russian: they typically followed the nouns. Recall that Short-Forms appeared prenominally in Proto-Slavic. Recall also that they are not used attributively any more in Modern Russian. A question is whether the postnominal position of Short-Form adjectives in Old Russian indicates that there would be only predicative use available in Modern Russian. I do not have the answer to this question at this point.

The table (46) summarizes the difference between Long-Forms and Short-Forms in Old Russian.[19]

(46) Old Russian Long-Form & Short-Form

	Predicative	Attributive
Long-Form	No	Yes (definite; prenominal)
Short-Form	Yes	Yes (indefinite; postnominal)

1.6 Incorporated/Reduced Relative Clauses

The grammar of English freely allows post-nominal relative clauses (RCs) like (47a). In a more limited set of cases, however, it also permits post-nominal adjectives (47b):

(47) a. Mary saw the stars **that were visible**.
b. Mary saw the stars **visible**.
(cf. Mary saw the **visible** stars.)

Given the usual prenominal position of adjectival modifiers in English,[20] a natural question about (47b) is whether its structure is as simple as it seems: is *visible* occurring as a bare post-nominal AP (48a), or is it embedded within more complex (but silent) relative clause structure (48b)?

(48) *Mary saw the stars **visible***.
a. the stars [$_{AP}$ visible]
b. the stars [$_{RC}$ THAT WAS [$_{AP}$ visible]]

[19] Bailyn (1994) gives a syntactic analysis of Long-Form and Short-Form adjectives in connection with the references of definiteness and indefiniteness in Old Russian, and discusses how only Long-Form adjectives have become possible as modifiers of a noun diachronically.

[20] There is a semantic difference between *the stars visible* and *the visible stars*. See Bolinger (1967) and Larson (1998) for discussion.

Hudson (1973) (and others) has argued that surface appearances are in fact deceiving in this case: (48b) (and similar examples) are actually "reduced relative clauses". On this view, English grammar actually contains no genuine post-nominal APs; it only <u>appears</u> to have them.

1.6.1 Igbo

Maduka-Durunz (1990) makes a similar proposal for Igbo, a language spoken in Nigeria, Africa. There exist only five basic adjectives in this language: *ọma* 'good/beautiful', *ọjọ̄* 'bad/ugly', *ọcha* 'white/bright', *ojiǐ* 'black/dark', and *ukwu* 'big/large'. Except for *ukwu* 'big', they are derived from verb roots through their cognate noun forms. They can be found only post-nominally, as shown in (49):

(49) a. ụlò [$_{AP}$ **ọma**] IG.
house good/beautiful
'good/beautiful house'
b. ***ọma** ụlò

In addition, the basic adjectives appear only in post-nominal constructions (or in his term "associative" constructions), but <u>not</u> in predicative constructions. (50a) shows a relativized predicative sentence incorporating the cognate noun of the adjective *ọma* 'good/beautiful', *mmā* 'goodness', with the copula *di*; (50b) shows a relative clause, in which the signal of tone change makes it different from (50a):

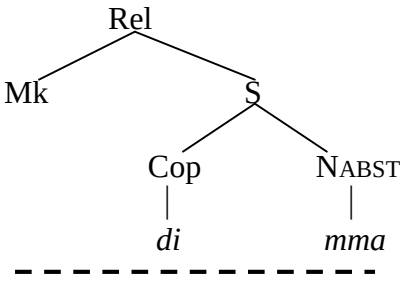
(50) a. ụlò ahù dì mmā IG.
house that possesses goodness
'that house is good'
b. ụlò ahu dī mmā
house that that-possesses goodness
'that house that is good' (Maduka-Durunz 1990: 241)

Examples (51) show that *mmā* 'goodness' in (50) cannot be replaced with the adjective *ọma* 'good/beautiful':

(51) a. *ụlò ahù dì **ọma** IG.
b. *ụlò ahu dī **ọ̄mā** (Maduka-Durunz 1990: 242)

Maduka-Durunz (1990) concludes that *ọma* in (49a) is not a bare attributive adjective, but rather a predicative adjective contained inside a (reduced) relative clause. He analyzes the form of the adjective in (49a) as a portmanteau, which, along with the abstract noun *mmā*, includes a relative marker (i.e., tone change) (Mk), and a copula *–di*, as represented in (52) (which is a slightly modified version of (25) in Maduka-Durunz 1990):

(52)



→ *ọma* (Adj) ‘good/beautiful’

Thus, *ọma* is an incorporated relative clause and more appropriately glossed as ‘that is good/beautiful’, rather than ‘good/beautiful’. On Maduka-Durunz’s view, Igbo contains no genuine attributive adjective structures; it only <u>appears</u> to have them.

1.6.2 Jukun

In Jukun, a Central Nigerian language, when adjectives (or “qualificatives” in Welmers’ (1973) term) modify a noun, they occur after a morpheme /à/, following it. They are derived from verbs, but are morphologically different in that they are reduplicated. For example, in (53a) a noun *tukpa* ‘cloth’ is modified by an adjective *kìkyè* ‘clean’, which is reduplicated from an intransitive verb *kyè* ‘be clean’, with the morpheme /à/ in between:

(53) a. tukpa **à** kìkyè
cloth clean
‘clean cloth’ (*kyè* (v.i.) ‘be clean’)

b. yinà **à** wõwom
wood dry
‘dry wood’ (*wom* (v.i.) ‘be dry’)

c. zàpè **à** syĭsyì
water boil
‘boiled water’ (*syì* (v.t.) ‘boil’)

d. zàpè **à** wáwa
water drink
‘drinking water’ (*wa* (v.t.)‘drink’)

(Welmers 1973: 254) JU.

Adjectives can appear in predicative position as well; however, they do <u>not</u> take reduplicated forms, and the morpheme /à/ appearing between a noun and its adjectival modifier (as in (53)) disappears, as shown in (54):

(54) tukpa kyè ra. ‘The cloth is clean.’ JU.
cloth clean (Welmers 1973: 253)

Then, what is the morpheme /à/, which appears only when an adjective modifies a noun (as in (53))? In fact, this morpheme is not exclusive for adjectival modifiers. It also appears when a noun is modified by a relative clause, as shown in (55):

(55) a. pèrè **à** bi kéré ní
person came here the
'the person who came here'

cf. pèrè ní bi kéré JU.
person the came here
'the person came here'

b. tórà **à** ku to ní
trap he set the
'the trap he had set'

cf. ku to tórà
he set trap
'he set a trap' (Welmers 1973: 253)

As Welmers concludes, the morpheme /à/ is a relative clause marker; therefore, adjectives modifying a noun are in fact in a relative clause. However, a question still remains: why are adjectives in this position reduplicated, but not in predicative position? I do not know the answer to this question at this point.[21]

1.7 Adverbials

There is a very unique type of adjectival inflection. It appears to modify a noun, but it functions as adverbial. When adjectives modify a noun in the Ganja dialect of Balanta spoken in West Africa (hereafter, called "Balanta"), they appear post-nominally and are marked with the prefix *u-*, as shown in (56) and (57).[22] In (56) singular human nouns are modified with the adjectives prefixed with *u-*; in (57) singular non-human nouns are modified with the adjectives prefixed with *u-*:

(56) a. hal **u-** bontʃe
person U-beautiful/nice
'a nice person'

b. alaante **u**-sire BA.
man U-smart
'a smart man'

(57) a. sin **u**-haame
road(CL3) U-new
'new road'

b. wil **u**-haame BA.
thing(CL6) U-new
'new thing'

(Fudeman 2004: 108-109, 111)

The prefix *u-* also appears with adjectives in predicative positions, as shown in (58):

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[21] In the negative counterparts of examples (53), the adjectives are not always reduplicated: adjectives in (ia,b) are not reduplicated whereas those in (ic,d) are:

(i) a. tukpa à kyè á mbá
cloth clean NEG
'cloth that is not clean' (*kyè* 'be clean')

b. yinà à wom ra á mbá JU.
wood dry NEG
'wood that has not dried' (*wom* 'be dry')

c. yinà à kĭkì á mbá
wood split NEG
'wood that is not split' (*kì* 'sprit')

d. tukpa à pẽpẽ á mbá
cloth put out to dry NEG
'clothes that have not been put out to dry' (*pẽ* 'put out to dry')

(Welmers 1973: 254)

According to Welmers (1973), this difference is due to its quality of transitivity. Intransitive adjectivals such as *kyè* 'be clean' and *wom* 'be dry' are not reduplicated, whereas transitive adjectivals such as *kì* 'sprit' and *pẽ* 'put out to dry' are reduplicated.

[22] The discussion in this subsection is based on Fudeman (2004).

(58) a. a- gi **u**-hii. b. a- gi **u**-saage. BA.
3SG.SUB- COP U-white 3SG.SUB- COP U-sick
'He is white.' 'He is sick.'
(Fudeman 2004: 109-110)

On the other hand, there is another prefix, *a-*, which attaches to adjectives as modifiers of singular human nouns and also as predicates. For example, the prefix *u-* in (56) can be replaced by *a-*, with a change of meanings. Consider the following examples in (59) and (60) from Fudeman (2004: 109):

(59) a. u- gi hal **u**-/*a-bontʃe. BA.
2SG.SUB- COP person U-/*A-beautiful/nice
'You are a nice person.'
b. alla u- mada gi hal **a**-/*u-bontʃe mo?
how 2SG.SUB- be.able COP person A-/*U-beautiful/nice today
'Why are you being nice today?'

(60) a. n- gi **u**-raale. b. n- gi **a**-raale. BA.
1SG.SUB- COP U-angry 1SG.SUB- COP A-angry
'I am angry' (inherently angry) 'I am angry' (because of something that just happened)

Whereas the *u*-prefixed adjective *u-bontʃe* 'beautiful/nice' shows an inherent property in (59a), the *a*-prefixed adjective *a-bontʃe* 'beautiful/nice' shows a temporary property in (59b), as evidenced by the presence of the temporal adverb *mo* 'today'. Likewise, whereas the *u*-prefixed adjective *u-raale* 'angry' shows the inherent angriness of "I" in (60a), the *a*-prefixed adjective *a-raale* 'angry' shows a temporal angriness of "I" because of something that just happened in (60b).

When an adjective modifies a deverbal noun such as *anire* 'dancer', the difference of the meaning between *u*-prefixed and *a*-prefixed adjectives becomes much sharper. Consider the following examples in (61):

(61) a. sibow gi anire **u**-bontʃe. BA.
Sibow COP dancer U-beautiful
'Sibow is a beautiful dancer.' (≈ Sibow is beautiful, and Sibow is a dancer.)
b. sibow gi anire **a**-bontʃe.
Sibow COP dancer A-beautiful
'Sibow is a beautiful dancer.' (≈ Sibow dances beautifully.)
(Fudeman 2004: 106)

In (61a) the Noun-Adjective prefixed with *u-* has an intersective reading, where Sibow is beautiful (although her dancing might not be). This reading is paraphrased as "Sibow is beautiful, and Sibow is a dancer". On the other hand, in (61b) the Noun-Adjective prefixed with *a–* has a non-intersective reading, where Sibow's dancing is beautiful

(although she herself might not be beautiful), paraphrased adverbially as "Sibow dances beautifully." [23]

Given these points above, Fudeman concludes that, while the prefix *u-* is an adjectival agreement, the prefix *a-* is a form of adverbial inflection. According to her, this idea also fits well for the cases like (60b) (being angry because of something that just happened) since it has been linguistically evidenced that adverbs have causative interpretation. In Balanta, there is no category of "adverb", and the presence of the adjectival prefix *a-* would compensate for lack of the category, as suggested by Fudeman.

1.8 Conclusion

This chapter presents a typological study of adjectival inflection in the world's languages. Syntactic environments examined are attributives (which usually appears pre- or post-nominally), and primary (and sometimes secondary) predicatives. The representative types of adjectival inflection are φ-agreement, case marking, definiteness, Long- and Short-Form, incorporated/reduced relative clause material, and adverbial. Having set the stage for what are possible analyses for adjectival inflection in natural language, we are ready, in the following chapters, to explore what Japanese adjectival inflection is.

[23] Unlike Balanta, some Adj-Noun combination in English (such as *a beautiful dancer*, *an enthusiastic speaker*, and *an old friend*) can have both intersective and non-intersective readings without any change of the form. See Larson (1995, 1998, 1999), and Larson and Segal (1995) for more.

Chapter 2: Adjectives in Japanese
True Adjectives vs. Nominal Adjectives

2.1 Introduction

As seen in the previous chapter, there are several patterns of adjectival inflection in attributive modification in the world languages. This chapter introduces adjective and adjectival inflection in attributive modification in **Japanese**. Japanese is unique in that it contains two morphologically distinct types of adjectives. First, I take a closer look at each type of adjective and its morphology. One question is how these two relate to the general category of adjective in the world's languages. Another question is what makes these two types different from each other. If the difference lies only in morphology, how has Japanese acquired these two different types, given that there are many world languages that lack the category "adjective" completely (Dixon 1982)? I will address this question from morphological and also from syntactic and semantic perspectives.[1]

2.2 Analysis of TA/NA Similarity and Distinction

Japanese contains two morphologically distinct types of adjectives, which I will henceforth label "true adjectives" (TAs) and "nominal adjectives" (NAs) in this thesis. When they modify a noun, they usually precede it, with the suffix *–i* appearing on the first type (TA) (1) and the morpheme *–na* appearing on the second type (NA) (2):[2]

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[1] Japanese is an SOV language, a language with the basic order of transitive sentences, S(ubject)-O(bject)-V(erb). Subjects are marked with nominative case marker, *ga*, and (direct) objects are marked with accusative case marker, *o*:

(i) Taroo **ga** ringo **o** tabe-ta.
Taroo NOM apple ACC eat-PST
'Taroo ate an apple.'

Like the other SOV languages, Japanese has postpositional (not prepositional) particles, such as *kara* 'from', *e* 'to', *de* 'in' and *to* 'with':

(ii) a. Taroo ga Tokyo **kara** Osaka e it-ta.
Taroo NOM Tokyo from Osaka to go-PST
'Taroo went from Tokyo to Osaka.'
b. Taroo ga Ziroo **to** Tokyo **de** ason-da.
Taroo NOM Jiroo with Tokyo in play-PST
'Taroo played with Jiroo in Tokyo.'

[2] The terminological distinction "true adjective"/"nominal adjective" made here is equivalent to: "verbal adjective"/"nominal adjective" (Hinds 1986), "adjective"/"adjectival noun" (Kageyama 1982, 1993; Martin 1985; Sugioka 1986; Miyaygawa 1987; Shibatani 1990; Ohkado 1991; Urushibara 1994; Tsujimura 1996), "adjective"/"nominal adjective" (Kuno 1973; Uehara 1996; Yamakido 2000), and "canonical adjective"/"nominal adjective" (Nishiyama 1998, 1999), "adjective"/"adjectival verb" (Murasugi 1991; Kubo 1992), "*–i* adjective"/"*–na* adjective" (Backhouse1983). Note that in Murasugi (1991) and Kubo (1992) the stem of "adjectival verb"

(1) *True Adjectives (TA)*

a.	utukusi-**i**	tori	b.	taka-**i**	hon
	beautiful	bird		expensive	book
	'a/the beautiful bird'			'an/the expensive book'	

(2) *Nominal Adjectives (NA)*

a.	kirei-**na**	hana	b.	sizuka-**na**	umi
	pretty	flower		quiet	sea
	'a/the pretty flower'			'a/the quiet sea'	

As the glosses in (1) and (2) show, there appears to be no obvious semantic difference between these two types (e.g., *utukusi-i* (TA)'beautiful' vs. *kirei-na* (NA) 'pretty'). This view is supported by the list presented in (3), where each TA-NA pair shows semantic similarity:

(3)

	True Adjectives		vs.	*Nominal Adjectives*	
a.	utukusi-**i**	'beautiful'		kirei-**na**	'pretty, clean'
b.	abuna-**i**	'dangerous, risky'		kiken-**na**	'dangerous, risky'
c.	yasasi-**i**	'easy, simple'		kantan-**na**	'easy, simple, brief'
d.	uma-**i**	'good'		zyoozu-**na**	'skillful, good'
e.	muzukasi-**i**	'difficult, hard'		konnan-**na**	'difficult, hard, troublesome'

In fact, there are many cases in which one and the same adjective can behave either as a true adjective or as a nominal adjective, and accept either the TA prenominal suffix *–i* and the NA prenominal suffix *–na* with no apparent change of meaning:[3]

(4)

		True Adjectives	*Nominal Adjectives*	
a.	'warm'	atataka-**i**	atataka-**na**	
b.	'soft'	yawaraka-**i**	yawaraka-**na**	
c.	'small'	komaka-**i**	komaka-**na**	
d.	'square'	sikaku-**i**	sikaku-**na**	(Uehara 1998)

According to Uehara (1998), the number of TAs and NAs is 145 and 257, respectively, exclusive of the four words listed in (4). The difference of the ratio (roughly, 3 : 5 (TA : NA)) is due to the fact that, whereas true adjectives are closed class items, nominal adjectives are open class items. All true adjectives are native, however,

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(e.g., *kirei* 'pretty' and *sizuka* 'quite') is called "nominal adjective" and "adjectival nominal", respectively. I use "true adjective (TA)"/"nominal adjective (NA)" consistently through this thesis.

[3] Some true adjectives of color (such as *siro-i* 'white' and *kuro-i* 'black') can accept the NA suffixes after the prefixation of *ma–* 'pure, complete':

(i)

a.	siro-i	'white'	ma-s-siro-**i** / ma-s-siro-**na**	'pure white'
b.	kuro-i	'black'	ma-k-kuro-**i** / ma-k-kuro-**na**	'deep black, jet black'

See Nishiyama (1999) for the detailed discussion on the categorial change.

most nominal adjectives (about 200) originate from Sino-Japanese. The other NAs are native and more recently borrowed from Western sources (Backhouse 1984; Uehara 1998).[4] When an adjective-like word is borrowed from another language, it automatically receives the status of nominal adjective, instead of finding its equivalent from TAs and NAs, or choosing between TAs and NAs depending on its meaning (5):

(5) a. modan-**na** 'modern' (English)
b. kurasikku-**na** 'classic' (English)
c. pureen-**na** 'plain' (English)
d. sikku-**na** 'chic' (French)

These facts suggest that there is no semantic distinction between TAs and NAs, and whether a word belongs to TA or NA depends on its origin; therefore, the difference between these two categories thus appears to lie simply in inflectional suffixes. However, there seems to be additional complexities involved. In fact, a number of researchers have approached this problem by comparing these two categories to each other or to the other major categories in Japanese such as noun and verb. The status of NA has been especially controversial since it is a "unique" category with no equivalent in English and other European languages (Shibatani 1990).

Uehara (1998) gives a comprehensive list of formal criteria for the categories TA and NA used in the literature.[5] There are nine formal criteria for the category True Adjective

[4] The first type of NAs originating from native Japanese is a compound (or with "bimorphemic nature" (Nishiyama 1999)) (i):
(i) a. ki-garu-na 'casual' (NA) ← *ki* 'spirit' (N) + *karu-i* 'light' (TA)
b. mi-dika-na 'familiar' (NA) ← *mi* 'the body' (N) + *tika-i* 'close' (TA)
The second type includes the suffix *–ka*, *–raka*, or *–yaka*, which is a NA-forming productive suffix in Old Japanese (Backhouse 1984):
(ii) a. sizu**ka**-na 'quiet' b. name**raka**-na 'smooth' c. nigi**yaka**-na 'bustling'
The third type is mimetic (iii) and reduplicated forms (iv) (Backhouse 1984):
(iii) a. tippoke-na 'small' b. sokkuri-na 'be just like' c. abekobe-na 'opposite'
(iv) a. bara-bara-na 'scattered, disconnected'

[5] Uehara's principal sources are:
(i) a. Hashimoto, Shinkichi. (1948) "Kokugoho yosetsu" in *Kokugoho Kenkyuu*. Tokyo: Iwanami Shoten.
b. Kuno, Susumu. (1973) *The Structure of the Japanese Language*. Cambridge, MA: MIT Press.
c. Martin, Samuel. (1975) *A Reference Grammar of Japanese*. New Haven, CT: Yale University Press.
d. Teramura, Hideo. (1982) *Nihongo no Shintakusu to Imi. Vol. 1*. Tokyo: Kuroshio Publishers.
e. Kageyama, Taro. (1982) "Word Formation in Japanese." *Lingua 57*: 215-258.
f. Miyagawa, Shigeru. (1987) "Lexical Categories in Japanese." *Lingua 81*: 29-51.
g. Shibatani, Masayoshi. (1990) *The Languages of Japan*. Cambridge, Great Britain: Cambridge University Press.

(Uehara 1998: 38):

TA1. (can) inflect and can constitute predicates by themselves. (can constitute predicates without being accompanied by copulas) [Hashimoto, Kuno, Kageyama]
TA2. do not take the copula [Teramura]
TA3. have no imperative forms [Hashimoto]
TA4. can take *–sa* [Kageyama]
TA5. cannot co-occur with the auxiliary *–rasii* 'look like' (onto its stem) [Kageyama]
TA6. can be used adverbially [Ohkado]
TA7. can be modified by some adverbials such as *totemo* 'very' [Ohkado]
TA8. can be followed by comparative expressions [Ohkado]
TA9. emphatic particles such as *sae* 'even', *sura* 'even', and *mo* 'also' cannot be attached to A [Ohkado]

On the other hand, NA has nineteen formal criteria (Uehara 1998: 7, 37-38):

NA1. can inflect (*–na* prenominally, *–da* sentence-finally) [Hashimoto, Kageyama]
NA2. do not inflect and need a copula, and take *–na* before N[6] [Kuno, Teramura, Martin, Miyagawa, Shibatani]
NA3. have no imperative forms [Hashimoto]
NA4. cannot take the conditional, (*ke*)*–reba* [Miyagawa]
NA5. cannot take (be adjectivalized by) the derivational suffix *–rasii* 'like' [Teramura, Shibatani]
NA6. can co-occur with the auxiliary *–rasii* 'look like' [Kageyama]
NA7. can take the dependent morpheme *–soo* (*da*) 'appear' [Teramura, Miyagawa]
NA8. take the dependent morpheme *–mitai* 'seem like' [Miyagawa]
NA9. can take (are nominalized by) the derivational suffix *–sa* '–ness' [Teramura, Kageyama, Miyagawa, Shibatani]
NA10. cannot be used as subjects and objects of sentences [Kuno, Martin, Shibatani]
NA11. emphatic particles such as *sae* 'even', *sura* 'even', and *mo* 'also' cannot be attached to NA [Ohkado]
NA12. can take *motto* 'more' [Teramura]
NA13. can be modified by adverbs such as *zuibun* 'quite a bit' [Miyagawa]
NA14. can be modified by a degree adverb [Shibatani]
NA15. can be modified by some adverbials such as *totemo* 'very' [Ohkado]
NA16. can be followed by comparative expressions [Ohkado]

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h. Ohkado, Masayuki. (1991) "On the Status of Adjectival Nouns in Japanese." *Lingua 83*: 67-82.

[6] NA prenominal *–na* is considered as the attributive form of the copula *da* in Kuno (1973), Miyagawa (1987), Murasugi (1991), among others.

NA17. can be used adverbially [Ohkado]
NA18. cannot be modified by adjectives [Kuno]
NA19. cannot be modified by an adonominalization or an adnoun [Martin]

Comparing the NA list with the TA list, NAs share nine out of nineteen criteria with TA, as listed in (6):

(6) a. (can) inflect (NA1, TA1)
b. have no imperative forms (NA3, TA3)
c. cannot co-occur with the auxiliary *–rasii* 'look like' (in the case of TAs, onto its stem) (NA5, TA5)
d. can take *–sa* '–ness' (NA9, TA4)
e. emphatic particles such as *sae* 'even', *sura* 'even', and *mo* 'also' cannot be attached (NA11, TA9)
f. can be modified by a degree adverb such as *totemo* 'very' (NA14-15, TA7)
g. can be followed by comparative expressions (NA16, TA8)
h. can be used adverbially (NA17, TA6)

According to (6a), both TA and NA (can) inflect, supported by Hashimoto (1948) and Kageyama (1982); however, as stated in NA2, many researchers claim that NAs do <u>not</u> inflect and need a copula, and take *–na* before N. The issue is whether the inflectional suffixes for NAs (such as prenominal *–na*) are considered as a part of NAs or not. If so, then it implies that NAs <u>can</u> inflect by themselves (as supported by Hashimoto and Kageyama (NA1)). If the NA category consists of only NA stems, then this implies that NAs <u>cannot</u> inflect by themselves and need a copula (as supported by Martin, Miyagawa, Shibatani (NA2)).

If we adopt the second idea, NAs share an important property of inflection with nouns (Ns). In fact, as suggested by its name "nominal adjective" (or "adjectival noun" in Kageyama (1982), Miyaygawa (1987), Shibatani (1990), Ohkado (1991), among others; see fn.2), NAs share some other properties with nouns. A list of the formal criteria for the category N is as follows (Uehara 1998: 37, 39):

N1 have no inflection [Hashimoto]
N2 can function as subject (can take case particles) [Hashimoto, Teramura, Martin]
N3 (can) take the copula to take a predicate [Teramura, Martin, Miyagawa]
N4 take *no* before N [Teramura]
N5 take the dependent morpheme *–mitai* 'seem like' [Miyagawa]
N6 cannot take the conditional, (*ke*)*–reba* [Miyagawa]
N7 cannot take the dependent morpheme *–soo* 'appears' [Miyagawa]
N8 cannot be modified by adverbs such as *zuibun* 'quite a bit' [Miyagawa]
N9 cannot take *–sa* 'ness' [Miyagawa]
N10 can take *–rasii* 'like' [Shibatani]

Comparing the NA list with the N list, NAs share four out of nineteen criteria with Ns specifically (7):

(7) a. have no inflection (NA2, N1)
b. (can) take the copula to take a predicate (NA2, N3)
c. cannot take the conditional, (*ke*)*–reba* (NA4, N6)
d. can take *–rasii* '(look) like' (NA6, N10)
e. take the dependent morpheme *–mitai* 'seem like' (NA8, N5)

The remaining NA criteria (not listed in (7)) suggest that, in some contexts, NAs behave differently from (sometimes rather opposite to) Ns, as in (8)-(12):

(8) a. NAs take *–na* before N (a part of NA2)
b. Ns take *no* before N (N4)

(9) a. NAs can take the dependent morpheme *–soo* (*da*) 'appear' (NA7)
b. Ns cannot take the dependent morpheme *–soo* 'appears' (N7)

(10) a. NAs can take (are nominalized by) the derivational suffix *–sa* '–ness' (NA9)
b. Ns cannot take *–sa* 'ness' (N9)

(11) a. NAs cannot be used as subjects and objects of sentences (NA10)
b. Ns can function as subject (can take case particles) (N2)

(12) a. NAs can be modified by adverbs such as *zuibun* 'quite a bit' (NA13)
b. Ns cannot be modified by adverbs such as *zuibun* 'quite a bit' (N8)

However, it is still "unclear and gradient" to make distinction between NAs and Ns. In fact, Uehara (1998) surveys a "frequently-used Japanese word list" and reports "of 264 *na*-taking Nominals, 113 (42.8%) also take [the genitive case marker] *no*, 151 (57.2%) are co-listed as Nouns (behave like Nouns, e.g., taking case-particles), and 188 (71.2%) take *no* or are co-listed as Nouns. (p.102)" As Uehara (1998) concludes, "Nominal Adjectives are like Nouns in form, but like (English) adjectives in meaning, and this discrepancy between form and meaning seems to make the NA category "unique". (p.130)"

2.2.1 Traditional Description of TA/NA Distinction

Among Japanese traditional grammarians, there has been a lively discussion of the distinction between true adjectives (TAs) and nominal adjectives (NAs) (Kashiwadani 1973, among others). A main point of argument is whether to separate NAs from TAs and establish an independent category for NAs.[7]

[7] In Japanese traditional grammar, the category NA is called *keiyoo-doosi* 'adjectival verb', which was first named by Yaichi Haga (1905). By observing pre-modern Japanese, Haga observes the NA words share many properties with TAs, but their conjugational system is similar to verbs'.

Hashimoto (1935) is (to my knowledge) the first to claim that NAs should be treated as a distinct grammatical category in the grammar of modern Japanese.[8] His claim is based on the assumption that NAs can inflect themselves because NA stems such as *kirei* 'pretty' and *sizuka* 'quiet' cannot stand independently (with a few exceptions). For example, they cannot become the subject of a sentence; they are always accompanied with inflectional suffixes such as prenominal *–na*. Therefore, NA^{stem} + Inflectional Suffix (such as *sizuka-na* in (2b) *sizuka-na umi* 'a/the quiet sea') should be considered as one word. Based on this assumption, he compares NAs with TAs and Vs (which both have their own inflectional suffixes) (13),[9] and characterizes NAs, as in (14):

(13)

		TA *aka-i* 'red'	NA *sizuka* 'quiet'	
a.	Irrealis	aka-**kar**(-oo)	sizuka-**dar**(-oo)	'I suppose … is red/quiet'
b.	Adverbial	aka-**kat**(-ta)	sizuka-**dat**(-ta)	'was red/quiet'
		aka-**ku**(-te)	sizuka-**de**	'is red/quiet and'
		aka-**ku**	sizuka-**ni**	'redly/quietly'
c.	Conclusive	aka-**i**	sizuka-**da**	'is red/quite'
d.	Attributive	aka-**i**	sizuka-**na**	'red/quiet'
e.	Hypothetical	aka-**ke**(-reba)	sizuka-**nara**(-ba)	'if … is red/quiet'
f.	Imperative	---	---	

(14) Hashimoto (1935)
- a. NA has its own set of inflectional suffixes.
- b. NA inflectional suffixes are *da–*, *de–*, *na–*, and *ni–*, which are phonologically different from those for true adjectives and verbs.
- c. The predicative NA suffix is different from the prenominal NA suffix (i.e., *da* vs. *–na*), unlike TAs' and Vs'.
- d. The NA conditional/hypothetical form is NA^{stem} + *nara*(*ba*), where *ba* is optional, whereas the TA and V conditional forms require *ba*.

Thus, nominal adjective is established as one category in the grammar of modern Japanese with its own inflectional endings.

Contrary to Hashimoto (1935), Tokieda (1950) rejects the existence of nominal adjective as a distinct grammatical category in Japanese. Recall that Hashimoto's claim is made under the assumption in which the NA inflectional endings are a part of a NA word, given that NA stems cannot stand by themselves; however, Tokieda claims that NA stems (such as *kirei* 'pretty' and *sizuka* 'quiet') should be treated as a word for following reasons. First, it is intuitively true that NA stems are the ones stored as a

[8] Before Hashimoto (1935), Yoshizawa (1932) claims to establish one grammatical category for nominal adjectives, but his arguments are based on literary Japanese, *bungo*.

[9] Six categories of inflection in (13) are translated from *mizen*, *ren'yoo*, *syuusi*, *rentai*, *katei*, and *meirei* in Japanese traditional grammar, respectively, adapted from Shibatani (1990). Glosses for the TA inflection is from Kuno (1973), where "irrealis" (13a) is "suppositional", "adverbial" (13b) is "perfect (or past)" (*-kat*(*-ta*)), "gerundive" (*-ku*(*-te*)), and "continuative" (*-ku*), "conclusive" (13c) is "present (or nonpast)", and "hypothetical" (13e) is "conditional".

word/lexicon in our brain, but not NA^{stem} + inflectional ending. For example, like a noun *yama* 'mountain', *sizuka* 'quiet' is stored as a word, but not *sizuka-na/da*.

Second, there exist forms in Japanese grammar, which are unable to become sentence subject but nonetheless are considered as words. For example, adverbs (such as *tatimati* 'immediately') are considered to be words although they cannot function as subjects (15):

(15) a. Kono kusuri wa **tatimati** kiku. 'This medicine works immediately.'
this medicine TOP immediately work
b. *Tatimati ga / o / no … 'Immediately NOM/ACC/GEN …'

On Tokieda's view, an important question arises: if NA is not an independent category, which major category does NA belong to as a sub-category in Japanese grammar? Tokieda analyzes NA stems as nouns and the inflectional endings as auxiliaries. For example, nominal adjectives take the copula *da* to function as predicates, like nouns, as shown in (16a) and (17a). This parallelism is observed in the polite version of the copula, *desu*, as shown in (16b) and (17b):

(16) *sizuka* (NA) 'quiet'
'(It) is quiet' a. sizuka **da** b. sizuka **desu**

(17) *yama* (N) 'mountain'
'(It) is a mountain' a. yama **da** b. yama **desu**

Thus, on Tokienda's view, so-called "nominal adjectives" are not really adjectives at all.

2.2.2 Modern Analysis of TA/NA Distinction

The Japanese true adjective/nominal adjective split poses an interesting puzzle for modern theories of grammatical category as well. In the classic feature-decomposition proposed by Chomsky (1970), the four main lexical categories in English - N(oun), V(erb), A(djective) and P(reposition) are analyzed as arising from combinations of two basic features: ± predicative (±V), and ± substantive (±N). The table is given (18):

(18)

	+N	–N
+V	A	V
–V	N	P

In this table, adjectives are analyzed as elements that are simultaneously predicative and substantive [+V, +N].

Chomsky's proposal allows limited options for analyzing the Japanese TA/NA split. One option is to say that one of the two Japanese types corresponds directly to English

As, and that the remaining type is underspecified.[10] For example, we might claim that true adjectives like *utukusi-i* 'beautiful' are [+V, +N], whereas nominal adjectives like *kirei* 'pretty' are simply [+N]. The table (19) shows the logically possible options:

(19)

Analysis	TA	NA
I	[+V, +N]	underspecified
II	underspecified	[+V, +N]
III	[+V, +N]	[+V, +N]
IV	underspecified	underspecified

A number of researchers have challenged to solve this problem by examining TAs and NAs in detail. One way is to see if only TA and NA share a certain property, but not with N or V. Then it provides us a piece of evidence that TA and NA have the same lexical features. Similarly, if TA shares a certain property with N, but not with V, for example, it implies that TA has the [+N] feature, and so on.

To my knowledge, Analysis I is not proposed by any researcher.

Analysis II, where TAs are underspecified and NAs have the [+V, +N] features, is advanced by Miyagawa (1987), who gives three pieces of evidence that NAs have the lexical feature [+N] (20)-(22) (Miyagawa 1987: 43-45):

(20) NAs and Ns (but not TAs and Vs) do not inflect and need a copula.[11] (NA2, N1,3)

a.	Ano	hito	ga	kirei	**da**.	(NA)
	that	person	NOM	pretty	COP	
b.				sensee	**da**.	(N)
				teacher	COP	
c.				*utukusi	**da** / utsukusi-i	(TA)
				beautiful		
d.				*i	**da** / i-ru	(V)
				exist		

'That person is pretty / is a teacher/ is beautiful / is (here)'

[10] Here "underspecified" refers to any lexical feature that is <u>not</u> [+V, +N].

[11] According to Kubo (1992), the set of data in (20) shows both NAs and Ns are free morphemes, whereas Vs and TAs are not: they must be bound to an immediately following morpheme. Murasugi (1991) and Kubo (1992) also point out that not only NAs and Ns but also Ps (such as *de* 'at' and *kara* 'from'), which are also free morphemes, can take the copula, *da* (i):

(i) a. Tugi-no kaigi-wa Tokyo-**de** da. (P)
next meeting-TOP Tokyo-at be-PRES
'The next meeting is at Tokyo.'

b. Kono kozutumi-ga Amerika-**kara** da. (P)
this parcel-NOM America-from be-PRES
'This parcel is from America.' (Kubo 1992: 115)

(21) NAs and Ns (but not TAs and Vs) take the dependent morpheme *–mitai* 'seem (like)'[12] (NA8, N5)

a.	sizuka-**mitai**[13]	'seems to be quiet'	(NA)
b.	otoko-**mitai**	'seems like a man'	(N)
c.	*utukusi-**mitai**	'seems to be beautiful'	(A)
d.	*tabe-**mitai**	'seems to eat'	(V)

(22) NAs and Ns (but not TAs and Vs) cannot take the conditional, (*ke*)*–reba*[14] (NA4, N6)

a.	*sizuka-**reba**	'if quiet'	(NA)
b.	*sensei-**reba**	'if a teacher'	(N)
c.	utukusi-ke-**reba**	'if beautiful'	(TA)
d.	tabe-**reba**	'if (you) eat'	(V)

Next, Miyagawa presents two pieces of evidence that NAs have the lexical feature [+V]. NAs share some properties with Vs and TAs, but not with Ns (23) and (24):

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[12] It seems that *–mitai* 'seem (like)' in (21) is not a good formal criterion to test a lexical category. First, as pointed out by Kageyama (1993) (pointed out by T. Miyake), although *–mitai* appears to follow NA stems and Ns directly, the copula *de ar-u* is in fact deleted (i.e., *sizuka* (***de ar-u***) *mitai* 'seems to be quiet' (21a); *otoko* (***de ar-u***) *mitai* 'seems like a man' (21b)).

Second, as pointed out by Kubo (1992), in addition to NAs and Ns, Ps as well as TAs and Vs in "free forms" can be also followed by *–mitai*. Examples in (i) are modified versions of Kubo (1992: 116):

(i) a. Sakki-no denwa-wa kare-no imouto-san-*kara* **mitai** da. (P)
just no-GEN phone-TOP he-GEN sister-from seem like be-PRES
'The phone call just now seems to be from his sister.'

b. Ano tou-wa totemo *utukusi-i* **mitai** da. (TA)
that tower-TOP very beautiful seem be-PRES
'That tower seems to be very beautiful.'

c. Kono inu-mo toutou esa-o *tabe-ta* **mitai** da. (V)
this dog-also finally food-ACC eat-PST seem be-PRES
'This dog seems to have eaten food finally.'

[13] Ohkado (1991) reports that many native speakers do not accept NA-*mitai* (as in (21a)).

[14] Kubo (1992) points out that a PP behaves in the same way as Ns and NAs in that they cannot take the conditional, (*ke*)*–reba*, as shown in (i):

(i) *Okinawa-*kar*a **reba** (intended) 'if from Okinawa' (P)

However, she notes that NAs, Ns and Ps "can appear in a conditional clause if *–na*, which is a variant of the copula verb *da* (p.118)":

(ii) a. sizuka-**na raba** 'if it is quiet' (NA)
b. sensei-**na raba** 'if he is a teacher' (V)
c. Okinawa-kara-**na raba** 'if it is from Okinawa' (P)

According to her, "the alternation between *-**re**ba* [in (22)] and *-**ra**ba* [in (ii)] is purely phonological" due to the vowel harmony effect in Old Japanese.

(23) NAs, Vs and TAs (but not Ns) can take the dependent morpheme –*soo* (*da*) 'appear' (NA7, N7)

a.	sizuka-**soo**	'appears to be quiet'	(NA)
b.	*otoko-**soo**	'appears to be a man	(N)
c.	utukusi-**soo**	'appears to be beautiful'	(TA)
d.	tabe-**soo**	'appears to be eat'	(V)

(24) NAs, Vs and TAs (but not Ns) can be modified by adverbs such as *zuibun* 'quite a bit' (NA13, N8)

a.	**Zuibun** sizuka da.	'It's very quiet.'	(NA)
b.	***Zuibun** otoko da.	'*It's very a man.'	(N)
c.	**Zuibun** utukusi-i.	'It's very beautiful.'	(TA)
d.	**Zuibun** tabe-ru.	'(He) eats a lot.'	(V)

Based on these, Miyagawa concludes the NA has the feature specification [+N, +V]. (23) and (24) also give evidence that TA has the lexical feature [+V], since TA shares two properties with V and NA (which both have the [+V] feature). Then, what about the [+/–N] feature of TA? According to him, there is "no property exclusively shared by [true] adjectives and nouns. (p.45)" This suggests that TA is "associated with the lone feature [+V], being neutral as to [+/–N]. (p.45)" However, there exists one property that is potentially problematic to his analysis, as he notes "the feature characterization proposed for [TA and NA] does not allow us to isolate these two categories and exclude V at the same time. (p.45)" Examples in (25) show that the suffix –*sa* attaches only to TA and NA, but not to V, which also has the feature [+V]:

(25) NAs and TAs can take (are nominalized by) the derivational suffix –*sa* '–ness' (NA9, N9, TA4)

a.	odayaka-**sa**	'pleasant-ness'	(NA)
b.	*sensee-**sa**	'*teacher-ness'	(N)
c.	utukusi-**sa**	'beautiful-ness'	(TA)
d.	*iki-**sa**	'*going-ness'	(V)

Miyagawa attempts to solve this problem technically by proposing that features α can be specified as [–[–α]] without being specified as [+α]. The suffix –*sa* is then assigned the subcategorization [+V, –[–N]]. This excludes V from taking –*sa* since V has the feature [–N].

Thus, TA has the lone feature [+V] and NA has the [+V, +N] feature. This implies the Japanese equivalent of adjectives in English is nominal adjectives, not TAs (26):

(26) Miyagawa (1987)
TA: [+V]
NA: [+V, +N]

Contrary to Miyagawa (1987), Ohkado (1991) claims that both TAs and NAs have the [+V, +N] feature (Analysis III in (19)), like English adjectives. He presents four pieces of evidence to assume that TAs and NAs belong to the same lexical category, as follows (27)-(30) (Ohkado 1991: 76-78):[15]

(27) TAs and NAs (but not Ns and Vs) can be used adverbially. (TA6, NA17)

a. Hanako ga utukusi **ku** hohoe-mu (TA)
Hanako NOM beautiful INFL smile INFL
'Hanako smiles beautiful**ly**.'

b. Hanako ga ryuutyoo **ni** eigo o hanas-u (NA)
Hanako NOM fluent INFL English ACC speak-INFL
'Hanako speaks English fluent**ly**.'

(28) TAs and NAs (but not Ns and Vs) can be modified by some adverbials such as *totemo* 'very'[16] (TA7, NA15)

a. Hanako ga **totemo** utukusi -i. (TA)
Hanako NOM very beautiful INFL
'Hanako is very beautiful.'

b. Hanako ga **totemo** kirei da. (NA)
Hanako NOM very pretty INFL
'Hanako is very pretty.'

c. *Hanako ga **totemo** sensei da. (N)
Hanako NOM very teacher INFL

d. *Hanako ga **totemo** okasi o tabe-ru. (V)
Hanako NOM very sweets ACC eat INFL

(29) TAs and NAs (but not Ns and Vs) can be followed by comparative expressions[17]

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[15] INFL in the glosses for examples (27)-(30) is an abbreviated form of "inflection" in Ohkado (1991).

[16] Natsuko Tsujimura (p.c.) points out that some nouns (i) and verbs (ii) can be modified by the intensifier *totemo* 'very'. See Tsujimura (2001) for discussion:

(i) a. Taroo ga **totemo** *bouken-ka* da.
Taroo NOM very advebture-er COP
'Taroo is quite an adventurer.'

b. Taroo ga **totemo** *kanemoti* da.
Taroo NOM very rich person COP
'Taroo is quite a wealthy man.'

(ii) Taroo wa tuma no si ni totemo kanasin-da.
Taroo TOP wife GEN death to very feel sad-PST
'Taroo felt sad about his wife's death.'

[17] Ohkado (1991) also presents TAs and NAs (but not Ns and Vs) followed by superlative expressions using *itiban* 'most':

(i) a. Hanako ga kurasu de **itiban** utukusi-i. (TA)
Hanako NOM class in most beautiful INFL
'Hanako is more beautiful in the class.'

(TA8, NA16)

a. Hanako ga Meiko **yori** utukusi-i. (TA)
Hanako NOM Meiko more than beautiful INFL
'Hanako is more beautiful than Meiko.'

b. Hanako ga Meiko **yori** kirei da. (NA)
Hanako NOM Meiko more than pretty INFL
'Hanako is prettier than Meiko.'

c. *Hanako ga Meiko **yori** sensei da. (N)
Hanako NOM Meiko more than teacher INF

d. *Hanako ga Meiko **yori** okasi o tabe-ru. (V)
Hanako NOM Meiko more than sweets ACC eat INFL

(30) Emphatic particles such as *sae* 'even', *sura* 'even', and *mo* 'also' cannot be attached to TAs and NAs (but Ns and Vs) (TA9, NA11)

a. *utukusi **sae**, **sura**, **mo** 'even/also beautiful' (TA)
beautiful

b. *kiree **sae**, **sura**, **mo** 'even/also pretty' (NA)
pretty

c. Hanako **sae**, **sura**, **mo** 'even/also Hanako' (N)

d. tabe **sae**, **sura**, **mo** 'eve/also eat' (V)
eat

On the basis of this, Ohkado (1991) concludes that true adjectives and nominal adjectives are [+V, +N] (Analysis III) (31), just as their counterparts in English:

(31) Ohkado (1991)
TA: [+V,+N]
NA: [+V, +N]

Kubo (1992) also takes the position of Analysis III. She presents four "non-trivial" properties shared by both true adjectives and nominal adjectives to indicate that they are both As with the [+V, +N] features. Two of the four properties are the same as (28) and (29) above (in Ohkado 1991): the TA and NA ability to take degree adverbs (32), and the TA and NA ability to have comparative expressions (33):

(32) Only (and both) TAs and NAs select *totemo* 'very', *kanari* 'quite', *kekkoo* 'somewhat', etc., as their specifiers, just as English adjectives exclusively select degree phrases such as *very*, *quite*, *too*. etc. (Kubo 1992: 111-112)
cf. (28) TAs and NAs (but not Ns and Vs) can be modified by some adverbials such as *totemo* 'very' (TA7, NA15)

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b. Hanako ga kurasu de **itiban** kirei da. (NA)
Hanako NOM class in most pretty INFL
'Hanako is prettiest in the class.'

The superlative expressions do not go well with Ns and Vs.

(33) Only TAs and NAs allow comparatives; a TA or NA is necessary in order to have a comparative of the form NP-*yori*. (Kubo 1992: 112-113)
cf. (29) TAs and NAs (but not Ns and Vs) can be followed by comparative expressions (TA8, NA16)

The third property that TAs and NAs share is the ability to take the nominalizer *–sa* ' –ness', as discussed earlier in (25) (Miyagawa 1987):

(25) NAs and TAs can take (are nominalized by) the derivational suffix *–sa* '–ness'

According to Kubo, this also suggests that TAs and NAs are of the same category.

The last property comes from a universal, namely that adjectives do not assign accusative case (ACC) to their complements (Jackendoff 1977; van Riemsdijk 1983). Japanese is not an exception: neither TAs nor NAs take accusative complements: they take *ga* for object marking (Kuno 1973: 81).[18] For example, transitive TA *uma-i* 'good at', *hosi-i* 'want' and *kowa-i* 'be fearful of' in (34), and transitive NA *zyoozu (da)* 'be good at' and *suki (da)* 'be fond of' in (35) take an object marked with *ga*:

(34) a. Taroo ga eigo **ga** uma-i. (TA)
Taroo NOM English NOM good-at
'Taroo is good at English.'
b. Taroo ga okane **ga** hosi-i.
Taroo NOM money NOM want
'Taroo wants money.'
c. Taroo ga Hanako **ga** kowa-i.
Taroo NOM Hanako NOM be-fearful-of
'Taroo is afraid of Hanako.'

(35) a. Taroo ga eigo **ga** zyoozu da. (NA)
Taroo NOM English NOM good-at be
'Taroo is good at English.'
b. Taroo ga okane **ga** suki da.
Taroo NOM money NOM fond-of be
'Taroo likes money.'

On the basis of this, Kubo (1992) concludes that both TAs and NAs belong to the same syntactic category A since they share several important structural properties of As:[19]

[18] For an alternative analysis of *ga* in this construction, see Larson, den Dikken and Ludlow (1997), and Endo, Kitagawa and Yoon (1999).

[19] The same proposal is made in Urushibara (1994).

(36) Kubo (1992)
TA: [+V, +N]
NA: [+V, +N]

Finally, Analysis IV, where both TA and NA are underspecified, is proposed by Murasugi (1991). She agrees with Miyagawa (1987) that Japanese TA has the lone feature [+V], and does not share any important properties with N, therefore, cannot specify [+/– N]. In English, Stowell's (1981) *of*-insertion rule (37) predicts that both Ns and As trigger *of*-insertion because they both have the feature [+N], as in (38) and (39):

(37) *of*-insertion
In the environment [$_{\alpha}$ ..β..], adjoin *of* to β
where
(i) α is some projection of [+N], and
(ii) β is an immediate constituent of α, and
(iii) for some γ, γ the head of α, γ precedes β.

(38) a. a sister **of** John (N)
b. the destruction **of** the barbarian
c. a shirt **of** cotton
d. a man **of** religion

(39) a. John is fearful **of** traffic lights. (A)
b. Mary is considerate **of** her neighbors.

Likewise, in Japanese *no*-insertion rule (40), which is a counterpart of Stowell's (1981) *of*-insertion rule in (37), predicts that Ns trigger *no*-insertion because they have the feature [+N], as shown in (41):

(40) *no*-insertion
In the environment [$_{\alpha}$ ..β..], adjoin *no* to β
where
(i) α is some projection of [+N], and
(ii) β is an immediate constituent of α, and
(iii) for some γ, γ the head of α, γ follows β.

(41) a. Taroo **no** imouto ‘a sister of John’ (N)
Taroo GEN sister
b. yabanzin **no** hakai ‘the destruction of the barbarian’
barbarian GEN destruction
c. men **no** shatu ‘a shirt of cotton’
cotton GEN shirt
d. syuukyou **no** hito ‘a man of religiou’
religion GEN person

However, unlike in English, Japanese TAs do not allow *no* to be inserted, as shown by the ungrammaticality of examples in (42):

(42) a. *Taroo ga okane **no** hosi-i. (TA)
Taroo NOM money GEN want
(intended) 'Taroo wants money.'
b. *Taroo ga Hanako **no** kowa-i.
Taroo NOM Hanako GEN be-fearful-of
(intended) 'Taroo is afraid of Hanako.'

This suggests that TAs lack the feature [+N], therefore, have the lone feature [+V].

For the lexical feature of NAs, Murasugi argues for [−V, +N]. As noted in fn.1, she refers to only stems (without the copula *–na*) (such as *kirei* 'pretty' and *sizuka* 'quiet') as NAs. NAs have the lexical feature [+N] because NAs and Ns (but not TAs and Vs) do not inflect and need a copula, as discussed earlier in Miyagawa (1987) (see (20)). Then, what about the [+/−V] feature? First, consider (43):

(43) a. *sizuka ga ii.
quiet NOM good
(intended) 'The quietness is good.'
b. Bitoku ga taisetu da.
virtue NOM important is(COP)
'Virtue is important.' (Murasugi 1991: 43)

Japanese NAs are bound morphemes, given that they cannot appear with nominative case *ga*. In order to be able to be accompanied by *ga*, NAs have to be nominalized by the suffix *–sa*. Since "*–sa* attaches only to bound morphemes which have the feature [−V], (p.45)" NAs have the lexical feature [−V]. Thus, Murasugi proposes that TA has the lone feature [+V] and NA has the [−V, +N] feature (44):

(44) Murasugi (1991)
TA: [+V]
NA: [−V, +N]

The preceding analyses all attempt to fit the TA/NA distinction within the Chomskyan feature table for lexical categories. However, it is important to observe that not all researchers have accepted this constraint. Kageyama (1982) introduces an additional lexical category [+/−A] to the original [+/−V] and [+/−N].[20] According to him, the major lexical categories in Japanese are analyzed as in (45):

[20] Jackendoff (1977) also gives an extended analysis of feature specification as [+/−subject], [+/−object], [+/−complement], and [+/−Det]. For example, adjectives have the features [−subject], [−object], [+complement]. However, this analysis does not suggest a natural approach to the TA/NA distinction.

(45) Kageyama (1982)

	V	N	A
V	+	−	−
N	−	+	−
TA	−	−	+
NA	−	+	+

The table (45) shows that both TAs and NAs have [+A], but they are different with respect to [+/−N]. It also suggests that NAs share the lexical features with both TAs and Ns. According to Kageyama, this feature analysis fits the NA status of A borrowings (as in (5)):

> "… exotic words will most probably be regarded as direct quotes, and direct quotes resemble nouns in many syntactic respects. This amounts to saying that … foreign adjectives [are accorded] the feature [+N] as well as [+A]. These double specifications are equivalent to native … [NAs]" (Kageyama 1982: 218)

This suggests that NAs are a subclass of Ns.

2.3 Conclusion

This chapter introduced two kinds of adjectives in Japanese, true adjectives (TAs) and nominal adjectives (NAs), with special attention to inflectional morphemes. The question is whether these two types belong to the same category or not. Many researchers (of both traditional grammar and generative grammar) have challenged to solve this problem, examining the similarity and distinction between them. However, I would like to adopt the idea that TAs and NAs are both adjectives, belonging the category A, following Ohkado (1991), among others. Both (and only) TAs and NAs appear in Baker's (2003) "three syntactic environments" (as discussed earlier in chapter 1), and share semantic properties. As Baker (2003) concludes, "there are simply two different declension classes of adjectives that are identical syntactically and semantically. (p.244)"

Chapter 3
What Prenominal Adjectival Inflection in Japanese is Not

3.1 Introduction

This chapter starts exploring the nature of adjectival inflection appearing in prenominal position in Japanese, more specifically, which pattern(s) (from chapter 1) prenominal adjectival inflection in Japanese has. These types include:

- φ-agreement
- Definiteness
- Long-Form and Short-Form
- Incorporated/reduced relative clause material
- Case marking
- Adverbial

Traditionally, it has been assumed that Japanese prenominal adjectives are in relative clauses and that the inflectional suffixes represent tense or the present tense form of copula. First, I review the relevant literature (Kuno 1972; Nishiyama 1998, 1999) and present data to motivate the relative clause analysis, from standard Japanese and a couple of dialects spoken in Japan as well as children's language. Then, I discuss why this idea is not sufficient to analyze all adjectives in Japanese, following Yamakido (2000). Finally, I present some dialect data, which also challenge the relative clause analysis. Having set the stage for what adjectival inflection in Japanese is not, we will be ready, in the next chapter, to consider what it is.

3.2 Possible Analyses

A question is what prenominal adjectival inflection in Japanese is: the suffix *–i* for true adjectives and the free morpheme *–na* for nominal adjectives, as seen in (1) and (2), respectively:

(1) *True Adjectives (TA)*

a. utukusi-**i** tori
beautiful bird
'a/the beautiful bird'

b. taka-**i** hon
expensive book
'an/the expensive book'

(2) *Nominal Adjectives (NA)*

a. kirei-**na** hana
pretty flower
'a/the pretty flower'

b. sizuka-**na** umi
quiet sea
'a/the quiet sea'

Some of the patterns above clearly cannot be applied to Japanese *–i* and *–na*. First, we can eliminate a possibility as φ-agreement, in which adjectives show person, number and gender agreement with the noun they modify, since Japanese is not a language showing marking for φ-features in any other case.[1]

For a similar reason, definiteness marking is not a plausible analysis of Japanese *–i* and *–na*. Recall that, in some languages like Swedish, while a definite article is encliticized in simple definite noun phrases, the presence of the adjective with definiteness marking triggers an additional pre-adjectival definite article (with the noun remaining encliticized). Since Japanese is a language with no definite and indefinite article (Kuno 1973) and does not exhibit determiners in NPs (Fukui 1986), it is highly unlikely that the prenominal inflection occurring on Japanese adjectives is definite marking. This also leads us to eliminate a possibility of Long- and Short-Forms. These forms are usually connected to definiteness (see section 1.5 in chapter 1), and Japanese is a language with no definite and indefinite article. Therefore, Japanese prenominal TA *–i* and NA *–na* cannot be Long- and Short-Forms.

This appears to leave us three possible analyses for Japanese TA and NA prenominal inflection *–i* and *–na*:

- Incorporated/reduced relative clause material
- Case marking
- Adverbial

First, consider an incorporated/reduced relative clause analysis.

3.3 Relative Clause Analysis

Japanese TAs and NAs occur prenominally in nominal modification (3). In this position they are formally similar to relative clauses (RCs), which also occur prenominally in Japanese (4).[2] Compare (3) with (4):

(3) a. Taroo-ga [**utukusi-i**] tori-o mita. (TA)
Taroo-NOM beautiful bird-ACC saw
'Taroo saw a beautiful bird.'

b. Hanako-ga [**kirei-na**] hana-o katta. (NA)
Hanako-NOM pretty flower-ACC bought
'Hanako bought a pretty flower.'

[1] However, it is not clear if there is a language, which shows φ-feature agreement only between the adjective and the noun it modifies in, but not anywhere else. According to Greenberg's Universal #31, "if in a language, the verb agrees with either the subject or object in gender, then the adjective always agrees with the noun in gender." This implies that at least in gender feature, noun-phrase-internal agreement is more basic than verbal agreement. I am grateful to Richard Larson, Edith Moravcsik and Greville Corbett for pointing this out to me.

[2] As Kuno (1973) says, "Japanese lacks relative words corresponding to English *who*, *whom*, *whose*, *which*, *that*, *where*, etc. (p.234)"

(4) a. Taroo-ga [**kurakkaa-o taberu**] tori-o mita. (RC)
Taroo-NOM cracker-ACC eat bird-ACC saw
'Taroo saw a bird that eats crackers.'

b. Hanako-ga [**Taroo-ni ageru**] hana-o katta.
Hanako-NOM Taroo-DAT give flower-ACC bought
'Hanako bought a flower to give to Taroo.'
(Lit. 'a flower that she gives to Taroo')

However, there is in fact an even stronger, surface similarity between the two constructions. In simple predicative position, the morpheme *–i* attaches to TA roots (5); by contrast, NA roots are followed by the copula, which inflects for tense (6):

(5) a. Tori ga utukusi-**i**.
bird NOM beautiful
'The bird is beautiful.'

b. Hon ga taka-**i**.
book NOM expensive
'The book is expensive.'

(6) a. Hana ga kirei **da**.
flower NOM pretty
'The flower is pretty.'

b. Umi ga sizuka **da**.
sea NOM quiet
'The sea is quiet.'

Notice that the morphemes occurring in (3a) (and (1)) also appear in (5). Similarly, the marker *–na* occurring in (3b) (and (2)) is quite similar to the *da* appearing in (6). In predicative TA examples, Japanese *–i* is standardly analyzed either as a present tense marker, or as a present tense form of the copula. Similarly in predicative NAs, *da* is typically analyzed as an inflected copula. If these analyses are correct, then adjectives in prenominal position are nearly identical in morphology to sentential constructions; specifically, they look like sentential modifiers of the noun.

Given these points, it is tempting to propose that Japanese prenominal adjectives are in fact just copular relative clauses, with the *–i* and *–na* elements having the status of copulas, as shown in (7). Indeed a number of researchers have proposed just this.[3] On this proposal, the structure of the modified nominal in (3a) is as in (8a), and not as in (8b). Furthermore, the correct semantics for the prenominal adjective construction is as in (9a), where A occurs as the predicate in a relative clause, and not as in (9b):

(7) a. [utukusi - **i**] tori
beautiful BE bird

b. [kirei **-na**] hana
pretty BE flower

(8) a. Taroo-ga [$_{\mathbf{CP}}$ ... utukusi-i ...] tori-o mita.
b. Taroo-ga [$_{\mathbf{AP}}$ utukusi-i] tori-o mita.

(9) a. 'Taroo saw a bird <u>which is beautiful</u>'
b. 'Taroo saw a <u>beautiful</u> bird'

[3] Kuno (1973), Shibatani (1978), Whitman (1981), Teramura (1982, 1984, 1991), Nishiyama (1998, 1999), and Hoshi (1997, 2001, 2002).

3.3.1 Kuno (1973)

As discussed in chapter 2, Kuno (1973) assumes that TAs can constitute predicates without accompanied by copulas; however, he points out that they inflect in a manner similar to verbs, as follows (10) (Kuno 1973: 27-28):

(10)		V *tabe-ru* 'eat'		TA *aka-i* 'red'	
a.	Present (or nonpast)	tabe-ru	'eat'	aka-i	'is red'
b.	Perfect (or past)	tabe-**ta**	'ate'	aka-kat-**ta**	'was red'
c.	Imperative	tabe-ro tabe-yo	'Eat'	---	
d.	Cohortative	tabe-yoo	'Lets' eat'		
e.	Continuative	tabe	'eating'	aka-ku	'redly'
f.	Gerundive	tabe-**te**	'eat-and'	aka-ku-**te**	'is red and'
g.	Conditional	tabe-**reba**	'if … eat'	aka-ke-**reba**	'if … is red'
h.	Suppositional			aka-kar-oo	'I suppose … is red'
i.	Perfect conditional	tabe-**tara**	'if … have eaten'	aka-kat-**tara**	'if … was (has been) red
j.	Perfect suppositional	tabe-**taroo**	'(I suppose) …'	aka-kat-**taroo**	'I suppose … was red'

(10) shows that (except for imperative, cohartative and suppositional) the TA inflection is in parallel with the Vs, with the same particles (such as *ta* for perfect and *te* for gerundive) attached, although TAs require additional inflectional suffixes in between (such as *kat* before the perfect *ta* (10b), or *ku* before the gerundive *te* (10f)). Notice that in (10a) *aka-i* is assumed as a present (or non-past) tense form with the gloss 'is red' in parallel with the present (or non-past) tense form of the verb, *tabe-ru* 'eat'.

Kuno (1973) also addresses prenominal TAs and NAs in his chapter on relative clauses (pp. 234-242), and the discussion there strongly suggests that he regards all prenominal adjective construction as implicit relatives. According to him, example (11a) represents a case where a TA appears prenominally in a relative clause (although he does not gloss it accurately with 'this is a book which is thick');[4] example (11b) represents a case where a NA appears prenominally, in his words "the copula *da* appears as *–na*", in a relative clause, with accurate glosses:

(11) a. Kore wa atui hon desu.
this **is**-thick book is
'This is a thick book.'

b. baka **-na** hito
stupid **is** person
'a person who is stupid'

[4] Kuno (1973) notes that unaccented TAs appear without an accent in relative clauses, but with an accent sentence-finally (p.234).

Following Kuno's idea, Whitman (1981) explicitly states:[5]

> "AP in Japanese is subcategory of VP: adjectives inflect for tense and select case-marked NP complements, just like other verbals. Because of this fact and the absence of complementizers (a feature shared with other SOV languages), prenominal APs are formally identical to relative clauses, and most plausibly derive from the same source, i.e., [[S] N] … in languages like Japanese and Korean, where adjectives are tensed and subcategorize NP complements, adjectival modifiers of NP and sentential modifiers of NP are formally identical." (Whitman 1981: 414-415)

3.3.2 Nishiyama (1998, 1999)

A recent, sophisticated version of the relative clause analysis is proposed by Nishiyama (1998, 1999). Consider the NA *kirei* 'pretty' as it occurs in simple predications like (12a,b), and prenominally like (12c,d):

(12) a. Hana ga kirei **de ar-u**.
flower NOM pretty be-PRES
'The flower is pretty.'
b. Hana ga kirei **da**.
'The flower is pretty.'
c. kirei **de ar-u** hana
'a flower which is pretty'
d. kirei **-na** hana
'a pretty flower'

Following Urushibara (1993), Nishiyama analyzes *da* as the contracted form of *de ar-u*.[6] In the latter, /de/ is analyzed as "predicative copula", a semantically contentful member

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[5] Although "prenominal APs are formally identical to relative clauses," Whitman (1981) notes that, as described in Greenberg's Universal #20, the unmarked position of adjectives is after determiners and that of relative clauses is before determiners in SOV languages. (p.415)

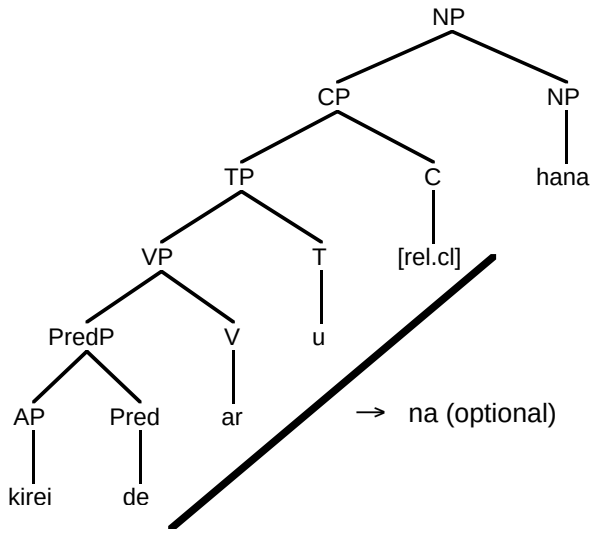
(i) a. *ano* **ao-i** mi 'those blue berries'
that blue berry
b. **ima** **it-ta** *ano* kuruma 'that car which left just now'
now go-PST that car

[6] This analysis is based in part on evidence like the fact that only *de ar-u* allows insertion of the particle *mo* with focus on the predicate:

(i) a. *Hana-ga kirei **da**-mo (ar-u).
flower-NOM pretty da.PRES-even (ar-PRES)
b. Hana-ga kirei **de**-mo ar-u. 'The flower is even pretty.'
flower-NOM pretty de-even ar-PRES (Nishiyama 1999: 185)

of the category Pred; /ar/ is analyzed as a dummy copula, a semantically vacuous member of the category Pred; /u/ is analyzed as a present tense marker, belonging to the category T. Contraction of *de ar-u* results from a morphological operation that Nishiyama calls "fusion". This operation realizes *de ar-u* as *da* in simple clauses (12b), but as *–na* in clauses containing a relative complementizer. The prenominal constructions (12c) and (12d) are both analyzed as in (13), where *de + ar + u + [rel.cl]* may fuse and spell out as *–na*:

(13)

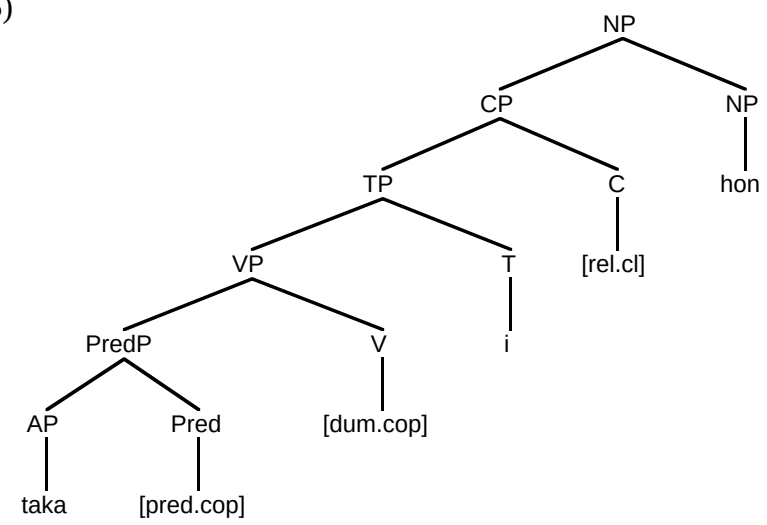


Nishiyama's analysis of TAs like *taka-i* 'expensive' is similar to that of NAs. Predications like (14a) are assumed to contain both a null predicative copula and a null dummy copula. Null realization of the copula is strictly a fact about the present tense; the past form requires an overt form of the copula (14b). The marker *–i* is assumed to be a present tense morpheme, analogous to *–u* in the nominal adjective case.

(14) a. Hon ga taka-i.
book NOM expensive-PRES
'The book is expensive.'
b. Hon ga taka-k-at-ta.
book NOM expensive-pred.cop-dum.cop-PAST
'The book was expensive.'
c. taka-i hon
'an expensive book'

The prenominal TA construction *taka-i hon* 'an expensive book' is assumed to contain all of the structure (13). Thus (14) gets the tree in (15):

(15)



In principle, Nishiyama's machinery allows all Japanese prenominal TAs and NAs to be analyzed as occurring within a relative clause containing a semantically contentful copular element and an independent tense.[7] On such an analysis, prenominal adjectives would not exist as such.

3.4 Dialectal Variation of Prenominal Adjectives in Japanese

A key motivation for the copular relative clause analysis is the assumption noted above that the *–i* inflection appearing on true adjectives in simple predicative constructions, and the *–na* appearing with nominal adjectives, represents tense or a tensed copula.[8] This view is in turn motivated by distributional facts from "standard Japanese", i.e., Tokyo dialect.

3.4.1 The "Standard" Pattern: Tokyo Dialect

In Tokyo dialect, the *–i* inflection on TAs in prenominals and present tense predicatives alternates with the past tense copula *katta*. This is shown in (16):

(16) *Tokyo Dialect (TA)*

a.	samu-**i**	umi	b.	umi-ga	samu-**i**	c.	umi-ga	samu **katta**
	cold	sea		sea-NOM	cold		sea-NOM	cold BE(PST)
	'cold sea'			'the sea is cold'			'the sea was cold'	

[7] Even though his syntactic and morphological assumptions provide the means to do so, Nishiyama (1999) is actually ambivalent about whether all Japanese attributive adjective constructions should be analyzed as present tense copular relative clauses.

[8] The material in this section is based on Yamakido (2002, 2005).

d.

PRENOMINALS	Stem +	*i*	+ Noun
PRESENT PREDS		*i*	
PAST PREDS		*katta*	

Likewise, the inflection for prenominal NAs is *–na*, and the inflection for present-tense predicatives is *da*. The latter, which closely resembles the prenominal *–na*, alternates with the past predicative copula *datta*, as shown in (17):

(17) *Tokyo Dialect (NA)*

a. sizuka-**na** umi
calm sea
'calm sea'

b. umi-ga sizuka **da**
sea-NOM calm BE
'the sea is calm'

c. umi-ga sizuka **datta**
sea-NOM calm BE(PST)
'the sea was calm'

d.

PRENOMINALS	Stem +	*na*	+ Noun
PRESENT PREDS		*da*	
PAST PREDS		*datta*	

3.4.2 Non-standard Dialects

This "standard pattern" is found in many dialects of Japanese, although the actual form of the morphemes may differ. For example, in Echigo dialect, spoken in Niigata prefecture, true adjectives in predicative and prenominal environments are inflected with the morpheme *–e*, instead of *–i*. Again, this morpheme alternates with the past tense copula, *katta* (18):

(18) *Echigo Dialect (TA)* (Kenmotsu 1983)

a. taka-**e** yama
high mountain
'high mountain'

b. yama-ga taka-**e**
m.-NOM high
'the mountain is high'

c. yama-ga taka **katta**
m.-NOM high BE(PST)
'the mountain was high'

d.

PRENOMINALS	Stem +	*e*	+ Noun
PRESENT PREDS		*e*	
PAST PREDS		*katta*	

Similarly, in dialects spoken in western Japan, such as Osaka dialect, nominal adjectives show the morpheme *–na* in prenominals, but *ya* appears in present tense predicatives instead of *da*. Again, *ya* alternates with the past tense *yatta* (19):

(19) *Osaka Dialect (NA)* (Hirayama *et al*. 1997a)

a. sizuka-**na** umi
calm sea
'calm sea'

b. umi-ga sizuka **ya**
sea-NOM calm BE
'the sea is calm'

c. umi-ga sizuka **yatta**
sea-NOM calm BE(PST)
'the sea was calm'

d.

PRENOMINALS	Stem +	*na*	+ Noun
PRESENT PREDS		*ya*	
PAST PREDS		*yatta*	

In all of such cases, complementarity between the adjectival morphology in present predicatives and the inflected copula in past predicatives makes it attractive to assimilate the two in function. The surface resemblance between the prenominal inflection and the present predicative inflection then further suggests that all three be brought together.

3.4.3 Non-standard Dialect Patterns Supporting the Relative Clause Analysis

Although the "standard pattern" is found in many dialects of Japanese, it is not universal. Interestingly, some non-standard dialects appear to provide even more transparent support for the relative clause analysis.

A number of dialects spoken in the Kyushu region show a pattern in which the inflection appearing on true adjectives in the three environments is not merely similar, but identical. Fukuoka dialect, illustrated in (20), is an example. Note that *–ka* occurs throughout and appears bearing past tense morphology (*–ta*) in (20c):

(20) *Fukuoka Dialect (TA)* (Hirayama *et al*. 1997b)

a. naga **ka** hasi
long bridge
'long bridge'

b. hasi-ga naga **ka**
bridge-NOM long
'the bridge is long'

c. hasi-ga naga **katta**
bridge-NOM long BE(PST)
'the bridge was long'

d.

PRENOMINALS	Stem +	*ka*	+ Noun
PRESENT PREDS		*ka*	
PAST PREDS		*katta*	

Given this distribution, it is very attractive to analyze *–ka* as a copula bearing a zero present tense in (20a,b). This would of course imply a copular relative analysis of (20a). The same pattern is observed in Saga and Kagoshima dialects (21) and (22) (respectively). Here also *–ka* replaces the *–i* found in predicatives and prenominals in standard Japanese. And here too it is tempting to analyze *–ka* as the copula throughout, bearing a zero tense in prenominals and present predicatives, and bearing past *–ta* in past predicatives:

(21) *Saga Dialect (TA)* (Ono 1983)

a.	b.	c.
omosiro **ka** hon	hon-ga omosiro **ka**	hon-ga omosiro **katta**
interesting book	book-NOM interesting	book-NOM interesting BE(PST)
'interesting book'	'the book is interesting'	'the book was interesting'

(22) *Kagoshima Dialect (TA)* (Goto 1983)

a.	b.	c.
aka **ka** tori	tori-ga aka **ka**	tori-ga aka **katta**
red bird	bird-NOM red	bird-NOM red BE(PST)
'red bird'	'the bird is red'	'the bird was red'

Similar variation is found in the marking of nominal adjectives. In standard Japanese, the element *–na* appearing on prenominal NAs resembles the copula *da* found in present and past predicatives. In other dialects, the elements are actually identical in the three cases. Tsugaru dialect shows this pattern (23):

(23) *Tsugaru Dialect (NA)* (Konoshima 1982)

a.	b.	c.
sizuka **da** umi	umi-ga sizuka **da**	umi-ga sizuka **datta**
calm sea	sea-NOM calm	sea-NOM calm BE(PST)
'calm sea'	'the sea is calm'	'the sea was calm'

d.

PRENOMINALS	Stem +	*da*	+ Noun
PRESENT PREDS		*da*	
PAST PREDS		*datta*	

Here *da* replaces the *–na* found with prenominals in standard Japanese. Thus, the element (*da)* appearing on prenominal NAs is identical to that appearing with present predicatives. Again, these facts suggest an analysis of *da* as a present copula, and hence a relative clause analysis of the prenominal construction.

3.5 Children's Production of Prenominal Adjectives in Japanese

The relative clause analysis gains another piece of evidence from acquisition study of prenominal adjectives in Japanese. When Japanese-speaking children (at two to three years old) produce nouns modified by a true adjective, they frequently insert the morpheme *no* between TA-*i* and N.[9] The examples in (24) show this pattern, where *no* is simply glossed with "*NO", following Murasugi (1991). By contrast, in the adult grammar, TAs modify a noun without any intervening morphological element (25):

[9] The material and argument in this section are based on Murasugi (1991, 1998).

(24) *Children's Grammar of Standard Japanese (TAs)*

a. ao-i **no** buubuu
blue *NO car
'the blue car' (Clancy 1985: 459)

b. kawai-i **no** zoosan
cute *NO elephant
'a cute elephant' (Murasugi 1991: 223)

(25) *Adult's Grammar of Standard Japanese (TAs)*

a. ao-i buubuu[10]
blue car
'the blue car'

b. kawai-i zoosan
cute elephant
'a cute elephant'

Interestingly, a similar phenomenon is observed with relative clauses (RCs) around the same acquisition stage: the morpheme *no* is inserted between a RC (with both subject and object gaps and with both present and past tenses) and the N it modifies (26). By contrast, in the adult grammar, relative clauses modify nouns without any intervening morphological element (27):

(26) *Children's Grammar of Standard Japanese (RCs)*

a. [$_{RC}$ gohan tabe-teru] **no** buta san
food eat-PROG *NO pig
'the pig that is eating the food' (Murasugi 1991: 13)

b. [$_{RC}$ usatyan ga tabe-ta] **no** ninzin
rabbit NOM eat-PST *NO carrot
'the carrot that the rabbit ate' (Harada 1980)

c. [$_{RC}$ tigau] **no** outi
differ *NO house
'the house which differs / a different house' (Murasugi 1991: 13)

(27) *Adult's Grammar of Standard Japanese (RCs)*

a. [$_{RC}$ usatyan ga tabe-ta] ninzin
rabbit NOM eat-PST carrot
'the carrot that the rabbit ate'

b. [$_{RC}$ gohan tabeteru] buta san
food eat-PROG pig
'the pig that is eating the food'

c. [$_{RC}$ tigau] outi
differ house

[10] *Buubuu* 'car' is a baby-talk word, but I use it here to be consistent with the examples (24). (cf. *kuruma* 'car')

'the house which differs / a different house'

What is this morpheme *no* occurring on prenominal TAs and RCs in children's production? In the adult grammar of Japanese, there are three types of *no* occurring in NPs: (i) genitive case-marker *no*, (ii) pronoun *no*, and (iii) complementizer *no*. Let us review these three constructions briefly.

3.5.1 Genitive Case-marker *No*

Japanese genitive case *no* appears on NPs to mark several relations, including those of possessor, subject, object, modifier, and quantifier (Murasugi 1991), as shown in (28). It also marks postpositional phrases (PPs) preceding a noun, as shown in (29):

(28) *Genitive Case-marker "no" (with NP)*

a. John **no** hon — POSSESSOR
   book
   'John's book'

b. yabanzin **no** tosi **no** hakai — SUBJECT AND OBJECT
   barbarian city destruction
   'the barbarian's destruction of the city'

c. ame **no** hi — MODIFIER
   rain day
   'a rainy day'

d. ikutuka **no** uti — QUANTIFIER
   a few house
   'a few houses'

e. san-bon **no** biiru — QUANTIFIER
   three-CL beer
   'three bottles of beer'

(Murasugi 1991: 10)

(29) *Genitive Case Marker "no" (with PP)*

a. Boston de **no** gakkai
   at GEN conference
   'a conference at Boston' (Murasugi 1991: 10)

b. Tokyo kara **no** densya
   from GEN train
   'a train from Tokyo' (Murasugi 1991: 50)

According to Kitagawa and Ross (1982), Japanese genitive *no* serves to mark prenominal modification under a universal rule, MOD (Prenominal Modification Marker)

Insertion Rule (30). In Japanese this rule inserts *no* (MOD) after NPs and PPs (X) in prenominal modification, as shown in (31):[11]

(30) MOD Insertion Rule: $[_{NP}$ X NP] → $[_{NP}$ X **MOD** NP]
(Kitagawa and Ross 1982: 23)

(31) a. $[_{NP}$ John $[_{NP}$ hon]] → $[_{NP}$ John **no** hon] (for (28a))
book 'John's book'
b. $[_{NP}$ ame $[_{NP}$ hi]] → $[_{NP}$ ame **no** hi] (for (28c))
rain day 'a rainy day'
c. $[_{NP}$ ikutuka $[_{NP}$ uti]] → $[_{NP}$ ikutuka **no** uti] (for (28d))
few house 'a few houses'
d. $[_{NP}$ $[_{PP}$ Boston de] $[_{NP}$ gakkai]] → $[_{NP}$ $[_{PP}$ Boston de] **no** $[_{NP}$ gakkai]] (for (28a))
at conference 'a conference at Boston'

As observed earlier, nouns can be modified by true adjectives and relative clauses, but in the adult grammar the modifying marker *no* does not appear ((25) and (27)). Kitagawa and Ross (1982) proposes that this is due to an additional rule of *NO*-deletion (32):

(32) *NO*-deletion
$[_{NP}$ X *no* NP] → $[_{NP}$ X NP]
where (a) NP ≠ e
(i.e., the head NP is occupied by a phonologically full lexical item); and
(b) X = [… tense] (i.e., X is tensed [+V] final).
(Kitagawa and Ross 1982: 23)

Thus when true adjectives and relative clauses modify a noun, they are initially followed by the prenominal modifying marker *no* under MOD Insertion Rule (29); however, since true adjectives and relative clauses are both considered to have tense, prenominal modification marker *no* is deleted in both cases.

3.5.2 Pronominal *No*

Examples (33a-c) show cases of pronominal *no*, which is similar to English *one*, and widely assumed to be of category N (Murasugi 1991: 56). This pronoun *no* can be modified by true adjectives (33a) and relative clauses (33b,c):[12]

[11] The MOD Insertion Rule also applies to Chinese, in which Prenominal Modification Marker (MOD) is *de*, as in (i):

(i) a. wo **de** shu
I book
'my book'
b. da **de** shu
big book
'big book'
c. wo nian **de** shu CH.
I read book
'the book that I am reading'

[12] As Murasugi (1991) notes, the sequence *no–no* is not possible, as shown in (i):

(33) *Pronoun "no"*

a. ao-i **no** 'the one which is blue'
blue one

b. hasitte iru **no** 'the one which is running'
running one (Murasugi 1991: 56)

c. kaita **no** 'the one which (I) wrote'
wrote one

3.5.3 Complementizer *no*

Finally, there is complementizer *no* in Japanese (Kuno 1973, among others). This *no* can be used for sentential subject marking (34a) and for sentential object marking (34b), especially of verbs of perception (such as "see", "hear" and "feel") (34c):[13]

(i) a. *Taroo **no** **no** → Taroo **no** 'the one of Taroo's'
GEN one one

b. *Tokyo kara **no** **no** → Tokyo kara **no** 'the one from Tokyo'
from GEN one from one

c. *ni-hon **no** **no** → ni-hon **no** 'the one of two pieces'
two-CL GEN one two-CL one

(Murasugi 1991: 63-64)

This is referred as "*no-no* reduction" rule in Okutsu (1974), which is observed throughout all variants except for several dialects (Yuzawa 1953). An example is shown in (ii):

(ii) Kore wa watasi **no** **no** de wa arimasen.
this TOP I GEN one is-not
(Lit.) 'This is not my one.' (Yuzawa 1953: 257)

However, it is still not clear which *no* in the *no–no* sequence is deleted.

On the other hand, it seems that the reduction of *no-no* sequences is not simply due to phonology. For example, if the N *no* is not a pronoun, but a contentful word (iii-a), or the order of *no-no* is PRONOUN-GEN (iii-b), then resulted sentences are grammatical:

(iii) a. Taroo **no** **no** 'Taroo's field'
Taroo GEN field

b. aka-i **no** **no** hyoosi 'the front page of the red one'
red one GEN front page (Murasugi 1991: 64)

[13] According to Kuno (1973), *no* can be used as a complementizer when the predicate of a subject noun clause contains the presupposition of the truth of the clause. For this reason, the following examples in (i) are not acceptable:

(i) a. *John ga Mary o nagutta **no** wa ariuru koto da.
NOM ACC hit TOP possible thing is
(intended) 'It is probable that John hit Mary.'

b. *John ga Mary o nagutta **no** wa uso da.
NOM ACC hit TOP lie is
(intended) 'It is false that John hit Mary.' (Kuno 1973: 218-219)

(34) a. John ga kekkon tyokugo sinde simatta **no** wa higeki da.
NOM marriage right-after died TOP tragedy COP
'It is a tragedy that John died right after he got married.' (Kuno 1973: 218)

b. John wa Mary ga tunbo de aru **no** o wasurete ita.
TOP cry NOM deaf is ACC forgot
'John forgot that Mary was deaf.' (Kuno 1973: 215)

c. Watakusi wa John ga Mary o butu **no** o mita.
I TOP NOM ACC hit ACC saw
'I saw John hitting Mary.' (Kuno 1973: 219)

3.5.4 Acquisition of Modification Structures and *No*

Now let us return to our earlier question: what is the *no* appearing after TAs (as in (24)) and RCs (as in (26))? Consider a possibility of genitive case marker first. Clancy (1985) and Murasugi (1991) report that at an earlier stage of language acquisition (age 2;2-2;4) Japanese children are able to properly insert genitive case marker *no* after NPs, as shown in (35):[14]

(35) a. Emi **no** zyuusu 'Emi's juice' POSSESSOR
's juice

b. megane **no** ozityan 'a man with eye glasses' MODIFIER
glasses GEN man

c. heya **no** okatazuke 'the cleaning of the room' OBJECT
room GEN cleaning

(Murasugi 1991: 174)

This indicates that Japanese children at this stage already have an ability to apply the universal MOD Insertion Rule to their language. Given this, it is reasonable to hypothesize that children are able to apply the *NO*-Insertion rule not only to an NP modification but also to a TA and RC modification, but yet they have not acquired the language-specific *NO*-deletion rule. Indeed, a number of researchers claim that the overgeneralized *no* is genitive case marker (Harada 1980, Clancy 1985).

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[14] According to Clancy (1985), children acquire the genitive *no* to indicate possession in sentences of the form "N *no*" 'It's N's' at 1;8 years-of-age, as in (i):

(i) Noriko-chan **no**. 'It's Noriko's (=mine).'
GEN (Miyahara 1974; Clancy 1985: 458)

Around 1;11 years, many children begin to produce both the modifier and the head noun in two-word constructions as in (ii), where the genitive *no* (between them) is undergeneralized:

(ii) *neechan buubuu 'older sister's car'
older sister car (Clancy 1985: 458)

Note that at this two-word construction stage, children can produce a correct TA-*i* N phrase (iii):

(iii) aka-i buubuu 'red car'
red car (Clancy 1985: 458)

Then, the stage of overgeneralization of *no* (as in (24) and (26)) follows.

However, Murasugi (1991) gives two pieces of evidence against this idea. The first is that Japanese children at this acquisition stage do not insert *no* properly after a PP modifier. We saw earlier (in (29)) that in the adult grammar genitive case marker *no* is inserted after PPs in prenominal modification; however, Murasugi (1991) reports that those children who insert *no* after TAs and RCs do not insert *no* after PPs in prenominal modification, as shown in (36):

(36) *Children's grammar of Standard Japanese (PPs)*
a. Tokyo made *(**no**) basu
to *(GEN) bus
(intended) 'a bus from Tokyo'
b. Santa san kara *(**no**) purezento
Santa from *(GEN) present
'a present from Santa'
(Murasugi 1991: 173)

This undergeneration of genitive case marker *no* in PP modifiers suggests that Japanese-speaking children at this stage do not have the ability to apply the MOD Insertion Rule fully to the language yet, thus, we cannot simply assume that the *no* occurring on TAs and RCs is the Prenominal Modification Marker (i.e., the genitive case marker).[15]

A second piece of evidence against the proposal that children insert genitive case marker *no* comes from dialectal variation in Japanese. As discussed earlier, the morpheme *no* can be either (i) genitive case marker, (ii) pronoun, or (iii) complementizer in standard Japanese; however, in some dialects these are realized in different morphological forms. Table (37) shows a morphological variation in Toyama and Kumamoto dialects:

(37)

	Tokyo	Toyama	Kumamoto
(i) GENITIVE CASE	no	no	no
(ii) PRONOUN	no	**ga**	**to**
(iii) COMPLEMENTIZER	no	**ga**	**to**

[15] This argument is not convincing enough. If genitive *no* appearing on PPs really is a CASE-marker, then what we see may simply reflects children's understanding of case-marking possibilities. Both N and A are [+N], case-bearing categories. Furthermore in some languages RCs receive case-marking along with the nominal they modify. On the other hand, P is [–N], case-ASSIGNING category. So maybe children have the idea that *no* is a case-marker, that PP is [–N], and that you don't assign case to [–N] phrases. I am grateful to Richard Larson for pointing this out. In fact, Murasugi (1991) also makes a similar point that Japanese children may start inserting *no* after PP modifiers at the point when they realize P is not a case assigner in Japanese.

Something very like this goes on with Persian PPs and Ezafe. I will discuss it in the next chapter.

Examples in (38)-(40) show that, in Toyama dialect, while genitive case marker is *no* as in Tokyo dialect, pronoun and compelementizer are realized as *ga*:

(38) *Toyama Dialect (Genitive Case)*

a. [$_{NP}$ [$_{NP}$ Yamada san] **no** hon] 'Yamada's book'
GEN book

b. [$_{NP}$ [$_{NP}$ daigaku made] **no** miti] 'a street to college'
college to GEN street

(Murasugi 1998: 234)

(39) *Toyama Dialect (Pronoun)*[16]

a. [$_{NP}$ aka-i **ga**] 'the one which is red'
red one

b. [$_{NP}$ hasitte iru **ga**] 'the one which is running'
running one (Murasugi 1998: 234)

(40) *Toyama Dialect (Complementizer)*

[$_{CP}$ [$_{IP}$ Doroboo ga kane o nusunda] **ga**] wa koko kara da.
thief NOM money ACC stole TOP here from COP
'It is from here that a thief stole money.' (Murasugi 1998: 234)

Examples in (41)-(43) show that, in Kumamoto dialect, while genitive case marker is *no* as in Tokyo dialect, pronoun and compelementizer are realized as *to*:

(41) *Kumamoto Dialect (Genitive Case)*

a. [$_{NP}$ [$_{NP}$ Yamada san] **no** hon] 'Yamada's book'
GEN book

b. [$_{NP}$ [$_{NP}$ daigaku made] **no** miti] 'a street to college'
college to GEN street

(Murasugi 1998: 240)

(42) *Kumamoto Dialect (Pronoun)*

a. [$_{NP}$ aka-ka **to**] 'the one which is red'
red one

b. [$_{NP}$ hasitte iru **to**] 'the one which is running'
running one

(Murasugi 1998: 240)

[16] While the sequence of GENITIVE-PRONOUN (*no-no*) is prohibited in standard Japanese (as discussed in fn.12), that of Toyama dialect, which is realized as *no-**ga***, is possible (i):

(i) a. John no **ga** 'the one which is John's'
GEN one

b. Arizona kara no **ga** 'the one from Arizona'
from GEN one (Murasugi 1991: 72)

(43) *Kumamoto Dialect (Complementizer)*

[$_{CP}$ [$_{IP}$ Doroboo ga kane o nusunda] **to**] wa koko kara da.
thief NOM money ACC stole TOP here from COP
'It is from here that a thief stole money.' (Murasugi 1998: 240)

Murasugi (1991, 1998) reports that Toyama dialect-speaking and Kumamoto dialect-speaking children also insert a morpheme after TAs and RCs in prenominal modification, but interestingly the morpheme is <u>not</u> *no*, but *ga* in Toyama dialect and *to* in Kumamoto dialect, as shown in (44) and (45), respectively:

(44) *Children's grammar of Toyama Dialect (TAs, RCs)*

a. [$_{NP}$ [$_{RC}$ aka-i] **ga** boosi]] 'the cap which is red'
red cap

b. [$_{NP}$ [$_{RC}$ Anpanman tuitoru] **ga** koppu]]
a character attaching cup
'the cup which is pictured with Anpanman' (Murasugi 1991: 179)

(45) *Children's grammar of Kumamoto Dialect (TAs)*

[$_{NP}$ [$_{RC}$ ao-ka] to buubuu]] 'the car which is blue'
blue car (Murasugi 1998: 240)

These facts imply that the *no* appearing in children's grammar of standard Japanese is <u>not</u> the genitive case marker, but either of category N (pronoun) or category C (complementizer). Murasugi (1991) rules out the first possibility, arguing that, if children can already apply the *NO*-Insertion rule to NP modifiers (as in (35)), then the structures in (46) become logically possible. Thus, examples like (47) for standard Japanese and (48) for Toyama dialect are predicted to be possible. This prediction is incorrect, however:

(46) a. [$_{NP}$ [$_{NP}$ IP **no**] no NP] (where IP is TA, RC) *Standard Japanese*

b. [$_{NP}$ [$_{NP}$ IP **ga**] no NP] (where IP is TA, RC) *Toyama Dialect*

(47) *Children's grammar of standard Japanese (TAs, RCs)*

a. *ao-i (***no** no) buubuu (intended) 'a car which is blue'
blue one GEN car

b. *usatyan ga tabe-ta (***no** no) ninzin
rabbit NOM ate one GEN carrot
(intended) 'the carrot that the rabbit ate' (Murasugi 1991: 182)

(48) *Children's grammar of Toyama Dialect (TAs, RCs)*

a. *aka-i (***ga** no) boosi (intended) 'a cap which is red'
red one GEN cap

b. *anpanman tuitoru (***ga** no) koppu
a character attaching one GEN cup
(intended) 'the cup which is pictured with Anpanman' (Murasugi 1991: 182)

Hence, the *no* appearing in standard Japanese and *ga* in Toyama dialect (and probably *to* in Kumamoto dialect) in prenominal modification are <u>not</u> Ns, that is, not pronouns (Murasugi 1991).[17] [18]

Given these results, the only remaining analysis of the *no* inserted by children in pronominal modification structures is that it is the complementizer (C), and this is indeed what Murasugi (1991) concludes. On this proposal, Japanese relative clauses in prenominal modification in the children's grammar have a structure like (49a), where a complementizer is overtly realized as *no*. This structure is, in essence, the mirror image of an English relative clauses marked with complementizer *that* (49b):

(49) a. [$_{NP}$ [$_{CP}$ [$_{IP}$ usatyan ga tabe-ta] **no]** ninzin] (=(26b))
rabbit NOM eat-PST **COMP** carrot
'the carrot that the rabbit ate'
b. [$_{NP}$ the carrot [$_{CP}$ **that** [$_{IP}$ the rabbit ate] **]**]

In Toyama dialect the *no* in (49a) would be replaced by *ga*, and in Kumamoto dialect it would be replaced by *to*.

Now consider a case of TAs. Following Murasugi (1991), where prenominal TAs are assumed to have tense and to be in relative clauses, we can assume that TAs in prenominal modification have a structure in parallel to (49a), as shown in (50). Here *no* following a TA is a complementizer:

(50) [$_{NP}$ [$_{CP}$ [$_{IP}$ ao-i] **no]** buubuu] (=(24a))
blue **COMP** car
'a car which is blue'

[17] As discussed earlier in fn.12, the sequence of PRONOUN-GENITIVE (*no-no*) is possible in the adult grammar (Murasugi 1991: 64).

[18] As noted in fn. 14, children at 1;8 years-of-age acquire the genitive *no* to indicate possession in sentences of the form "N *no*" 'It's N's' (Clancy 1985), as repeated in (i):
(i) Noriko-chan **no**. 'It's Noriko's (=mine).'
GEN (Miyahara 1974)
However, it is not clear to me if children at this acquisition stage still maintain sentences like (i). Most of all, it is not clear whether the *no* in (i) is pronoun or genitive case-marker. (The gloss for (i) is from Clancy 1985.) Furthermore, I don't know if they are able to use the pronoun *no* 'one' with TAs, producing "TA-i *no*" 'a A one' like (ii):
(ii) aka-i **no** 'a red one'
red
If not, then it is unlikely that they could produce more complex phrases with the pronoun as in (47). The same questions apply to Toyama dialect.

Once again, in Toyama dialect the *no* in (50) would be replaced by *ga*, and in Kumamoto dialect it would be replaced by *to*.

Finally, consider a instance of nominal adjectives (NAs). The same overgeneration of *no* is observed with NAs in prenominal modification (51) in the children's grammar. By contrast, as seen earlier, NAs modify a noun only with morpheme *–na* in the adult grammar (52):

(51) *Children's Grammar of Standard Japanese (NAs)*
a. kirei -na **no** hana
pretty *NO flower
'a pretty flower'
b. genki -na **no** onnanoko
cheerful *NO girl
'a cheerful girl'
c. iya -na **no** neko
disgusting *NO cat
'a disgusting cat'
(Murasugi 1991: 250)

(52) *Adults' Grammar of Standard Japanese (NAs)*
a. kirei -na hana
pretty flower
'a pretty flower'
b. genki -na onnnanoko
cheerful girl
'a cheerful girl'
c. iya -na neko
disgusting cat
'a disgusting cat'

The parallelism of overgeneration between NAs and TAs suggests that *no* occurring after NA-*na* is a complementizer as well. Therefore, a structure of NAs in prenominal modification in the children's grammar is proposed as in (53):

(53) $[_{NP}\ [_{CP}\ [_{IP}$ kirei -na] **no]** hana] (=(51a))
pretty **COMP** flower
'a flower which is pretty'

Once again, Japanese children hypothesize that Japanese NAs in prenominal modification are CPs, and overgeneralize *no*.[19]

[19] There is another type of incorrect NA forms observed in children's production, as shown in (i). Here the morpheme *no* directly follows NA stems:
(i) *Children's Grammar of Standard Japanese (NAs) II*
a. kirei **no** hana 'a flower that is pretty'
pretty *NO flower

3.5.5 Summary and Remaining Questions

The analysis of acquisition of TA and NA modification structures gives an important piece of evidence for the RC analysis: at least at some stage of children's language acquisition, Japanese prenominal TAs and NAs are in relative clause constructions (CPs), with *no* as their heads realized overtly, as shown in (54):

(54) a. *Acquisition of True Adjectives*

$[_{NP}\ [_{CP}\ [_{IP}$ TA-i] **no]** N] 'N that is A'
COMP

b. *Acquisition of Nominal Adjectives*

$[_{NP}\ [_{CP}\ [_{IP}$ NA-na] **no]** N] 'N that is A'
COMP

In the proposed structures above, TA *–i* and NA *–na* are analyzed as a present tense marker, or as a present tense form of the copula.

However, recall that in the adult grammar TAs and NAs as well as RCs modify a noun without any intervening morphological element (as in ((25), (27) and (52)). An important question still remains as to why and how Japanese children retreat from the overgeneration of the category C, *no*. According to Murasugi, Japanese relative clauses in the adults' grammar are not CPs, but rather IPs (which she calls "IP hypothesis"). First they hypothesize that Japanese relative clauses are CPs, and overgeneralize *no*. Then, once they attain the (adults') grammar of Japanese, in which relative clauses are IPs, they retreat from the overgeneration (pp.196-198). We can also apply Murasugi's IP hypothesis to TAs and NAs: Japanese-speaking children initially assume that prenominal TAs and NAs are in CP relative clauses, and then they retreat from the overgeneration of *no* after they learn that, like RCs, prenominal TAs and NAs are IPs.[20]

Alternatively, it is perfectly consistent to hypothesize that children retreat from a CP analysis of pronominal adjectives, reanalyzing them as APs in the face of additional evidence. We will come back to this issue later in this chapter, but it is still an important fact that prenominal adjectives in Japanese are in relative clause constructions (CPs), with *no* as their heads realized overtly, at least at some stage of language acquisition.

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b. genki **no** onnnanoko 'a girl who is cheerful'
cheerful *NO girl

c. kirai **no** papa 'Daddy, who *pro* dislikes'
dislike *NO daddy (Murasugi 1991: 222-223)

According to Murasugi (1991), the *no* in (i) is Genitive case marker and inserted by the *no*-insertion rule, given that NA stems have the feature matrix [+N,–V] like Ns. Interestingly, no children use two types (this type and a type found in (51)) in a mixed way (Murasugi 1991: 250).

[20] Murasugi (1991) reports that the overgenerated *no* eventually disappear from NPs with AP modifiers (age 4;0) before those with relative clauses (age 4;2). At this point, children still undergenerate *no* on PPs (pp.230-1).

3.6 Problems for the Relative Clause Analysis

Given these points, the copular relative clause (RC) analysis of Japanese prenominal adjectives would appear to rest on solid ground. However, as I argue below, appearances are deceiving. There is in fact compelling evidence that prenominal morphemes TA *–i* and NA *–na* should not be uniformly analyzed as copulas or present tense. The first two line of evidence comes from semantics. The copular relative clause analysis predicts that the prenominal adjectives, like relatives, will always receive an intersective interpretation, and that the temporal relations between a prenominal adjective and its containing clause will parallel those found with relative clauses; however, both predictions appear to be false. The third line of evidence against the RC analysis is distributional. Along with dialect varieties that appear to support the relative clause analysis (in section 3.6.3.3), there are also varieties that appear to undermine it. On the basis of this evidence I conclude that the relative clause is wrong.

3.6.1 Intersectivity in RCs vs. Prenominal Adjectives

If Japanese attributive adjectives occur in copular relatives, they should be interpreted like relatives in which the adjective functions as a predicate.[21] More precisely, they should receive a uniform **intersective interpretation**, characterized schematically as in (55):[22]

(55) **Intersective Interpretation:** (a) NP is a N Mod → NP is an N & NP is Mod
(b) NP is a Mod N → NP is Mod & NP is an N

According to (55), a modifier (postnominal or prenominal) is interpreted intersectively when it is read as a predicative conjunct to the element modified. Thus if we can accurately paraphrase a sentence of the form *NP is a N Mod* with *NP is an N and NP is Mod*, we know that Mod is being understood intersectively. Conversely if *NP is a N Mod* is not equivalent to *NP is an N and NP is Mod*, or if *NP is an N and NP is Mod* is not coherent, we know that Mod is being read non-intersectively.

3.6.1.1 English intersectivity

Restrictive relative clauses are a canonical case of an intersective modifier. (56a) and (57a) are examples. *Obsidian is a rock that is black* is true just in case obsidian is a rock and obsidian is black (56b). Since the sentence shows the entailment pattern in (55a), the relative clause *that is black* is an intersective modifier of *rock* (56b). Similarly, *Ken is an*

[21] The material in this section is partially presented in Yamakido (2000).

[22] Such an interpretation is called "intersective" because the Mod-N combination is understood by taking the intersection of their respective sets; that is:
(i) [[Mod N]] (or [[N Mod]]) = [[Mod]] ∩ [[N]]

actor who is famous is true just in case Ken is an actor and Ken is famous; thus *who is famous* is an intersective modifier of *actor* (57b):

(56) a. Obsidian is a rock [$_{CP}$ that is black].
b. rock(obsidian) & black(obsidian)
'Obsidian is a rock and obsidian is black.'

(57) a. Ken is an actor [$_{CP}$ who is famous].
b. actor(Ken) & famous(Ken)
'Ken is an actor and Ken is famous.'

Prenominal intersective modifiers include certain adjectives, such as those expressing color or nationality. Thus (58a) *Monticello is a white building* is true just in case Monticello is white and Monticello is a building (58b). The sentence exhibits the entailment pattern in (55b), and hence the adjective is an intersective modifier of the noun:

(58) a. Monticello is a white building.
b. white(Monticello) & building(Monticello)
'Monticello is white and Monticello is a building.'

Now although all restrictive relative clauses are intersective modifiers, and some prenominal adjectives are, there are also prenominal adjectives that are not interpreted intersectively.[23] These nonintersective readings come in a variety of different kinds, but are often "adverbial" in general character. Consider first (59a). *Olga is a former dancer* does not mean that Olga was former and Olga was a dancer (59b); indeed it's unclear what it would mean to say that Olga was former. Hence the entailment in (55b) is not licensed. The adjective and noun do not function as separate predicates, applied conjointly to the subject; instead the relation between the adjective and noun is like the relation between the corresponding adverb and verb in (59c):

[23] There is another type of attributive adjective. They are interpreted intersectively, but are somewhat different from the adjectives such as 'black' and 'famous'. Consider the following examples:
(i) John is a short basketball player.
(ii) short(John) & basketball_player(John)
When we say that John is a short backetball player, we mean that he is short for a basketball player, not for a man in general. Therefore, the semantics of (i) is captured not by (ii), but instead requires something like (iii), where 'basketball_player' provides a comparison-class according to which shortness is evaluated:
(iii) short(John, basketball_player) & basketball_player(John)
'John is short for a basketball player and John is a basketball player.'
There are more adjectives which are predicated with respect to a comparison class in both English and Japanese, which I will not discuss in this thesis. See Wheeler (1972), Siegel (1976), and Platts (1979) for a fuller discussion of comparison-class relativity.

(59) a. Olga is a **former dancer**.
b. #Olga is former and Olga is a dancer.
c. Olga danced formerly.

Examples (60) and (61) present a similar, although slightly more subtle case. Both have an intersective reading. Thus (60a) has a meaning which entails that Olga is beautiful and Olga is a dancer (60b). And (61a) has a meaning which entails that Peter is old and Peter is a friend (61b). But both also have a second, non-intersective reading. (60a) has a meaning on which *beautiful* doesn't apply to Olga but rather to her dancing (60c). And (61a) has a meaning on which *old* doesn't apply to Peter, but rather to the friendship (61c):

(60) a. Olga is a **beautiful dancer**.
b. Olga is beautiful and Olga is a dancer.
c. Olga dances beautifully.

(61) a. Peter is an **old friend**.
b. Peter is old and Peter is a friend. (cf. *Peter is an aged friend*)
c. Peter has been a friend for a long time.

As with *former*, this second, nonintersective reading is adverbial in character, as testified by the adverbial paraphrases in (60c) and (61c). This kind of interpretation, in which the adjective bears an adverbial relation to the noun, is called an **internal adverbia**l **reading** by Larson (1998).

The range of cases in which a nonintersective attributive adjective is interpreted like an adverb goes beyond the type in (59)-(61). Consider example (62a), observed by Bolinger (1967), and discussed by Stump (1981) and Larson (1998):

(62) a. An **occasional sailor** strolled by.
b. A person who sailed occasionally strolled by.
c. Occasionally, a sailor strolled by.

Like the case of *beautiful dancer*, the nominal in (62a) shows an internal adverbial reading according to which an occasional sailor is one who sails occasionally (62b). However, the sentence can also mean that, now and then, a sailor strolled by. On this reading the modifier is understood like a matrix adverb (62c). Such an interpretation is called an **external adverbial reading** by Larson (1998). Example (63a) gives another case of ambiguity between an internal adverbial reading (63b) and an external adverbial reading (63c):

(63) a. An **unexpected visitor** came by.
b. A person who visited unexpectedly came by.
c. Unexpectedly, a visitor came by.

Notice that on both the internal and external adverbial readings, the adjective is interpreted non-intersectively.[24]

A final case where an adjective is interpreted non-intersectively and adverbially is (64a). (64a) is not paraphrasable as in (64b), but rather as in (64c). Note that the modifier *complete* expresses the degree to which the subject instantiates the predicate. In other words, the adjective is interpreted similarly to the corresponding degree adverb:

(64) a. Max is a **complete fool**.
b. #Max is complete and Max is a fool.
c. Max is completely foolish.

The modifier *complete* shows the "degree" of Max's foolishness and asserts, in effect, that the degree of Max's foolishness is total. Other degree adjectives similar to *complete* are *utter* and *total*.

In brief, then, although the semantic relation between a noun and a restrictive relative clause is uniformly intersective, there are many cases where an adjective in English bears a nonintersective semantic relation to its accompanying noun, which is adverbial in many cases; the A-N modifying relation appears to be semantically "richer" in this sense than the N-CP modifying relation. Berman (1974), Bolinger (1967) and Jackendoff (1972) (among others) note that such examples present a serious problem for any theory attempting to derive prenominal adjectives from an underlying RC source.

3.6.1.2 Japanese intersectivity

Yamakido (2000) applies these observations to Japanese. In Japanese, as in English, relative clauses receive an intersective interpretation. The bracketed prenominal modifier in (65a) is a relative clause, as shown by the presence of the tensed verb *hasitta* 'ran'. Correlatively, this structure has a straightforward intersective interpretation: *hasitta hito* is true of Taroo if and only if Taroo is a person and Taroo ran (65b). Similar remarks apply to (66a), which contains both a tensed verb (*mita* 'saw') and a case-marked complement to the verb (*Hanako o*). This structure is unambiguously a relative clause and shows an unambiguous intersective semantics (66b):

(65) a. Taroo ga [$_{CP}$ hasitta] hito da.
Taroo NOM ran person COP
'Taroo is a person who ran.'
b. ran(Taroo) & person(Taroo)
'Taroo ran and Taroo is a person.'

[24] Stump (1981) and Larson (1999) note that external adverbial readings are largely confined to adjectives of "infrequency" such as *occasional, infrequent, rare* and *sporadic*. The exceptions are cases where the adjective modifies the noun in a light verb construction:
(i) a. He paid me a frequent compliment
b. I give my dog a frequent bath.
For more discussion of *occasional*-type adjectives, see Zimmerman (1999).

(66) a. Taroo ga [$_{CP}$ Hanako o mita] hito da.
Taroo NOM Hanako ACC saw person COP
'Taroo is a person who saw Hanako.'
b. saw(Taroo, Hanako) & person(Taroo)
'Taroo saw Hanako and Taroo is a person.'

In addition to relative clauses, certain Japanese prenominal adjectives are understood intersectively. These include color adjectives like *kuro-i* 'black' and *siro-i* 'white', and adjectives like *yuumei* 'famous'. As shown in (67b)-(69b), the modifier is intersective, exactly as in the corresponding English cases.

(67) a. Kokuyouseki ga **kuro-i** isi da.
obsidian NOM black-BE rock COP
'Obsidian is a rock which is black.'
b. rock(obsidian) & black(obsidian)
'Obsidian is a rock and obsidian is black.'

(68) a. Monticello ga **siro-i** tatemono da.
Monticello NOM white-BE building COP
'Monticello is a building which is white.'
b. white(Monticello) & building(Monticello)
'Monticello is white and Monticello is a building.'

(69) a. Ken ga **yuumei-na** haiyuu da.
Ken NOM famous BE actor COP
'Ken is an actor who is famous.'
b. actor(Ken) & famous(Ken)
'Ken is an actor and Ken is famous.'

However, Japanese also exhibits A-N combinations showing non-intersective readings parallel to the English cases. Consider first what we termed "internal adverbial readings". We saw in (61) (repeated below) that when the English adjective *old* modifies the noun *friend*, it can be interpreted as meaning 'aged' (*old friend* = 'aged friend'); or as meaning 'of long duration' (*old friend* = 'long-time friend'). The former is an intersective interpretation; the latter is nonintersective:[25]

[25] This section was written before the author became aware of Nishiyama (1999), which notes a similar point. In fn.25, Nishiyama observes that a relative clause analysis of attributive adjectives entails an intersective semantics. He then offers example (i), with the glosses provided, and suggests that a non-intersective reading may be marginally available.
(i) utukusi-i dancer
'a beautiful dancer or a dancer who is beautiful'???
Note that the glosses are unhelpful, since the English phrase 'a beautiful dancer' is itself ambiguous, and it is not clear what the question marks apply to. However, Nishiyama appears to conclude that (i) is "not necessarily a relative clause".

(61) a. Peter is an **old friend**.
b. Peter is old and Peter is a friend. INTERSECTIVE READING
(cf. *Peter is an aged friend*)
c. Peter has been a friend for a long time. NON-INTERSECTIVE READING

Japanese expresses these two meanings with two different adjectives. The intersective meaning is expressed with the NA *koorei* 'aged', and the non-intersective meaning is expressed with the TA *huru-i* meaning 'of long duration' (70a,b).[26] Note that the latter is indeed non-intersective, as shown by the impossibility of (71); Japanese *huru-i* 'of long duration', like English *former*, simply cannot be used as a predicate asserted of a subject (cf. (59b)):

(70) a. Peter-ga koorei na tomodati da.
Peter-NOM old friend COP
'Peter was an aged friend.' INTERSECTIVE READING
b. Peter-ga huru-i tomodati da.
Peter-NOM of long duration-be friend be
'Peter has been a friend for a long time.' NON-INTERSECTIVE READING

(71) #Peter-ga tomodati de, Peter-ga huru-i.
Peter-NOM friend COP Peter-NOM long-duration
#'Peter is a friend and Peter is long-time.'

Notice now that since the prenominal adjective *huru-i* 'of long duration' in (70b) has a non-intersective meaning, it cannot be contained in a copular relative clause. For if *huru-i* were in a copular relative, we would expect it to be able to occur predicatively, and we would expect the Mod-N combination to yield an intersective semantics. Since this is not what we see, the copular relative analysis simply cannot be maintained for this case.

The reasoning applied to (71) is perfectly general. Any prenominal adjective in Japanese that is not read intersectively will not be analyzable as an underlying copular relative. And in fact there are examples of Japanese prenominal adjectives with non-intersective semantics. Consider (72a). As in the corresponding English case (63), the example has both an internal adverbial reading and an external adverbial reading (72b). The adjective is not allowed to occur predicatively (72c). The fact that (72a) has only a nonintersective reading shows that it is not within a relative.

(72) a. **Omoigakena-i** kyaku ga kita.
unexpected visitor NOM came
'An unexpected guest came.'
b. Omoigakena-ku, kyaku ga kita.
unexpected-ly guest NOM came
'Unexpectedly, a guest came.'

[26] Some speakers do not allow *–na* following *koorei* 'aged ' in examples like (70a), and instead require genitive *no*.

c. #Ano kyaku ga omoigakena-i.
that visitor NOM unexpected-BE

Japanese also exhibits cases of "degree" adjectives parallel to English (64a):

(73) a. Max ga **kanzen-na** baka da.
Max NOM complete fool COP
'Max is a complete fool.
b. #Max ga baka de, Max ga kanzen da.
Max NOM fool COP Max NOM complete COP

As expected, example (73a) fails to be interpreted intersectively (73b), which shows that the prenominal adjective is not in a relative clause.

Although (as in English) the proportion of prenominal TAs and NAs with non-intersective semantics is small, the conclusion we derive from this is straightforward: contra Kuno (1973) and Nishiyama (1998),[27] prenominal adjectives in Japanese are not uniformly analyzable as hidden copular relatives. Copular relatives have a predicative, intersective semantics, hence the existence of A-N structures with a non-predicative, non-intersective meaning shows that hidden copular relative analyses cannot be right.

It is also important to note that this sub-section partially gives an answer to our earlier question: what is the prenominal adjectival inflection in Japanese? Some Japanese prenominal TA *–i* and NA *–na* can function as adverbial marking. But, unlike Balanta, they are phonologically identical to those appearing prenominally with intersective semantics.

3.6.2 Temporal Relations in RCs vs. Prenominal Adjectives

An analysis of Japanese attributive adjective constructions as copular relative clauses makes a second semantic prediction.[28] It predicts that the temporal interpretation of an attributive adjective should match the temporal interpretation of a relative clause.[29]

3.6.2.1 English temporal relations

To see what this entails, consider first the English examples in (74), containing a present tense relative clause embedded under a matrix future:

[27] Nishiyama (1998) entertains the possibility that Japanese contains true attributive constructions (what he calls "direct modification structures") as well as copular relative clauses, but he provides no arguments that an attributive analysis is actually required. Nishiyama (1999) in fn.25 provides one (tentative) example that he believes may require an attributive analysis.

[28] The material in this section is partially presented in Yamakido (2000).

[29] I am grateful to Richard Larson for suggesting the line of argument in this section.

(74) Max **will** visit [the man who **is** president]
'Max will visit the man that is president right now' ABSOLUTE READING
'Max will visit the man that is president at the time of his visit' RELATIVE READ.

The temporal reference of the relative clause can be taken in either of two ways. The embedded present tense can be understood as referring to the speech time. On this reading, the man in question must be president now, and (74) can be true even if this individual is no longer president at the point where Max visits him. We might call this the "absolute reading" of the embedded present tense, since the latter is interpreted as if it were unembedded - as if it were a matrix present tense, which must refer to the speech time. (74) also has a reading where the present tense *is* can be understood as referring to the time of meeting (the event time). On this reading, the man in question must be president at a future time, and (74) can be true even if this individual is not currently president. We might call this the "relative reading" of the embedded present tense, since its present – its time of evaluation – is one determined relative to the higher clause.

The situation is rather different with (75), containing a present tense relative clause embedded under a matrix past:

(75) Max visit-**ed** [the man who **is** president]

Unlike (74), (75) has only an absolute reading of the embedded present, and no relative reading. That is, *the man who is president* can only be taken as referring to the man who is president now, and not to the man who was president at the time Max visited him. This difference between (74) and (75) illustrates the well-known "sequence of tense" phenomenon with English past tense. To express the relative reading under a past we must use a past tense in the embedded clause:

(76) Max visit-**ed** [the man who **was** president]

This tense marking is purely morphological on the reading in question; the embedded past tense is not being interpreted as an independent tense, making its own independent contribution.

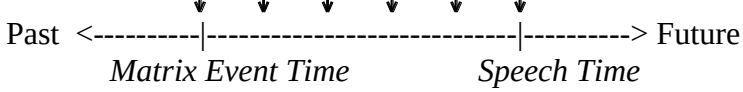
The two temporal readings available to (74) are exhaustive in the following sense: the present tense verb in the relative can be understood as referring to the (present) speech time or the (future) meeting time. But it cannot pick out some time in between, as shown by (77). Note first that (77a), like (74), shows both an absolute and a relative reading. Now compare (77b), which contains a temporal adverb that forces the time of the relative to be neither the speech time nor the event time (the time of winning). We might call this, an "intermediate reading" of the time reference:

(77) a. [The entry that **is** best] will win.
'The entry that is best now will win at a future time' ABSOLUTE READING
'The entry that is best at a future time will win at that future time'
RELATIVE READING

b. ?*[The entry that **is** best in the previous year] will win. INTERMEDIATE READ.
c. [The entry that **was** best in the previous year] will win. INTERMEDIATE READ.

The present tense (*is*) in the relative clause is unacceptable on the intermediate reading. Instead an embedded past tense (*was*) must be used (77c). Thus the potential time reference of a present tense relative clause embedded under a matrix future tense is limited to two options:[30]

(78) OK X X X X OK ENGLISH PRESENT TENSE RC



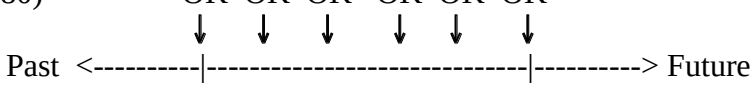
We might understand this result in the following way: the present tense must be interpreted as "now" with respect to some given time, and exactly two times are given in (77a): the speech time (which is available to the matrix), and the event time.

Now, interestingly, the temporal interpretation of an attributive adjective contrasts with that of a present tense relative clause. Compare (79) with (77b):

(79) [The previous year's best entry] will win.

Plainly there is no unacceptability in this example, nor any difficulty giving it the intermediate reading intended for (79b). That is, *the previous year's best entry* clearly can refer to an entry that is best at some future time lying in the year prior to the time that it wins. Multiple options are thus open for temporal reference with an attributive adjective:

(80) OK OK OK OK OK OK ENGLISH ATTRIBUTIVE ADJ



Yamakido (2000) suggests that this difference between RCs and attributive adjectives reflects the fact that the latter contain a genuine present tense, and hence are constrained by the options for temporal reference open to this element. By contrast, attributive adjectives contain no tense, and are not so constrained.[31]

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[30] Bob Hoberman (p.c.) notes that (i) appears to show an intermediate reading. Note that the entry needn't be best now, nor at the time it wins, but only in the year prior to its winning - an internediate time.
(i) [The entry that is best when it is submitted] will win in the following year.
I suggest that this example (and others like it) contain a hidden genuine quantification over times; in effect: For all <x,t>, if x is an entry & x is submitted at time t & x is best at t, then x will win at t + 1 year.

[31] Perhaps the adjectives receive their temporal reference through the deictic mechanism discussed in Enç (1983) and Larson (1983).

3.6.2.2 Japanese temporal relations

The difference in temporal interpretation between present tense relative clauses and adjectives offers a potential test of whether Japanese prenominal adjectives are in fact embedded in a relative clause.

Consider first the temporal interpretation of structures that are clearly relative clauses. Ogihara (1996) observes that the present tense in relative clauses in Japanese can be interpreted as referring to either the event time (81a) or the speech time (81b):

(81) a. Taroo-wa [nai-te i-ru otoko] -o mi-ta.
Taroo-TOP cry-PROG-PRES man -ACC see-PST
'Taroo saw a man who was crying [at the time of the meeting].'
b. Taroo-wa [asoko-de ima nai-te i-ru otoko] -o kinoo mi-ta.
Taroo-TOP there-at now cry-PROG-PRES man -ACC yesterday see-PST
'Yesterday Taroo saw the man who is now crying over there.'
(Ogihara 1996: 153-154)

Thus an embedded present tense in Japanese can have both the "relative reading" and the "absolute reading" found in English.

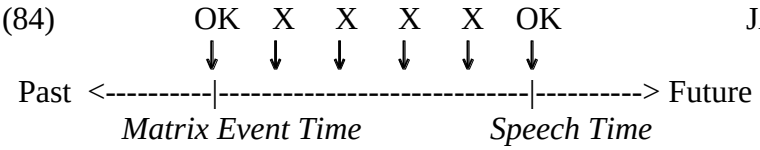
Now, consider (82), which contains a temporal adverb that forces the time of the relative to be neither the speech time nor the event time (the time of Taroo's seeing the man). As Ogihara points out, the present tense (*–ru*) in the relative clause is not acceptable on the intermediate reading. In place of the present tense, an embedded past tense (*–ta*) must be used (83):

(82) *Taroo-wa [eki-de kinoo nai-te i-**ru** otoko] -o
Taroo-TOP station-at yesterday cry-PROG-PRES man -ACC
ototoi mise-de mi-ta.
the-day-before store-at see-PST
[intended] 'The day before yesterday Taroo saw at the store the man who was crying at the station yesterday.' (Ogihara 1996: 154)

(83) Taroo-wa [eki-de kinoo nai-te i-**ta** otoko] -o
Taroo-TOP station-at yesterday cry-PROG-PST man -ACC
ototoi mise-de mi-ta.
the-day-before store-at see-PST
'The day before yesterday Taroo saw at the store the man who was crying at the station yesterday.' (Ogihara 1996: 154)

In short, then, Japanese is parallel to English: the potential time reference of a present tense in relative clause in Japanese is either the speech time or the matrix event time (but not the intermediate time) (84):

(84) JAPANESE PRESENT TENSE RC



Now, consider the possible temporal reference of prenominal adjectives. It is the case that prenominal adjectives can refer to the matrix event time or the speech time, as in a relative clause construction. Examples (85) and (86) illustrate this point. The natural reading of (85a) and (86a) takes their respective adjectives to be true of the nominal at the event time; thus (85a) is most easily read as claiming that Taroo bought a painting that was expensive at the time of buying. Similarly, the natural readings of (85b) and (86b), given the use of *ima* 'now', take the adjectives to be true of the nominal at the speech time:

(85) a. Taroo-wa [taka-**i** e] -o ka-tta.
Taroo-TOP expensive painting -ACC buy-PST
'Taroo bought an expensive painting / a painting which was expensive.'
b. Taroo-wa [ima-wa totemo taka-**i** e] -o zyuu-nen-mae ka-tta.
Taroo-TOP now-TOP very expensive painting-ACC ten-year-ago buy-PST
'Ten years ago Taroo bought the painting which is very expensive now.'

(86) a. Hanako-wa [yuumei-**na** haiyuu] -o mi-ta.
Hanako-TOP famous actor -ACC see-PST
'Hanako saw a famous actor / an actor who was famous.'
b. Hanako-wa [ima totemo yuumei-**na** haiyyu] -o go-nen-mae mi-ta.
Hanako-TOP now very famous actor -ACC five-year-ago see-PST
'Five years ago Hanako saw the actor who is very famous now.'

However, prenominal adjectives with *–i* and *–na* are not confined to these two temporal possibilities. Intermediate temporal reference is also available. Observe (87) and (88):

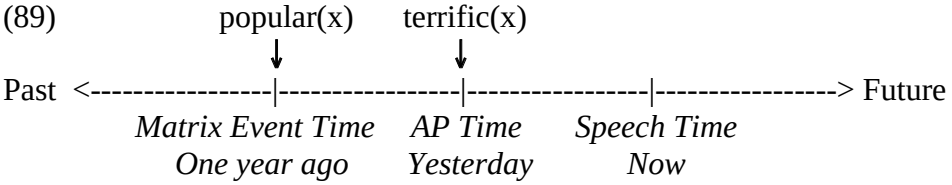
(87) a. Hanako-wa [kinoo-no oisi-**i** cake] -o ototoi yai-ta.
Hanako-TOP yesterday-'s delicious cake -ACC the day before bake-PST
'Hanako baked yesterday's delicious cake the day before yesterday.'
b. [Kinoo-no subarasi-**i** concert]-wa sakunen NY-de dai-ninki da-tta.
yesterday-'s terrific concert -TOP last year NY-in very-popular COP-PST
'Yesterday's terrific concert was very popular in NY one year ago.'

(88) a. Taroo-wa [kinoo-no hen-**na** hito]-o ototoi dinner-ni syootai-si-ta.
Taroo-TOP yesterday-'s strange man -ACC day before dinner-to invite-do-PST
'Taroo invited yesterday's strange man to dinner the day before yesterday.'
b. [Kinoo-no ma-kkuro-**na** hito]-wa mi-kka-mae-wa
yesterday-'s completely-black man-TOP 3-day-ago-TOP
ma-ssiro da-tta.
completely-white COP-PST

’Yesterday’s tanned man was completely pale three days ago.’

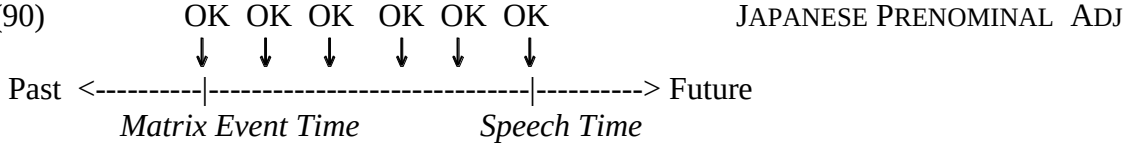
In all of these examples, a temporal adverb modifies the prenominal adjective, forcing the time reference of the latter to be intermediate between the matrix event time and the speech time. For example, (87b) describes the situation depicted in (89), where *subarasi-i* ‘terrific’ holds yesterday, a time that is intermediate between one year ago, the time of the matrix predicate *dai-ninki* ‘very popular’, and now, the speech time:

(89)



All of the sentences in (87) and (88) are fully acceptable. Evidently, then, prenominal adjectives marked with *–i* and *–na* can have the general possibilities of time reference shown schematically shown in (90):

(90)



Since this expanded temporal range is not available with relative clauses, which contain a tense, this argues in general that prenominal adjectives need not occur in copular relative clauses. And it argues, in particular, that the prenominal adjectives in (87) and (88) do not occur in copular relative clauses.

Thus temporal interpretation yields a second compelling argument that the copular relative clause analysis cannot provide the right general account of prenominal adjectives in Japanese; once again we see that the A-N modifying relation appears to be semantically “richer” - temporally less-restricted - than the CP-N modifying relation. More broadly, I suggest that prenominal adjectives in standard Japanese can occur in attributive constructions equivalent to what one finds in English.[32]

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[32] Hoshi (2002) points out that if a temporal adverb *kinoo* ‘yesterday’ is used instead of *kinoo-no* ‘yesterday’s’ in examples like (87) and (88), adjectives must inflect for past tense (i):

(i) a. Hanako-wa [**kinoo** oisi*-i/ -**katta** cake] -o ototoi yai-ta.
Hanako-TOP yesterday delicious -PST cake -ACC the day before bake-PST
‘The day before yesterday Hanako baked [the cake which was delicious yesterday].’

b. Taroo-wa [**kinoo** hen*-na/ -**datta** hito] -o ototoi dinner-ni syootai-si-ta.
Taroo-TOP yesterday strange -PST man -ACC day before dinner-to invite-do-PST
‘The day before yesterday Taroo invited to dinner [the man who was strange yesterday].’

He argues that this shows prenominal adjectives are in relative clauses. I am grateful to Naoko Okura (p.c.) for the reference.

However, as discussed later in section 3.7, we allow prenominal adjectives to have both a true relative clause construction and a genuine attributive construction. For cases like (i), adjectives

3.6.3 Distributional Problems

A third line of evidence against the RC analysis is distributional.

3.6.3.1 Nominal adjective na vs. da

We saw earlier in section 3.4 that the relative clause analysis of Japanese adjectives in prenominal modification is motivated by distributional facts: TA *–i* in prenominals and present-tense predicatives alternates with the past-tense predicative *–katta*; NA *–na* appearing in prenominals, which closely resembles the present tense predicative *da*, alternates with past-tense *datta*.

Let us further examine the distribution of NA morphemes *da* and *na*. While the former appears in present tense predicatives (as seen in (6), repeated as (91)), the latter appears in prenominal modification (as seen in (2), repeated as (92)). *–Na* is assumed to be an attributive form of the copula *da*, and to carry tense as well (Miyagawa 1987; Murasugi 1991; among others). (The glosses in (92) reflect this analysis.)

(91) *Nominal Adjectives (NA) (Present-tense Predicative)*

a.	Hana	ga	kirei	**da**.	b.	Umi	ga	sizuka	**da**.
	flower	NOM	pretty	BE(PRES)		sea	NOM	quiet	BE(PRES)
	‘The flower is pretty.’					‘The sea is quiet.’			

(92) *Nominal Adjectives (NA) (Prenominal)*

a.	kirei	**-na**	hana		b.	sizuka	**-na**	umi
	pretty	BE	flower			quiet	BE	sea
	‘the flower which is pretty’					‘the sea which is quiet’		

In case of past tense, the copula *da* becomes *datta*, bearing past tense morphology *–ta* (93):

(93) *Nominal Adjectives (NA) (Past-tense Predicative)*

a.	Hana	ga	kirei	**datta**.	b.	Umi	ga	sizuka	**datta**.
	flower	NOM	pretty	BE(PST)		sea	NOM	quiet	BE(PST)
	‘The flower was pretty.’					‘The sea was quiet.’			

This past form of the copula, *datta*, can appear prenominally, without any change of morphology (94):

(94) *Nominal Adjectives (NA) (Past-tense Prenominal)*

a.	kirei	**datta**	hana		b.	sizuka	**datta**	umi
	pretty	BE(PST)	flower			quiet	BE(PST)	sea
	‘the flower which was pretty’					‘the sea which was quiet’		

---

can be simply analyzed as having a relative clause construction, but not a genuine attributive construction.

Thus, NAs can appear with both present and past tense forms of the copula in prenominal positions (95):

(95) a. Present [$_{CP}$ … NA ***-na*** …] N ‘an N which is A’
BE
b. Past [$_{CP}$ … NA ***datta*** …] N ‘an N which was A’
BE(PST)

However, a simple, but important question arises: if Japanese adjectives in prenominal modification are in relative clauses, then why can *da* simply <u>not</u> appear in prenominal modification in standard Japanese? For example, why are examples like (96) impossible?

(96) a. *kirei **da** hana
pretty BE flower
(intended) ‘the flower which is pretty’

b. *sizuka **da** umi
quiet BE sea
(intended) ‘the sea which is quiet’

On the other hand, why does the copula *da* stay in prenominal positions if it is with the past tense morphology *–ta* (i.e., *datta*), as shown in examples (94)? For example, why are examples like (97) impossible?

(97) a. *kirei **natta** hana
pretty BE(PST) flower
(intended) ‘the flower which <u>was</u> pretty’

b. *sizuka **natta** umi
quiet BE(PST) sea
(intended) ‘the sea which <u>was</u> quiet’

Recall that in Nishiyama (1998, 1999) *da* is analyzed as the contracted form of *de ar-u*. In *de ar-u*, /de/ is analyzed as “predicative copula”, a semantically contentful member of the category Pred (98c); /ar/ is analyzed as a dummy copula, a semantically vacuous member of the category Pred (98d); /u/ is analyzed as a present tense marker, belonging to the category T (98e). Contraction of *de ar-u* results from fusion. This operation realizes *de ar-u* as *da* in simple clauses, but as *–na* in clauses containing a relative complementizer ((98a) vs. (98b)):

(98) a. [pred.cop, dum.cop, –past] ↔ /da/
b. [pred.cop, dum.cop, –past, **rel.cl**] ↔ /na/ / NA__[33]
c. [pred.cop] ↔ /de/
d. [dum.cop] ↔ /ar/
e. [–past] ↔ /u/
(Nishiyama 1998: 94)

Following Nishiyama’s analysis, we could assume that *datta* is contracted from of *de ar–ta*, which is in parallel to prenominal *da* from *de ar–u*. We need additional rules to generate the past-tense copula *datta* appearing in prenominal positions, as shown in (99):

[33] [pred.cop, dum.cop, –past, rel.cl] in (98b) is realized as /na/ when it follows an NA. Everywhere else is /no/ (Nishiyama 1998: 94-95).

(99) a. [pred.cop, dum.cop, **+past**, rel.cl] ↔ /datta/
b. [+past] ↔ /ta/

The difference between *–na* and *datta* in prenominal positions simply lies in tense: [–past] or [+past]; however, this analysis still cannot explain why fusion is active only with [–past], yielding /na/ (but not with [+past], yielding */natta/). It also suggests that *–na* is not simply an attributive form of the copula *da* and probably requires a new analysis.

3.6.3.2 Alternating prenominals

In section 2.2 (in chapter 2), we saw several cases in which one and the same adjective can behave either as a TA or as a NA, and accept both TA *–i* and NA *–na* in prenominal positions with no apparent change of meaning (4), repeated as (100):

(100)

Prenominal –	*True Adjectives*	*Nominal Adjectives*	
a. 'warm'	atataka-**i**	atataka-**na**	
b. 'soft'	yawaraka-**i**	yawaraka-**na**	
c. 'small'	komaka-**i**	komaka-**na**	
d. 'square'	sikaku-**i**	sikaku-**na**	(Uehara 1998)

This same set can also accept both TA *–i* and NA *da* in predicative positions, as shown in (101):

(101)

Predicative –	*True Adjectives*	*Nominal Adjectives*
a. 'warm'	atataka-**i**	atataka **da**
b. 'soft'	yawaraka-**i**	yawaraka **da**
c. 'small'	komaka-**i**	komaka **da**
d. 'square'	sikaku-**i**	sikaku **da**

Interestingly, however, there is another set of adjectives that behave like these in prenominal position, accepting both TA *–i* and NA *–na* with no apparent change of meaning (102):

(102)

Prenominal –	*True Adjectives*	*Nominal Adjectives*
a. 'big'	ooki-**i**	ooki-**na**
b. 'small'	tiisa-**i**	tiisa-**na**
c. 'funny'	okasi-**i**	okasi-**na**

But, in predicative positions these adjectives accept only *–i*, and not *da* (103):

(103)

Predicative –	*True Adjectives*	*Nominal Adjectives*
a. 'big'	ooki-**i**	*ooki **da**
b. 'small'	tiisa-**i**	*tiisa **da**
c. 'funny'	okasi-**i**	*okasi **da**

Take *ooki* 'big' (103a) for example. When it modifies a noun such as *hon* 'book' (i.e., 'a big book'), it can take either TA *–i* (*ooki-**i** hon*) or NA *–na* (*ooki-**na** hon*) (104a). On the other hand, when the adjective appears as a predicate, only TA *–i* is possible, as shown in (104b):

(104)	*ooki* 'big'	*True Adjectives*	*Nominal Adjectives*
	a. 'a <u>big</u> book'	ooki-**i** hon	ooki-**na** hon
	b. 'This book is <u>big</u>'	Kono hon ga ooki-**i**. this book NOM big	*Kono hon ga ooki **da**.

Recall that, according to Nishiyama (1998, 1999), prenominal *–na* is a contracted form of predicative *da + [rel.cl]* produced by fusion. If *–na* and *da* differ simply in which contains the relative complementizer, then why is the choice of morphemes restricted, depending on prenominal vs. predicative position? This distributional asymmetry found in a small set of adjectives suggests that *–na* may <u>not</u> be simply a prenominal form of the copula *da*.[34]

3.6.3.3 Non-standard dialects undermining the RC analysis

Along with dialect varieties that appear to support the RC analysis, there are also varieties that appear to undermine it. In these, overt copulas and overt adjectival inflection do <u>not</u> alternate with each other (Yamakido 2002, 2005).[35]

Wakayama dialect is very similar to Tokyo dialect insofar as adjectives appear inflected with *–i* in prenominal and present predicative environments (105a,b). However, unlike Tokyo dialect, the *–i* inflection is <u>retained</u> in the past tense (105c).[36] Here alternation between prenominal inflection and tense breaks down.

(105) *Wakayama Dialect (TA)* (Murauchi 1962)

a. utukusi-**i** tori 'beautiful bird'
b. tori-ga utukusi-**i** 'the bird is beautiful'
c. tori-ga utukusi-**i** **katta** 'the bird was beautiful'

(BE(PST))

d.

PRENOMINALS	Stem +	*i* + Noun
PRESENT PREDS		*i*
PAST PREDS		*i katta*

[34] To my knowledge there are no true adjectives with the converse behavior in standard Japanese. In other words, if an adjective is able to appear in predicative position with NA *da*, then it is also able to appear in prenominal position with NA *–na*.

[35] The material in this section is partially presented in Yamakido (2002, 2005).

[36] The insertion of *–i* is not just the lengthening of the vowel *i* in the stem, *utukus**i*** 'beautiful', in this dialect. For example, the past tense form of a TA *ita-i* 'painful' is *it**a-i** katta*.

A similar situation occurs in Fukushima dialect, where, as in Echigo dialect, adjectives appear inflected with *–e* in prenominal and present predicative environments (106a,b). However, in the past tense the *–e* inflection is retained (106c).[37] Again, alternation breaks down.

(106) *Fukushima Dialect (TA)* (Kanno 1982)

a.			b.			c.			
samu-**e**	umi		umi-ga	samu-**e**		umi-ga	samu-**e**	**gatta**	
cold	sea		sea-NOM	cold		sea-NOM	cold	BE(PST)	
'cold sea'			'the sea is cold'			'the sea was cold'			

d.

PRENOMINALS	Stem +	*e*	+ Noun
PRESENT PREDS		*e*	
PAST PREDS		*e gatta*	

In both Wakayama and Fukushima dialects, it appears problematic to analyze the TA prenominal inflection *–i/–e* either as present tense, or as a present tense form of the copula, given that it co-occurs overtly with the past copula.

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[37] As of June 2003, the past tense form like (106c) is still observed in Nihonmatsu dialect (spoken in Fukushima Prefecture), Niigata dialect and Takada dialect (both spoken in Niigata Prefecture). Note that the morpheme *–i* appearing in prenominal and predicative (both present and past tense) positions is close to /e/.

(i) *Nihonmatsu Dialect (TA)* (K.H. Female: 70)

a.			b.			c.			
samu-**i**	umi		umi-ga	samu-**i**		umi-ga	samu-**i**	katta.	
cold	sea		sea-NOM	cold		sea-NOM	cold	BE(PST)	
'cold sea'			'the sea is cold'			'the sea was cold'			

(ii) *Niigata Dialect (TA)* (S.H. Male: 38)

a.			b.			c.			
nemu-**i**	hi		kyoo-wa	nemu-**i**		kinoo-wa	nemu(-**i**)	katta.	
sleepy	day		today-TOP	sleepy		yesterday-TOP	sleep	BE(PST)	
'sleepy day'			'I'm sleepy today'			'I was sleepy yesterday'			

(iii) *Takada Dialect (TA)* (M.S. Female: 54)

a.			b.			c.			
taka-**i**	hon		hon-ga	taka-**i**		hon-ga	taka(-**i**)	katta.	
expensive	book		book-NOM	expensive		book-NOM	expensive	BE(PST)	
'expensive book'			'the book is expensive'			'the book was expensive'			

According to the informants of (ii) and (iii), TA past tense predicatives without the morpheme *–i* are default forms. With *–i* inserted, the meaning of TAs is more emphasized (eg., sleepiness (ii-c) and expensiveness of the book (iii-c)). Interestingly, not all TAs in past tense predicatives allow the insertion of *–i* (iv)-(v):

(iv) *Takada Dialect (TA)* (M.S. Female: 54)

a.			b.			c.			
oisi-**i**	keeki		keeki-ga	oisi-**i**		keeki-ga	oisi(*-**i**)	katta.	
tasty	cake		cake-NOM	tasty		cake-NOM	tasty	BE(PST)	
'cold sea'			'the sea is cold'			'the sea was cold'			

(v) a.

kitana-**i**	heya	b.	heya-ga	kitana-**i**	c.	heya-ga	kitana(*-**i**)	katta.
dirty	room		room-NOM	dirty		room-NOM	dirty	BE(PST)
'dirty room'			'the room is cold'			'the room was dirty'		

I don't know what is the general rule of the *–i* insertion yet.

Other dialects show a similar departure from the standard pattern with respect to nominal adjectives. For example, in Hiroshima dialect, the standard *–na* appears prenominally (107a), but also predicatively, instead of *da* (107b). However, in the past form, the prenominal *–na* is retained before the past tense *katta* (107c). The fact that *–na* co-occurs with the past copula suggests that it cannot itself be a present copula.

(107) *Hiroshima Dialect (NA)* (Kandori 1982)

a. sizuka-**na** umi
calm sea
'calm sea'

b. umi-ga sizuka-**na**
sea-NOM calm
'the sea is calm'

c. umi-ga sizuka-**na katta**
sea-NOM calm BE(PST)
'the sea was calm'

d.

PRENOMINALS	Stem +	*na*	+ Noun
PRESENT PREDS		*na*	
PAST PREDS		*na katta*	

An even sharper example of this pattern is found in a (now apparently extinct) Kyoto dialect reported by Umegaki (1946), and quoted in Nakai (1997). Here *–na* appears in prenominal and predicative constructions again (108a,b), but, revealingly, in the present predicative it is followed by a variant of *da*, viz., *ya* (which is familiar from the predicative constructions in Osaka dialect) (108b). Furthermore, in the past form, the morpheme *–na* is retained before the past tense *yatta* (108c):[38]

(108) (Apparently extinct) *Kyoto Dialect (NA)* (Umegaki 1946)

a. sizuka-**na** umi
calm sea
'calm sea'

b. umi-ga sizuka-**na ya**
sea-NOM calm
'the sea is calm'

c. umi-ga sizuka-**na yatta**
sea-NOM calm BE(PST)
'the sea was calm'

d.

PRENOMINALS	Stem +	*na*	+ Noun
PRESENT PREDS		*na ya*	
PAST PREDS		*na yatta*	

In Kyoto dialect, complementarity between adjectival morphemes and tenses breaks down at two points: the *–na* morpheme not only co-occurs with past copula *yatta*, as in Hiroshima dialect, it also co-occurs with what is plausibly the present copula, namely, *ya*. Again, these facts strongly imply that *–na* cannot itself be a present copula since it co-occurs with both the present and the past copulas, and therefore alternates with neither.

[38] Given that the dialect in question is apparently extinct (Yukihiko Nakai (p.c.)), Umegaki's data are historical at this point, and not synchronic; however, this does not diminish their importance or affect their theoretical implication.

3.7 The Resulting Picture

At this point, we have arrived, I believe, at the following two correlated results:

- Not all Japanese prenominal adjectives (TAs and NAs) are contained within relative clauses.
- The morphemes *–i* and *–na* appearing on Japanese prenominal adjectives (TAs and NAs, respectively) cannot be uniformly analyzed as copulas, nor as present tense marking.

The first result suggests that Japanese must include, along with prenominal relatives, cases of genuine attributive adjectives. The second result suggests that the morphemes *–i* and *–na* are members of some different category that typically in complementary distribution with an overt copula. (For now I will just gloss this category with a "?".)

3.7.1 Analysis of True Adjectives

One way to put these results together starts from a reanalysis of the basic predicative construction. Suppose we analyze the simple present tense Standard Japanese example of TAs in (16b) as in (109a), which contains a null present tense copula "∅". The latter would be strictly parallel to the past copula *katta* in (109b):

(16b) umi-ga samu-**i** *Tokyo dialect (TA)*
sea-NOM cold
'the sea is cold'

(109) *Tokyo Dialect (TA)*
a. umi-ga samu-**i** ∅.
sea-NOM cold-? BE(PRES)
'the sea is cold'
b. umi-ga samu-∅ **katta**.
sea-NOM cold-? BE(PST)
'the sea was cold'

This analysis will yield two possibilities for prenominal adjectives (with intersective semantics) inflected with adjectival morphology. There will be a true relative clause construction, with the present tense copula realized as null, as in (110a), and a genuine attributive construction, as in (110b):

(110) a. [$_{CP}$ samu-**i** ∅] umi
cold-? BE(PRES) sea
'sea that is cold'

b. [$_{AP}$ samu-**i**] umi
cold-? sea
'cold sea'

Here *–i* is adjectival morphology whose nature is yet to be determined. Note that having the prenominal adjective in two constructions need not lead to two different meanings.

For example, in (110) the meaning of *sea that is cold* is (almost) identical with that of *cold sea* (i.e., *sea(x) & cold(x)*).

This analysis accommodates the semantic data in section 3.6.1.2, which show that at least some instances of prenominal modifying adjectives in Japanese cannot be analyzed as underlying relative clauses. For example, the prenominal true adjective *huru–i* in *huru–i tomodati* 'a long-time friend' has a non-intersective reading and cannot be analyzed as a relative clause, as seen in (70b). For such adjectives, no relative clause construction (111a), but only a genuine attributive construction (111b) will be possible:

(111) a. #[$_{CP}$ huru-**i** ∅] tomodati
long-time-? BE(PRES) friend
#'a friend who is long-time'

b. [$_{AP}$ huru- **i**] tomodati
long-time-? friend
'a long-time friend'

A parallel analysis would apply to other standard pattern dialects like Echigo dialect, in which adjectival morphology is realized by a slightly different morpheme. The simple present tense predicative example is analyzed as in (112a), which contains a null present tense copula "∅". This would be strictly parallel to the past copula *katta* in (112b). The prenominal adjective allows for both relative clause and genuine attributive analyses ((112c) and (112d), respectively):

(112) *Echigo Dialect (TA)*

a. yama-ga taka-**e** ∅
mountain-NOM high -? BE(PRES)
'the mountain is high'

b. yama-ga taka-∅ **katta**
mountain-NOM high -? BE(PST)
'the mountain was high'

c. [$_{CP}$ taka **-e** ∅] yama
high-? BE(PRES) mountain
'mountain that is high'

d. [$_{AP}$ taka **-e**] yama
high -? mountain
'high mountain'

The morphological pattern found in Wakayama and Fukushima dialects fits in with this analysis even more sharply. In these dialects, both adjectival marking and tensed copula are morphologically realized in the past forms (as in (113b) and (114b)):

(113) *Wakayama Dialect (TA)*

a. tori-ga utukusi-**i** ∅
bird-NOM beautiful-? BE(PRES)
'the bird is beautiful'

b. tori-ga utukusi-**i** **katta**
bird-NOM beautiful-? BE(PST)
'the bird was beautiful'

c. [$_{CP}$ utukusi-**i** ∅] tori
beautiful-? BE(PRES) bird
'bird that is beautiful'

d. [$_{AP}$ utukusi **-i**] tori
beautiful-? bird
'beautiful bird'

(114) *Fukushima Dialect (TA)*

a. umi-ga samu-**e** ∅
sea-NOM cold-? BE(PRS)
'the sea is cold'

b. umi-ga samu-**e** **gatta**
sea-NOM cold-? BE(PST)
'the sea was cold'

c. [$_{CP}$ samu-**e** ∅] umi
cold-? BE(PRES) sea
'sea that is cold'

d. [$_{AP}$ samu-**e**] umi
cold-? sea
'cold sea'

Thus, a prenominal true adjective with intersective interpretation allows both relative clause construction, with an adjectival marking and a null tensed copula, as in (115a), and genuine attributive construction, as in (115b):[39]

(115) a. [$_{CP}$ TA **-i** ∅] N
-? BE(PRES)
'N that is A'

b. [$_{AP}$ TA **-i**] N
-?
'A N'

3.7.2 Analysis of Nominal Adjectives

The case of nominal adjectives is somewhat more complex, since the inflectional morpheme appearing in prenominal position is <u>not</u> morphologically identical with the one appearing in predicative position (i.e., *–na* vs. *da*); however, this fact suggests that they belong to different categories. Suppose we analyze the simple present tense example in (74b) as in (116a), which contains a null adjectival marking "∅". The past tense example would be strictly parallel to the present one (as in (116b)):[40]

(74b) umi-ga sizuka **da** 'the sea is calm'
sea-NOM calm BE(PRS)

(116) *Tokyo Dialect (NA)*

a. umi-ga sizuka-∅ **da**
sea-NOM calm-? BE(PRS)
'the sea is calm'

---

[39] In examples like (i) (from fn.32), prenominal adjectives are analyzed as having a relative clause construction, where adjectival morphology "?" is null:

(i) Hanako-wa [$_{CP}$ **kinoo** oisi-∅ **katta** cake] -o ototoi yai-ta. JP
Hanako-TOP yesterday delicious-? PST cake -ACC the day before bake-PST
'The day before yesterday Hanako baked [the cake which was delicious yesterday].'

[40] A simple question arises as to why *da* is not analyzed as an adjectival marking. If *da* is an adjectival marking, then some dialect possibly has a past tense form such as *sizuka **da** datta* 'calm(BE(PST))'; however, (to my knowledge) it is not.

b. umi-ga sizuka-∅ **datta**
sea-NOM calm-? BE(PST)
'the sea was calm'

Consider now the case of prenominal adjectives. Since the prenominal morpheme *–na* is not a present tense copula and possibly belongs to a category different from *da*, it is reasonable to analyze *–na* as adjectival marking. We allow both for relative clause constructions, with the present tense copula realized as null, as in (117a), and for genuine attributive constructions, as in (117b):

(117) *Nominal Adjectives*

a. [$_{CP}$ sizuka-**na** ∅] umi
calm-? BE(PRES) sea
'sea that is calm'

b. [$_{AP}$ sizuka-**na**] umi
calm-? sea
'calm sea'

Here again *–na* is adjectival morphology whose nature is yet to be determined.

This analysis would extend to other dialects like Osaka dialect, in which adjectival morphology is again realized by a slightly different morpheme. The simple present tense example is analyzed as in (118a), which contains a null adjectival marking "∅". This would be strictly parallel to the past copula *yatta* in (118b). The prenominal adjective allows both relative clause and genuine attributive constructions ((118c) and (118d)):

(118) *Osaka Dialect (NA)*

a. umi-ga sizuka-∅ **ya**
sea-NOM calm-? BE(PRS)
'the sea is calm'

b. umi-ga sizuka-∅ **yatta**
sea-NOM calm-? BE(PST)
'the sea was calm'

c. [$_{CP}$ sizuka-**na** ∅] umi
calm-? BE(PRES) sea
'sea that is calm'

d. [$_{AP}$ sizuka-**na**] umi
calm-? sea
'calm sea'

The morphological pattern found in Hiroshima and Kyoto dialects not only fits but provide evidence for this analysis: both adjectival morphology and tensed copula are morphologically realized in the past forms in both dialects (as in (119b) and (120b)) and even in the present tense form in (apparently extinct) Kyoto dialect (as in (120a)):

(119) *Hiroshima Dialect (NA)*

a. umi-ga sizuka-**na** ∅
sea-NOM calm-? BE(PRS)
'the sea is calm'

b. umi-ga sizuka-**na** **katta**
sea-NOM calm-? BE(PST)
'the sea was calm'

c. [$_{CP}$ sizuka-**na** ∅] umi
calm-? BE(PRES) sea
'sea that is calm'

d. [$_{AP}$ sizuka-**na**] umi
calm-? sea
'calm sea'

(120) *Kyoto Dialect (NA)*

a. umi-ga sizuka-**na** **ya**
sea-NOM calm-? BE(PRS)
'the sea is calm'

b. umi-ga sizuka-**na** **yatta**
sea-NOM calm-? BE(PST)
'the sea was calm'

c. [$_{CP}$ sizuka-**na** ∅] umi
calm-? BE(PRES) sea
'sea that is calm'

d. [$_{AP}$ sizuka-**na**] umi
calm-? sea
'calm sea'

Thus, a prenominal nominal adjective with intersective interpretation allows both relative clause construction, with an adjectival marking and a null tensed copula, as in (121a), and genuine attributive construction, as in (121b):

(121) a. [$_{CP}$ NA **-na** ∅] N
-? BE(PRES)
'N that is A'

b. [$_{AP}$ NA **-na**] N
-?
'A N'

3.7.3 Non-standard Dialect Patterns Supporting the RC Analysis: Revisited

In the previous section, we proposed that prenominal adjectives in Japanese can be analyzed as occurring in <u>both</u> a true relative clause construction (represented as (115a) and (121a)) and in a genuine attributive construction (represented as in (115b) and (121b)). On this view, the prenominal morphemes, TA *–i* and NA *–na*, are <u>not</u> tensed copulas, but rather adjectival morphology (glossed with "?"):

(115) a. [$_{CP}$ TA **-i** ∅] N
-? BE(PRES)
'*N* that is *TA*'

b. [$_{AP}$ TA **-i**] N
-?
'*TA N*'

(121) a. [$_{CP}$ NA **-na** ∅] N
-? BE(PRES)
'*N* that is *NA*'

b. [$_{AP}$ NA **-na**] N
-?
'*NA N*'

This analysis accommodates the semantic data in section 3.6.1.2, which show that at least <u>some</u> instances of prenominal modifying adjectives in Japanese cannot be analyzed as underlying relative clauses. Furthermore, it also fits the pattern of dialectal variation of adjectival morphology.

However, some interesting questions remain. Recall that there are dialects where the inflection appearing on TAs and NAs in the three environments (prenominal, present predicative, past predicative) is identical (as discussed in section 3.4.3). I will consider two representative cases: Fukuoka dialect and Tsugaru dialect.

3.7.3.1 Fukuoka dialect

We noted that in Fukuoka dialect, *–ka* occurs in all three environments: the standard TA *–i* is replaced by *–ka* in prenominal and predicative positions (122a,b), and, as in standard Japanese, *–ka* appears bearing past tense morphology (*–ta*) (122c):

(122) *Fukuoka Dialect (TA)* (Hirayama *et al*. 1997b)

a. naga **ka** hasi
long bridge
'long bridge'

b. hasi-ga naga **ka**
bridge-NOM long
'the bridge is long'

c. hasi-ga naga **katta**
bridge-NOM long BE(PST)
'the bridge was long'

If the morpheme *–ka* in simple present tense predicatives (in (122b)) is in fact identical to that appearing in the simple past tense predicatives (in (122c)), then the structure of the former is strictly morphologically parallel to that of the latter in this dialect, as shown in (123); *–ka* is a copula bearing a zero present tense:

(123) *Fukuoka Dialect (TA)*

a. hasi-ga naga-∅ **ka**
bridge-NOM long-? BE(PRES)
'the bridge is long'

b. hasi-ga naga-∅ **katta**
bridge-NOM long-? BE(PST)
'the bridge was long'

Then, what about prenominal adjectives? There are two logical possibilities. The first is that *–ka* in prenominal positions is identical to the morpheme appearing in the present and past predicatives. On this idea, prenominal true adjectives must all be contained within copular relative clauses with the null adjectival marking and the present tense copula *–ka* in this dialect, as shown in (124) (ANALYSIS I):

(124) ANALYSIS I: *Fukuoka Dialect (TA)*

[$_{CP}$ naga -∅ **ka**] hasi
long -? BE(PRES) bridge
'the bridge which is long'

This analysis is attractive in its simplicity: *–ka* is uniformly analyzed as a tensed copula.

On the other hand, if all prenominal adjectives occur in relative clause constructions, then we predict that there will be no prenominal adjectives with non-intersective semantics in this dialect. Yamakido (2003) reports cases of TA–***ka***-N combinations with non-intersective readings. For example, we can find *huru–**ka** tomodati* 'an old/long-time friend' in Fukuoka dialect, where *–ka* replaces *–i* in prenominal position in *huru–**i** tomodati* 'an old/long-time friend' in the standard Japanese (125a).[41] Furthermore, like the standard Japanese, *huru–**ka*** cannot be used as a predicate (125b):

(125) *Fukuoka Dialect (TA)*

a. huru-**ka** tomodati (Y.K. Male: 53; S.O. Female: 32)
   old friend
   'an olf/long-time friend'

b. #Ano tomodati ga huru-**ka**.
   that friend NOM old
   (intended) 'That friend is (in) long-time (relationship with me)'

The unacceptability of (125b) strongly suggests that prenominal *–ka* should not be a present tense copula. Rather this *–ka* must be a variant of *–i*, which leads us to a second possible analysis of the prenominal *–ka*.

The second analysis is that the inflectional morpheme *–ka* appearing on true adjectives in prenominal positions in Fukuoka dialect is a variant of the standard *–i* (glossed with "?" below), the morpheme that marks TAs and is typically in complementary distribution with an overt copula. Thus, (125a) is analyzed as (126a), which is in parallel with the standard Japanese case of 'an old/long-time friend' (111b) (repeated as (126b)):

(126) 'an old/long-time friend'

a. [$_{AP}$ huru **- ka**] tomodati *Fukuoka Dialect (TAs)*
   long-time - ? friend

b. [$_{AP}$ huru **- i**] tomodati *Tokyo Dialect (TAs)*
   long-time -? friend

This idea allows for prenominal true adjectives with simple intersective semantics in Fukuoka dialect to occur in both relative clause constructions (CP) and genuine attributive constructions (AP), as shown in (127) (ANALYSIS II):

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[41] Some speakers of Fukuoka dialect do not allow *huru-**ka** tomodati* 'an old/long-time friend' in (125a). They use the following instead:

(i) huru-**ku** **kara** **no** tomodari 'a friend from long days; an old/long-time friend'
   old from GEN friend

This form is found throughout all variants including Tokyo dialect. For the discussion on the morpheme *–ku* following TA *huru* 'old', see Larson and Yamakido (2003) and chapter 5.

(127) ANALYSIS II: *Fukuoka Dialect (TA)*

a. [$_{CP}$ naga-**ka** ∅] hasi
long-? BE(PRES) bridge
'bridge that is long'

b. [$_{AP}$ naga-**ka**] hasi
long-? bridge
'long bridge'

This analysis is also problematic, however. Consider predicatives. If *–ka* is adjectival morphology, then the analysis of present tense predicatives should be in (128a). On the other hand, the analysis of past tense predicatives is in (128b), in which a phonologically identical morpheme *–ka* occurs with past tense morphology (*–ta*):

(128) a. hasi-ga naga-**ka** ∅
bridge-NOM long-? BE(PRES)
'the bridge is long'

b. hasi-ga naga-∅ **ka**tta
bridge-NOM long-? BE(PST)
'the bridge was long'

This means that ANALYSIS II is committed to the idea that the *ka*'s appearing in present and past predicative constructions are in fact not the same item, despite phonological identity: the *–ka* in present tense predicatives is adjectival morphology, whereas the *–ka* in past tense predicatives is a copula bearing past tense.[42] This seems suspicious, however: it seems counterintuitive to assign two different analyses to a form when it occurs in two virtually identical syntactic environments, and when it is pronounced just the same.

In fact, however, adjectival inflection *–ka* (appearing with prenominal adjectives with non-intersective semantics, for example) and copular *–ka* (bearing a past tense morphology (*–ta*), for example) do appear to be rather different morphemes. Very revealing in this respect is an example recorded on Hakata Island by a dialectologist, Hachiroo-Yasutaka Atago (Fujiwara 2000), where TA *oo* 'many/much' is followed by two *–ka*'s in sequence in past tense predicatives (129):[43]

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[42] *–Ka* in *–katta* can potentially remain as an adjectival morphology (glossed with "?"), being followed by a null copula (∅) and past tense morphology (*–ta*), as shown in (i):

(i) hasi-ga naga-**ka** ∅-tta.
bridge-NOM long-? BE(PST)
'the bridge was long'

However, this analysis is unlikely, given that past tense morpheme (*–ta*) is a bound morpheme, which appears with verbs as well (as in (ii)):

(ii) Taroo-ga tori-o mi-**ta**.
Taroo-NOM bird-ACC see-PST
'Taroo saw a bird.'

[43] Hakata Island, Ehime prefecture, is geographically close to Fukuoka, where Fukuoka dialect is spoken. The whole recorded example is in (i):

(i) "Atu-i noo" no "noo" ga mukasi oo-**ka**-**ka**tta n de naide syoo ka.
hot GEN NOM old days many BE(PST)

(129) oo-**ka** **ka**tta
many BE(PST)
'There were many'

Notice that this *–ka–katta* sequence is exactly parallel to the *–i–katta* sequence found in TA past tense predicatives in Wakayama and Fukushima dialects as discussed in section 3.6.3.3. Recall (113b) (repeated below):

(113b) tori-ga utukusi-**i** **katta** *Wakayama Dialect (TA)*
bird-NOM beautiful-? BE(PST)
'the bird was beautiful'

This supports the idea that *–ka* in ***–ka****–katta* is a variant of *–i*, thereby adjectival morphology.

The conclusion that I draw from this is that there are actually <u>two</u> kinds of *–ka* in Fukuoka dialect: (i) an adjectival morpheme (*–ka*$_1$), which is a variant of the standard *–i*, and (ii) a present tense form of the copula (*–ka*$_2$).[44] This view yields two possible structures for the underlyingly representations of prenominal TAs, as shown in (130) (ANALYSIS III). Note that in the relative clause structure (130a), there are two *–ka*'s in sequence underlyingly, even though these do not surface in the pronounced form (PF):

(130) ANALYSIS III: *Fukuoka Dialect (TA)*

a. [$_{CP}$ naga-**ka$_1$** **ka$_2$**] hasi
long-? BE(PRES) bridge
'bridge that is long'

b. [$_{AP}$ naga-**ka$_1$**] hasi
long-? bridge
'long bridge'

The structure in (130a) is in parallel to that of present and past tense predicatives. The morphological patterns of true adjectives in Fukuoka dialect are, therefore, analyzed as in (131):

(131) *Fukuoka Dialect (TA)*

a. hasi-ga naga-**ka$_1$** **ka$_2$** → *hasi-ga naga-**ka*** (PF)
bridge-NOM long-? BE(PRES)
'the bridge is long'

b. hasi-ga naga-**ka$_1$** **ka$_2$**-tta → *hasi-ga naga-**ka**tta* (PF)
bridge-NOM long-? BE(PST)
'the bridge was long'

(An old woman talking to Mr. Atago in interview) 'I guess there were <u>many</u> *noo* in *Atsu-i noo* (meaning 'It's hot!') in the old days.'

However, according to Takuichiro Onishi (p.c.), *–ka katta* is not a productive inflectional morpheme. This would only apply to TA *oo(-i)* 'many/much'.

[44] I am grateful to Richard Larson for suggesting this possibility.

c. [$_{CP}$ naga-**ka$_1$** **-ka$_2$**] hasi → *naga-**ka** hasi* (PF)
long-? -BE(PRES) bridge
'bridge that is long'

d. [$_{AP}$ naga-**ka$_1$**] hasi
long-? bridge
'long bridge'

I will discuss the *–ka–ka* reduction rule in section 3.7.3.3.

3.7.3.2 Tsugaru dialect

Consider next the case of NAs in Tsugaru dialect. In this dialect, the morphological patterns appearing in present and past predicatives are exactly the same as in standard Japanese: *da* for present tense predicatives and *datta* for past tense predicatives; however, a phonologically identical morpheme *da* (instead of *–na*) also appears in prenominal positions (as seen in (23), repeated as (132)):

(132) *Tsugaru Dialect (NA)* (Konoshima 1982)

a. sizuka **da** umi
calm sea
'calm sea'

b. umi-ga sizuka **da**
sea-NOM calm
'the sea is calm'

c. umi-ga sizuka **datta**
sea-NOM calm BE(PST)
'the sea was calm'

Assuming that NAs in present and past predicatives in this dialect have the same structures as those of standard Japanese (133a,b), there are three possible structures proposed for prenominal NAs, like TAs in Fukuoka dialect. In the first analysis, *da* appearing in prenominal positions is identical to the morpheme appearing in the present and past predicatives. On this idea, prenominal NAs must <u>all</u> be contained within copular relative clauses with the null adjectival morphology and the present tense copula *da* (ANALYSIS I) (134).

(133) *Tsugaru Dialect (NAs)*

a. umi-ga sizuka-∅ **da**
sea-NOM calm-? BE(PRES)
'the sea is calm'

b. umi-ga sizuka-∅ **datta**
sea-NOM calm-? BE(PST)
'the sea was calm'

(134) ANALYSIS I: *Tsugaru Dialect (NAs)*

[$_{CP}$	sizuka	-∅	**da**]	umi
	quiet	-?	BE(PRES)	sea

'the sea <u>which is quiet</u>'

In the second possible analysis, the prenominal *da* is adjectival morphology (glossed with "?"), therefore, a variant of *–na*. On this idea, prenominal NAs must <u>all</u> be contained in genuine attributive constructions (ANALYSIS II) (135):

(135) ANALYSIS II: *Tsugaru Dialect (NAs)*

[$_{AP}$	sizuka	**-da**]	umi
	quiet	- ?	sea

'quiet sea'

Finally, in the third possible analysis, there are two kinds of *da*'s: (i) an adjectival morpheme (da_1), a variant of the standard *–na*, and (ii) a present tense form of the copula (da_2). On this idea, there are two possible structures for the underlying representations of prenominal NAs in Tsugaru dialect (ANALYSIS III) (136). In the relative clause structure (136a), there are two *da*'s in sequence underlyingly, even though these do not surface in the pronounced form:

(136) ANALYSIS III: *Tsugaru Dialect (NAs)*

a.

[$_{CP}$	sizuka-	**da$_1$**	**da$_2$**]	umi
	quiet-?	BE(PRES)		sea

'sea which is quiet'

b.

[$_{AP}$	sizuka-	**da$_1$**]	umi
	quiet-?		sea

'quiet sea'

Which structure (among these three) do prenominal NAs in Tsugaru dialect have? Yamakido (2003) was able to find that there is <u>no</u> NA *da*–N combination with non-intersective semantics in this dialect. For example, we cannot find the counterpart of the standard Japanese *kanzen-**na** baka* 'a complete fool', i.e., **kanzen **da** baka* '(intended) a complete fool', as shown in (137):[45]

(137)

*kanzen	**da**	baka	
complete	BE(PRES)	fool	

(intended) 'a complete fool'

This implies that we do not need the genuine attributive constructions with *da* to be analyzed as adjectival morphology for prenominal NAs in this dialect, therefore, no need for Analyses II and III. All prenominal NAs can be analyzed as having copular relative

[45] Yamakido (2003) records that one native speaker of Goshogawara dialect found example (136) not impossible. Goshogawara city is in the vicinity of where Tsugaru dialect is spoken.

clause construction (138a), but not genuine attributive construction due to lack of *–na* (138b):

(138) *Tsugaru Dialect (NA)*

a. [$_{CP}$ sizuka ∅ **da**] umi
calm ? BE(PRES) sea
'sea that is calm'

b. #[$_{AP}$ sizuka **da**] umi
quiet -- sea
(intended) 'quiet sea'

Having only relative clause constructions is not problematic for prenominal NAs from semantic point of view: the relative clause *sea <u>that is calm</u>* yields (almost) the same semantics as the genuine attributive *<u>calm</u> sea* (i.e., *sea(x) & calm(x)*). Thus, the morphological patterns in Tsugaru dialect are analyzed as in (139):

(139) *Tsugaru Dialect (NA)*

a. umi-ga sizuka ∅ **da**
sea-NOM calm ? BE(PRES)
'the sea is calm'

b. umi-ga sizuka ∅ **datta**
sea-NOM calm ? BE(PST)
'the sea was calm'

c. [$_{CP}$ sizuka ∅ **da**] umi
calm ? BE(PRES) sea
'sea which is calm'

This analysis is compatible with all data available in this dialect.

3.7.3.3 Complementarity between adjectival morphology and copula

We have seen that there are <u>two</u> kinds of *–ka* in Fukuoka dialect: (i) an adjectival morpheme (*–ka*$_1$), which is a variant of the standard *–i* (glossed with "?"), and (ii) a present tense form of the copula (*–ka*$_2$). This view yields two possible structures for the underlying representations of prenominal TAs. In the relative clause structure, there are two *–ka*'s in sequence underlyingly, though these do not surface in the pronounced form (PF) (140a). In the genuine attributive construction, the adjectival morpheme *–ka*$_1$ appears (140b):

(140) *Fukuoka Dialect (TAs)*

a. [$_{CP}$ TA **-ka$_1$** **ka$_2$**] N → (PF) [$_{CP}$ TA **-ka**] N
-? BE(PRES)
'N that is A'

b. [$_{AP}$ TA **-ka$_1$**] N
-?
'A N'

If our analysis is correct, then two important questions arise. In the relative clause structure (140a):

- Why are $–ka_1$ and $–ka_2$ not typically fully realized together in the pronounced form (PF)? What principles prohibit this?
- Which one of the two, $–ka_1$ and $–ka_2$, is retained in the pronounced form (PF)?

Let us consider the first question.[46] In the relative clause structure of Fukuoka dialect, there are two *–ka*'s appearing in sequence (i.e., $–ka_1$ ka_2) underlyingly, but the pronounced form (PF) is *–ka*. Why are $–ka_1$ and $–ka_2$ not typically fully realized together in the pronounced form (PF)? I suggest this is due to a morpho-phonological constraint called Obligatory Contour Principle (OCP). According to Yip (1998), it is common that sequences of two identical elements are avoided in natural language. This phenomenon takes place in several environments, and most commonly when "different but homophonous morphemes cannot appear adjacent in the same word, or otherwise adjacent in the sentence (p. 220)."[47] A familiar example is from English. The plural /s/ and the possessive /s/ cannot co-occur. As shown in (141a), whereas the possessive form of a singular noun *cat* is *cat'**s***, that of a plural noun *cats* is *cat**s**'*, not **cat**s's***. This is due to OCP, simply avoiding the /s/-/s/ sequence, not PLURAL-POSS, given that adding possessive /s/ to an irregular plural noun like *children* is fine, as shown in (141b):

(141)

	Singular	*Plural*	*Poss. Sg.*	*Poss. Pl.*
a.	cat	cat**s**	cat'**s**	cat**s'** *cats's
b.	child	children	child's	children's

(Yip 1998: 222)

Something similar can be observed in Japanese. As noted earlier (in fn.12), the *no-no* (GENITIVE-PRONOUN) sequence is not possible in standard Japanese (142), and it is simply realized as *no*:

(142)

a.	*Taroo	**no**	**no**		→	Taroo	**no**		'Taroo's'
		GEN	one						
b.	*Tokyo	kara	**no**	**no**	→	Tokyo	kara	**no**	'the one from Tokyo'
		from	GEN	one			from		

(Murasugi 1991: 63-64)

Thus, Japanese is a language with a tendency to avoid identical elements, in spite of the relatively small number of syllables. Then, it is reasonable to assume that the realization

[46] I am grateful to Lori Repetti for discussion of the question.

[47] Yip (1998) discusses several other forms in which avoidance of identity in morphology takes place, including:

i. The same morpheme cannot appear twice in the same word,
ii. Homophonous morphemes cannot appear on adjacent words,
iii. The output of reduplication cannot be total identity.

of the $–ka_1–ka_2$ sequence as *–ka* in the pronounced form (PF) is due to OCP. This supports the idea that the morpheme *–ka* in Fukuoka dialect is in fact underlyingly $–ka_1$ $–ka_2$.

Now let us turn to the second question: which one of the two, $–ka_1$ and $–ka_2$, is retained in the pronounced form (PF)? If our earlier analysis of relative clause and predicative constructions is correct, it would give us a clue. Below is the analysis proposed for standard true adjectives:

(143) *True Adjectives*

a.	$[_{AP}$ TA_{stem} ***–i***] N ?	ATTRIBUTIVES
b.	$[_{CP}$ TA_{stem} ***–i*** ∅] N ? be(PRS)	RELATIVE CLAUSES
c.	(N-*ga*) TA_{stem} ***–i*** ∅. -NOM ? be(PRS)	PRESENT-TENSE PREDICATIVES
d.	(N-*ga*) TA_{stem} ∅ *–katta*. -NOM ? be(PST)	PAST-TENSE PREDICATIVES

In relative clause and present-tense predicative constructions, the adjectival morphology is realized as *–i* while the present-tense copula is null (∅). On the other hand, in the past predicative construction, the adjectival morphology is null while the past tense copula is realized as *–katta* (although there are some dialects in which both adjectival morphology and copula are phonologically realized). Table (144) represents these patterns:

(144)

	Type	ADJ. MORPHOLOGY	COPULA
PRESENT PREDS	I, II	*–i* (/*–e*)	∅
PAST PREDS	I	∅	*–ka*(*–t–ta*)
	II	*–i* (/*–e*/*–ka*)	

Type I: Standard Japanese, Echigo dialect
Type II: Wakayama dialect (*–i*), Fukushima dialect (*–e*), Hakata dialect (*–ka*)

Although there are a few exceptions (past tense predicatives in Type II), adjectival inflection and copula are usually in complementary distribution.[48] [49]

If our analysis is correct, then the answer to the second question is straightforward. In the sequence of $–ka_1$ $–ka_2$, the adjectival morphology $–ka_1$ is retained in present-tense

[48] Recall that in (apparently extinct) Kyoto dialect both adjectival morpheme *–na* and copula *ya* are phonologically realized.

[49] There are general questions of why adjectival inflections and overt copulas are usually in complementary distribution, and what principles determine this. According to Borroff & Xu (2002), it is very probably part of a broader pattern of complementarity that also includes predicate nominals.

predicative forms, and copula $–ka_2$ in past tense predicative forms. Thus, adjectival constructions in Fukuoka dialect (in pronounced forms) are represented as in (145):

(145) *Fukuoka Dialect (TA)* (cf. (131))

a. hasi-ga naga-**ka$_1$** ∅
bridge-NOM long-? BE(PRES)
'the bridge is long'

b. hasi-ga naga-∅ **ka$_2$**-tta
bridge-NOM long-? BE(PST)
'the bridge was long'

c. [$_{CP}$ naga-**ka$_1$** ∅] hasi
long-? BE(PRES) bridge
'bridge that is long'

d. [$_{AP}$ naga-**ka$_1$**] hasi
long-? bridge
'long bridge'

Finally, let us go back to the language acquisition problem. (See section 3.5 for discussion.) The hypothesis is Japanese-speaking children initially assume that prenominal TAs and NAs are in relative clauses (CP), with the complementizer *no* overtly realized, and then they retreat from the overgeneration of *no* after they learn that, like RCs, prenominal TAs and NAs are in IPs. However, it is also perfectly reasonable to hypothesize that children further retreat from an IP analysis of pronominal adjectives, reanalyzing them as APs. Interestingly, as noted in fn. 20, the overgenerated *no* eventually disappears from NPs with AP modifiers (age 4;0) before those with RCs (age 4;2). According to Murasugi (1991), the order of the retreat suggests that children may acquire knowledge of the surface structure of TA and NA modifiers as APs (not as relative clauses); otherwise, children should have treated the retreat in all TAs, NAs and RCs uniformly (though there is no evidence available for the acquisition of the AP structure (p.247)). In fact, she also assumes that there are two possible structures of adjectival modifiers, and during the acquisition children choose the AP structure over the RC structure once the former becomes available for the "economy of representation" (proposed by Chomsky). This idea is compatible with our analysis of TAs and NAs in prenominal modification proposed in this chapter.[50] Also, from semantic point it is likely that children learn A-N combinations with intersective readings (such as *an* ***old*** *book*) before those with non-intersective readings (such as *a* ***old/former*** *friend*).

[50] It is not clear if the AP structure would be never available for prenominal TA and NA modifiers in Tsugaru dialect. If this is the case, then we can predict that Tsugaru dialect-speaking children retreat from the overgeneration of *no* with all TAs, NAs and RCs modifiers uniformly. In other words, the overgenerated *no* should disappear from all modifiers uniformly. I do not have any evidence for that at this point and leave it for future research.

3.8 Conclusion

This chapter began the exploration of adjectival inflection in Japanese with a discussion of what the prenominal adjectival morphology (TA *–i* and NA *–na*) is not. Among several possible patterns found in the world's languages, while some (φ-agreement, definiteness, and Long- and Short-Form) are easily eliminated, incorporated/reduced relative clause material is plausible. In fact, many researchers support this idea (Kuno 1973; Nishiyama 1998, 1999; among others), and distributional patterns of prenominal TAs and NAs in standard Japanese and in children's language make it promising. However, we have also seen that this idea is not sufficient to analyze all adjectives in Japanese given various semantic facts, distributional patterns of dialects as well as a set of adjectives, which show asymmetry between prenominal and predicative morphemes. We come to the conclusion that, besides RC structures, Japanese must have genuine attributive adjective structures. Also, TA *–i* and NA *–na* appearing in prenominal positions are neither a copula nor a present tense, but rather some form of adjectival morphology (glossed with "?"). Now we are ready to consider the identity of "?", which we turn to in the next chapter.

Chapter 4
Japanese Adjectival Inflection and Case-Marking

4.1 Introduction

In the previous chapter, I argued that prenominal adjectives in Japanese should be analyzed as occurring <u>both</u> in a true relative clause construction and in a genuine attributive construction, as shown in (1) and (2). The prenominal morphemes, TA *–i* and NA *–na*, were argued to be neither tenses, copulas, nor tensed copulas; however, the precise status of these elements was left undetermined, as reflected by the "?" glosses:

(1) a. $[_{CP}$ TA **-i** ∅] N
-? BE(PRES)
'*N* that is *TA*'
(e.g., *taka-**i** hon,* 'book that is expensive')

b. $[_{AP}$ TA **-i**] N
-?
'*TA N*'
(e.g., *taka-**i** hon,* 'expensive book')

(2) a. $[_{CP}$ NA **-na** ∅] N
-? BE(PRES)
'*N* that is *NA*'
(e.g., *sizuka-**na** umi* 'sea that is quiet')

b. $[_{AP}$ NA **-na**] N
-?
'*NA N*'
(e.g., *sizuka-**na** umi* 'quiet sea')

In this chapter, I lay out the central proposal of this thesis, namely, that Japanese adjectival morphemes are **case-markers**. In section 4.2 I introduce the case-marking analysis, providing some comparisons to more familiar instances of attributive adjectival case. The main suggestion is that Japanese adjectival morphology is a form of non-agreeing (invariant) case. Invariant case-marking on attributive adjectival modifiers is a relatively rare phenomenon in European languages; however, it appears to be found in well-developed form in Indo-Iranian languages exhibiting the so-called **Ezafe construction**, such as Modern Persian (Farsi), Kurdish and Zazaki. Section 4.3 provides a detailed discussion of the Ezafe construction, and observes striking similarities in the morphological patterns of Japanese and the Ezafe languages. Section 4.4 discusses certain basic theoretical questions that arise with the invariant adjectival case, viz.: Why do modifying adjectives need case? Where does this case come from? What is the case-assigner? I briefly introduce the proposals of Larson and Yamakido (2005a,b) that attributive modifiers in DP constitute arguments of their determiner head (D), and that the latter is also a source of case. Finally, in section 4.5, I extend the case-marking analysis of adjectival morphology in DP to other adjectival constructions in Japanese, including small clauses, secondary predicate constructions, and adverbials.

4.2 Japanese Adjectival Morphology as Case-Markers

To motivate the analysis of Japanese adjectival morphology that I will pursue in this chapter, consider the data in (3) below. The particle *no* is typically described as a genitive

case-marker (Shibatani 1990, among others), counterpart to English *'s*, and is often available in contexts where English *'s* would be appropriate (3a,b). In fact, however, as discussed by Murasugi (1991), Japanese genitive *no* can appear in a wider range of functions including "descriptive modification" contexts where English *'s* could not appear (4a,b). (Examples in (3) and (4) are from Murasugi 1991):[1]

(3)	a.	Taroo	**no**	hon		'Taroo's book'
		Taro	GEN	book		
	b.	tosi	**no**	hakai		'the city's destruction'
		city	GEN	destruction		
(4)	a.	tetu	**no**	onna		'iron woman; woman of iron; *iron's woman'
		iron	GEN	woman		
	b.	men	**no**	shatu		'cotton shirt; shirt of cotton; *cotton's shirt'
		cotton	gen	shirt		

Interestingly, for our purposes, *no* can also alternate with the adjectival morphemes in certain instances. In (5a) *no* alternates with the adjectival *–na.* In (5b) *no* alternates with both *–na* and *–i*:[2] [3]

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[1] Kuno (1973) assumes that *no* appearing in examples such as (i) is the attributive form of the copula *da*, not the genitive case-marker (p.25):

(i)	a.	is-satu	**no**	hon	'one book'
		one-volume		book	
	b.	gakusei	**no**	John	'John, who is a student'
		student			

[2] Not all speakers accept the alternations in (5a) and (5b); often one member is favored. For example, in (5b) 'squared-shaped building' one might favor *sikaku* ***no*** more than *sikaku-**na***. Furthermore, alternation in the morpheme is almost always accompanied by an alternation in meaning. According to Hamano (1997), *no*-marked nominals are absolute in semantics, while *na*-marked nominals are evaluative. She discusses a pair of nominals belonging to the same semantic class. Examples in (i) are all nominals with semantics of shape, 'triangle' 'star-shaped' and 'lop-side', but only the first two, members of absolute shapes, take *no*:

(i)	a.	sankaku	**no**	kami		'triangle paper'
		triangle	GEN	paper		
	b.	hosi-gata	**no**	moyoo		'star-shaped pattern'
		star-shape	GEN	pattern		
	c.	ibitu	**-na**	katati		'lop-sided form'
		lop-sided		shape		(Hamano 1997: 6-7)

Although "physical features are expressed by *no*-nominals" in general, they select *–na* when such expressions bear additional evaluative or emotive meanings (p.8). Examples in (ii) also illustrate the general application of *no* vs. *–na*. A color term (such as 'blue') used in "its purely physical sense" takes *no* (iia), whereas a color term used in "a derived, emotional sense" takes *–na* (iib):

(ii)	a.	ao	**no**	penki	'blue paint'
		blue	gen	paint	
	b.	massao	**-na**	kao	'very blue (= pale) face'
		very blue		face	

(5) a. baka **no** hito ‘fool/foolish person’
fool GEN person
baka **-na** hito
foolish person
b. sikaku **no** biru ‘square-shaped building’
sikaku **-na** biru
sikaku **-i** biru
square building

The fact that the adjectival morphemes *–i* and *–na* can alternate with *no* in the same general descriptive modifying function suggests a potential alternative view of these elements. Rather than being tensed copulas, *–i* and *–na* are in fact case morphemes parallel to genitive *no*.

4.2.1 The Historical Derivation of Japanese NA Morphology

A case-marking analysis of Japanese adjectival morphology can be historically motivated to some extent. Specifically, prenominal NA *–na* marking is known to have arisen from an earlier form *ni aru*, through a series of phonological changes. The derivation is shown in (6a). By contrast, the copula *da* arose from an earlier form *ni **te** aru*, as shown in (6b). (Tsukishima *et al*. 1982, among others):[4]

(6) a. Prenominal *na*: **ni aru** ⇒ naru ⇒ **na**
Drop /i/ Drop /ru/
b. Copular *da*: **ni** te **aru** ⇒ de aru ⇒ de a ⇒ **da**
Drop /ru/ Drop /e/

It is interesting to observe the binary nature of the two source forms. In both derivations, the original form contained the copula *aru*, and also *ni*, which is morphologically identical with the dative case-marker in standard Japanese. This fact suggests a rather natural idea: given the binary source of *–na* and *da*, it is tempting to see the two as distinguished by which of the two original functions was preserved. More directly, we

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[3] In Old Japanese, spoken in the Nara period and before (~794), TA inflection was not fully developed yet. When TAs modified nouns, they directly modified nouns without inflection, or more importantly they took genitive case *no* (Yamaguchi, *et al*. 1997):

(i) a. taka yama (*Man’yōshū 2*) b. too **no** mikado (*Man’yōshū 5*)
high mountain far GEN Imperial Court
‘high mountain’ ‘the distant Imperial Court’

Later the inflectional morpheme for attributives, *–ki*, as well as the predicative *–si* appeared (ii):

(ii) … nanimo nanimo tiisa-**ki** mono wa ito utuku-si. (*Makura-no Sōshi* (*c.* 1000))
anything anything small thing TOP very lovely
‘Anything small is very lovely.’

[4] The historical derivations in (6) are attested. *Ni te aru* in (6b) appeared as a colloquial version of *naru* (6a). See Tsukishima *et al*. (1982).

might speculate that *da* preserves the copular function of the old binary form, *aru*, and that *–na* preserves the case-marking function, *ni*.

4.2.2 Co-variant versus Invariant Adjectival Case-Marking

A case-marking analysis of Japanese TA *–i* and NA *–na* is plausible in general terms. Japanese is a language that does exhibit morphological case, including nominative, accusative, dative, as well as genitive (7):

(7) a. Taroo **ga** hasit-ta. JP.
Taroo NOM run-PST
'Taroo ran.'
b. Taroo **ga** Ziroo **ni** ringo **o** age-ta.
Taroo NOM Ziroo DAT apple ACC give-PST
'Taroo gave an apple to Ziroo.'
c. Taroo **no** uti **wa** ooki-i.
Taroo GEN house TOP big
'As for Taroo's house, it is big.'

It is a familiar fact that in other languages exhibiting case-marking on arguments, case morphology is also found in modifying contexts. Recall that German shows case-marking on its arguments and that German adjectives are inflected differently for each case such as nominative, accusative, dative and genitive (8) (repeated from (8) in chapter 1):

(8) 'good wine'

a.	gut**er**	Wein	b.	gut**en**	Wein	GE.
	good.NOM	wine		good.ACC	wine	
c.	gut**em**	Wein	d.	gut**en**	Weines	
	good.DAT	wine		good.GEN	wine	(Kester 1996: 160)

Russian adjectives are also inflected depending on the case of nominal which they are associated with, as shown in (9) (repeated from (9) in chapter 1):

(9) 'a/the smart girl'

a.	umnaja	devuška	RU.
	smart.**NOM**.FEM	girl.NOM	
b.	umnuju	devušku	
	smart.**ACC**.FEM	girl.ACC	
c.	umnoj	devuški	
	smart.**GEN**.FEM	girl.GEN	
d.	umnoj	devuške	
	smart.**DAT**.FEM	girl.DAT	
e.	umnoj	devuškoj	
	smart.**INSTR**.FEM	girl.INSTR	

The Japanese pattern evidently differs from that of German or Russian in so far as its attributive adjectives do not agree with the nominal modified. Whereas in German and Russian the form of the adjective shifts with the case-marking of the modified nominal, in Japanese it remains the same (*–i*/*–na*). We might describe this by saying that German and Russian show **co-variant case-marking** (or **agreeing case-marking**) on their adjectives, whereas Japanese shows **invariant case-marking** (or **non-agreeing case-marking**). But even in the latter there are parallels to in the European languages.

For example, Dutch attributive adjectives exhibit the inflectional suffix [–e], pronounced as *schwa*. According to Kester (1996), standard Dutch has two grammatical genders: "common" gender (which historically unifies masculine and feminine) and "neuter" gender (p.68). The presence of *schwa* depends on three grammatical features: (in)definiteness, gender and number. When an adjective modifies a common noun (such as *man* 'man' and *wijn* 'wine'), definite or indefinite, singular or plural, it is marked with *schwa* (10) and (11):

(10) a. de grot**e** man
the tall man
b. de grot**e** mannen DU.
the tall men
c. een grot**e** man
a tall man
d. grot**e** mannen
tall men (Kester 1996: 69)

(11) a. lekker**e** wijn
good wine
b. lekker**e** wijnen
good wines (Kester 1996: 69)

Likewise, when a modified noun is a neuter noun (such as *huis* 'house' and *bier* 'beer'), *schwa* appears, as shown in (12) and (13); however, it is absent in the context of indefinite DPs containing a singular noun (12c) and (13a):

(12) a. het grot**e** huis
the big house
b. de grot**e** huizen DU.
the big houses
c. een groot_ huis
a big house
d. grot**e** huizen
big houses

(13) a. lekker_ bier
good beer
b. lekker**e** bieren
good beers (Kester 1996: 69)

Like German, when adjectives in Dutch appear in predicative position, whether their subjects are singular or plural, neuter or common nouns, they are not inflected with *schwa* (14):

(14) a. De auto is groot_. DU.
the car is big
b. Het huis is groot_.
the house is big
c. De auto's zijin groot_.
the cars are big

d. De huizen zijn groot_.
the houses are big (Kester 1996: 81)

Kester assumes that the zero-ending on adjectives with [+indefinite, +neuter, +singular] as in (12c) and (13a) is a default form. But then, what is the *schwa* marking appearing on attributive adjectives in Dutch? Kester proposes that inflectional endings of attributive adjectives in Dutch are "spell-out of case-marking":

> Although there is no distinctive Case-morphology in modern Dutch, I assume that Dutch adjectives still have a Case-slot which is filled in prenominal position. In this way, the inflectional endings of adjectives in Dutch resemble the Case-morphology found with adjectives in German and Russian.
> (Kester 1996: 161)

Dutch adjectives are similar to German in that they are inflected only in prenominal position, but not in predicative position, whereas Russian adjectives are inflected in both positions. On the other hand, Dutch adjectives are different from German and Russian in that they get fixed *schwa* marking (with a few exceptions), whereas German and Russian adjectives inflect depending on the case of associated nominals, such as nominative, accusative and genitive. According to Kester, however, the loss of case-morphology is a fairly recent development, saying "in the former stages of Dutch, up to the present century, the Case system was still reflected in the different morphological endings of prenominal adjectives, … (p.161)"

What Kester (1996) proposes for the schwa marking on Dutch is essentially identical to what is being proposed here for the morphemes *–i* and *–na* appearing in Japanese attributive adjectival constructions. In both instances we have invariant case-marking on adjectives in prenominal position, referred to as the case-marking hypothesis in Yamakido (2000), as repeated as (15a), with structures (15b,c):

(15) a. **Case-Marking Hypothesis**:
The morphemes ***–i*** and ***–na*** appearing in adjectival constructions in Japanese are a form of case-marking. (Yamakido 2000: 599)

b. $[_{AP}$ TA **-i**] N
CASE
'*TA N*'

c. $[_{AP}$ NA **-na**] N
CASE
'*NA N*'

4.3 Ezafe and Nominal Modification[5]

Invariant case-marking on attributive adjectival modifiers is a relatively rare phenomenon in European languages; however, it appears to be found in well-developed form in Indo-Iranian languages exhibiting the so-called **Ezafe construction**. These languages exhibit some striking morphological parallels to Japanese, and motivate the main theoretical proposals that I want to adopt regarding adjectival case-marking and its source, hence I will explore this phenomenon in some detail below.

Ezafe is found in Modern Persian (Farsi), Kurdish (Kurmanji and Sorani) and Zazaki (Dimili). In these languages, nominal modifiers generally follow the noun, and a large class of nominal modifiers, including APs, NPs, some PPs, but typically not relative clauses, requires a "linking" element, referred to as "Ezafe". Thus in the Persian example (16a), the noun *otâq* 'room' is modified by the adjective phrase *besyar kuchik* 'very small'. The Ezafe vowel *é* appears in between, suffixed to the noun. In (16b), the noun *xune* 'house' is followed by a restrictive PP, *kenar-é dærya* 'on the beach'. The two are connected by Ezafe, which also appears internally, between the preposition and its object. Finally (16c) shows the noun *otâq* modified by the relative clause *é- ké bozorg ast* 'that is big'. No Ezafe appears in this instance; the relative clause initial *–î* is a distinct morpheme:

(16) a.	otâq **-é**	besyar	kuchik	'very small room'	(AP) FA.
	room **-EZ**	very	small		
b.	xune **-yé**	[kenar - **é**	dærya]	'house on the beach'	(PP)
	house - **EZ**	next **-EZ**	sea		
c.	otâq- î	ké	bozorg ast	'room that is big'	(CP)
	room-REL-that		big is		

The Ezafe construction raises a number of interesting questions, not the least of which is: What is the Ezafe morpheme? What is its status under current grammatical theory? Larson and Yamakido (2005a,b) develop a proposal advanced by Samiian (1994) for Persian that Ezafe is a case-marker, inserted to case-license [+N] elements. In the next section, I will review the basic facts of Persian Ezafe and Samiian's arguments for its case-marker status. I will then go on to consider two simple questions discussed by Larson and Yamakido (2005a,b):

- Why do modifiers require case?
- What is their case-assigner?

Case-markers (as opposed to agreement) are typically associated with argument status. However, the Ezafe-marked items in (16a) and (16b) are modifiers. Why would modifiers need case?

[5] The proposals of this section derive from joint work by the author and Richard Larson, presented as Larson and Yamakido (2005a,b).

Larson and Yamakido (2005a,b) suggest answers to these questions based on an articulated "shell structure" for DP proposed by Larson (1991). Under the latter, (most) nominal modifiers originate as arguments of D, a view defended in classical transformational grammar by Smith (1964), and in generalized quantifier theory by Keenan and Stavi (1994). I relate this account to adjectival inflection in Japanese, following Larson and Yamakido (2005a,b).

4.3.1 Ezafe in Farsi (Samiian 1994; Ghomeshi 1997; Ghozati 2000)

Farsi shows the basic Ezafe pattern in a simple form. The language contains prenominal demonstratives (17a) and numerals (17b); superlatives seem to be the only instance of prenominal adjectives (17c):

(17) a. on mard FA.
that man
b. sé tá dokhtar
three NM daughters
c. kûechektarin mive
smallest fruit

Otherwise, all modifying elements occur postnominally and require Ezafe, including APs (18a), descriptive NPs (18b,c), genitive NPs (18d), and some PPs (18e). The construction is recursive, insofar as multiple modifiers of these kinds trigger multiple occurrences of Ezafe (18f):

(18) a.	otâq **-é**	besyar	kuchik	'very small room'	(AP)	FA.
	room- **EZ**	very	small			
b.	del - **é**	sang		'stone heart'	(NP)	
	heart- **EZ**	stone				
c.	shahr- **é**	Tehran		'city of Tehran'	(NP)	
	city- **EZ**	Tehran				
d.	manzel- **é**	John		'John's house'	(NP)	
	house- **EZ**	John				
e.	xune - **yé**	[kenar - **é**	dærya]	'house on the beach'	(PP)	
	house- **EZ**	next - **EZ**	sea			
f.	ketâb - **é**	sabz - **é**	jâleb	'interesting green book'	(AP-AP)	
	book- **EZ**	green- **EZ**	interesting			

As noted earlier, relative clause modifiers, which are also postnominal, do <u>not</u> trigger Ezafe (19). They are introduced by a relative morpheme (*î*) that may be historically related to Ezafe, but is considered synchronically distinct by Persian grammarians:

(19)	otâq- î	-ké	bozorg ast	'room that is big'	(*CP)	FA.
	room-REL	that	big is			

4.3.2 Ezafe as a Case-Marker (Samiian 1994)

The presence of the Ezafe "linking" morpheme raises a simple and very natural question. What is Ezafe? What function does Ezafe serve in the grammar of Persian and languages like it? Vida Samiian (1994) proposes that Farsi Ezafe is a dummy case-marker, inserted before complements of [+N] catgeories, including Ns, As and some Ps. Samiian supports this claim by observing that the use of Ezafe extends considerably beyond modification. Many contexts where English would use the (genitive) case-marking preposition *of* are ones in which Ezafe occurs, including complements of N (20), complements of AP (21), and certain partitive constructions (22):

(20) *Complements of N*

a.	tæxrib - **é**	shæhr	'destruction of the city'	FA.
	destruction- **EZ**	city		
b.	hordan - **é**	âb	'drinking of water'	
	drinking- **EZ**	water		
c.	forushandé - **yé**	ketâb	'seller of books'	
	seller- **EZ**	books		

(21) *Complements of A*

a.	asheq - **é**	Hæsæn	'in love with Hasan'	FA.
	in love- **EZ**	Hasan		
b.	negæran - **é**	bæche	'worried about the children'	
	worried- **EZ**	child-PL		
c.	montæzer - **é**	Godot	'waiting for Godot'	
	waiting- **EZ**	Godot		

(22) *Partitives*

a.	tamâm - **é** - în	manzelhâ	'all (of) the houses'	FA.
	all - **EZ** - DEF	houses		
b.	hardo - **yé** - în	manzelhâ	'both (of) the houses'	
	both - **EZ** - DEF	houses		

The role played by *of* in the counterpart English cases is to case-mark the complement following adjectives, nouns and partitives. Samiian suggests that Ezafe plays the same role here.

Perhaps the most persuasive piece of evidence Samiian gives is the behavior of the category P, which initially looks like a problem for Samiian's proposal. Since prepositions are typically analzyed as [–N, –V] elements, PP would not be expected to require Ezafe marking; furthermore, P would not be expected to require Ezafe to case-license its object, contrary to what we observed in (16b)/(18e). However, Samiian shows that the class of prepositions in Farsi is not uniform with respect to Ezafe. As shown in (23), some prepositions reject Ezafe (call these "Class 1"). By contrast, as shown in (24) and (25), other prepositions either permit Ezafe, or require it (call these "Class 2"):

(23) *Class 1 Ps* (reject Ezafe)

a.	be (*- **yé**) Hæsæn to (-**EZ**) Hasan	'to Hasan'	FA.
b.	æz (*-**é**) Hæsæn from (-**EZ**) Hasan	'from Hasan'	
c.	ba (*- **yé**) Hæsæn with (-**EZ**) Hasan	'with Hasan'	
d.	dær (*- **é**) Hæsæn in/at/on (-**EZ**) Hasan	'in/at/on Hasan'	

(24) *Class 2 Ps* (permit Ezafe)

a.	zir (- **é**) miz under (-**EZ**) table	'under the table'	FA.
b.	ru (- **ye**) miz on (-**EZ**) table	'on the table'	
c.	bala (- **yé**) divar up (-**EZ**) wall	'up the wall'	
d.	jelo (- **yé**) Hæsæn in front of (-**EZ**) Hasan	'in front of Hasan'	

(25) *Class 2 Ps* (require Ezafe)

a.	beyn - **é** mæn-o to between- **EZ** you and me	'between you and me'	FA.
b.	væsæt - **é** otaq in-the-middle - **EZ** room	'in the middle of the room'	
c.	dor - **é** estæxr around- **EZ** pool	'around the pool'	
d.	bæqæl- **é** dær by- **EZ** door	'by the door'	

Samiian shows that, whereas Class 1 prepositions are true function words equivalent to English Ps, Class 2 and Class 3 prepositions are really noun-like elements. For example, Class 1 prepositions require an object, whereas Class 2 Ps do not (26a,b). Class 2 Ps can occur after determiners and can even bear plural morphology (26c,d), whereas Class 1 prepositions cannot.[6] Finally, only PPs headed by Class 2 prepositions appear in case positions and are joined to nominals by Ezafe; Class 1 prepositions do not (26e,f):

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[6] Interestingly, Japanese postpositions behave (almost) exactly like prepositions in Farsi as in examples (23)-(25), as shown in (i)-(iii):

(i)	a.	Taroo ni to	'to Taroo'	b.	Taroo kara from	'from Taroo' JP.
	c.	Taroo to with	'with Taroo'	d.	Taroo ni in/on	'in/on Taroo'
(ii)	a.	teeburu **no** sita ni table GEN bottom part in 'under the table'		b.	teeburu (no ue) ni table GEN top part in 'on the table'	

(26) a. ræft bala (-**yé** deræxt) ‘went up (the tree)’ FA.
went up - **EZ** tree
b. ræft ba *(Hæsæn) ‘went with Hasan’
went with Hasan
c. in ru ‘up here’
this top
d. un zir-a ‘way down there’
that under-PL
e. æks - **é** ru- **yé** miz ‘picture on the table’
picture- **EZ** on- **EZ** table
f. *æks - **é** dær ganje ‘picture in the closet’
picture- **EZ** in- **EZ** closet

The upshot is that, instead of being a counterexample to the case-marking hypothesis, Farsi PPs appear to provide further support for it. It is exactly the noun-like (and presumably [+N]) prepositions that trigger the Ezafe phenomenon – exactly the prepositions that would not be expected to assign case, and whose projections would require it. As a point of comparison with English, we might note that Class 2 prepositions in Farsi somewhat resemble complex English Ps like (27a,b), which contain an internal nominal element (*cause, spite*):

(27) a. [be [cause]] (*of) that fact
(historically: by-cause-of)
b. [in [spite]](*of) his reluctance

Here too an internal genitive case-assigner (*of*) is evidently required.

Finally, we may note that if Samiian’s case-marking analysis is correct, then one otherwise anomalous fact receives a straightforward explanation. Recall that, unlike adjectival (28a) and noun modifiers (28b), relative clauses are not linked to the head by Ezafe (28c):

(28) a. otâq –**é** kuchik ‘small room’ (AP) FA.
room- **EZ** small

---

c. kabe **no** ue ni
wall GEN upper part in
‘up the wall’

d. Taroo no mae ni
GEN front position in
‘in front of Taroo’

(iii) a. Taroo to Hanako **no** aida ni ‘between Taroo and Hanako’
and GEN the position between in
b. heya **no** mannaka ni ‘in the middle of the room’
room GEN middle, center in
c. puuru **no** mawari ni ‘around the pool’
pool GEN circumference in
d. doa **no** soba ni ‘by the door’
door GEN vicinity in

The distribution of genitive case-marker *no* shows a striking similarity to that of Ezafe.

b. del - **é** sang ‘stone heart‘ (NP)
heart- **EZ** stone
c. otâq- î -ké bozorg ast ‘room that is big’ (*CP)
room-REL that big is

Assuming that Ezafe is a case-marker and that case is required on [+N] (i.e., nominal elements), then we correctly predict that Ezafe will occur on adjectives, nouns and nominal PPs, but not on relative clauses.[7]

4.3.3 Case-assigner or Case-morphology?[8]

The Ezafe construction appears highly significant for our purposes because, if the case-marking analysis is correct, then Ezafe languages seem to be strong candidates for what I have been calling “languages with invariant case-marking” on their modifiers. In Farsi, nominal modifiers occur joined to the heads they modify by the invariant linking particle *–é/–yé*, which appears to be a case element given the arguments that we have just reviewed. Nonetheless, there is an important ambiguity that has been left unresolved up to this point, and which must be addressed. In the preceding, I have made free use of the term “case-marker” in discussing items appearing in Japanese and Farsi. However, as it is typically used, the term “case-marker” is ambiguous between two distinct notions: (i) **case-assigner**, and (ii) **case-morphology**. When used in the first sense, “case-marker” refers to something that confers case upon another [+N] phrase. When used in the second sense, “case-marker” refers to inflection appearing on a [+N] phrase, “spelling out” case that it has received from elsewhere.

Under Samiian’s (1994) analysis, Farsi Ezafe must be a case-marker in the first sense: a <u>case-assigning</u> element. This is clear, for example, from the fact that in a simple Farsi nominal like (29), Ezafe appears, not on the modifier analyzed as receiving case - the adjective *kuchik* ‘small’ - but rather on the head noun *otâq* ‘room’ that immediately precedes the modifier:

(29) otâq **-é** kuchik ‘small room’
room **-EZ** small

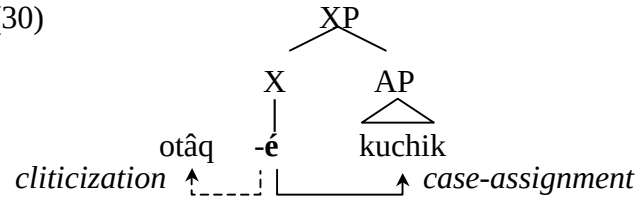
In section 4.4.6 below I propose (following Larson and Yamakido (2005a,b)) that Ezafe is in essence a clitic preposition (X) that assigns case to the element to its right, but which cliticizes onto the item to its immediate left for phonological reasons (30):[9]

[7] For more on this, see section 4.4.5.

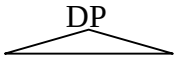
[8] I am indebted to Alice Harris and particularly John Whitman for discussion clarifying issues raised in this section.

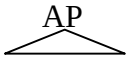
[9] See Kahnemuyipour (2000) for an analysis similar in spirit.

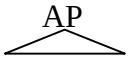
(30)



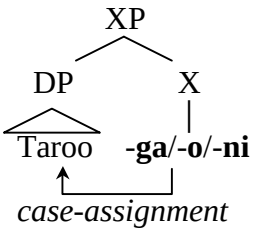
By contrast, when we turn to Japanese, the reference of the term "case-marker" becomes much less clear. One standard analysis of Japanese case-particles like *ga*, *o* and *ni* is that they are case-morphemes - case-markers in the second sense given above. On this view *ga*, *o* and *ni* are simply the spell out of case (31a). Under an equivalent analysis of the Japanese adjectival morphemes *–i* and *–na* (31b,c), the latter would also have the status case-morphology, making the parallel to Ezafe a weak one:

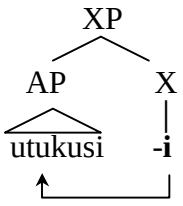
(31) a. 

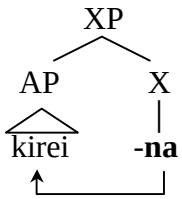
b. 

c. 

However, there are also a number of recent analyses of Japanese case-particles according to which the latter constitute independent heads (X) that assign case to the [+N] phrases to their left – in effect behaving like postpositions (32a). This is "case-marker" in the first sense. Under an equivalent analysis of the Japanese adjectival morphemes *–i* and *–na*, the parallel to Ezafe is quite direct (32b,c):

(32) a. 

b. 

c. 

Evidence for the second analysis comes from a number of sources. Aoyagi (1998) argues that Japanese case particles are clitics (not suffixes), making them parallel on the phonological level to the analysis of Ezafe adopted here. Similarly, Vance (1993), applying criteria from Zwicky and Pullum (1983), argues that Japanese case particles are minimally clitics, more probably independent words. Hence, they are not simple case suffixes.

There are at least two syntactic analyses of Japanese case particles analyzing them as syntactic heads that assign or check case. The first is the so-called KP analysis according to which in a sentence like (33) *inu ga* and *neko o* are KPs headed by the case particles *ga* and *o*, which take the D/NPs *inu* and *neko* as complements (Fukui 1986, Oshima 1999):

(33) [Inu **ga**] [neko **o**] oidasita.
dog NOM cat ACC chased out
'The dog chased out the cat.'

As observed above, this makes nominal phrases with case particles very close to PPs in syntactic status. Like P, K (= the case particles) would assign/check abstract case on their D/NP complements.[10]

The second set of analyses takes case particles to be functional heads that select complements to their right and host specifiers to their left. Thus in (34), *ga* would be analyzed as the head of the clause - i.e., Infl - taking VP as its complement and the subject *inu* 'dog' as its specifier:

(34) [$_{IP}$ Inu [$_{I'}$ ga [$_{VP}$ neko o oidasita]]]
dog NOM cat ACC chased out
'The dog chased out the cat.'

Similarly, in a nominal, *no* would be analyzed as D, taking the NP to its right as a complement and the possessor as its specifier (35):

(35) [$_{DP}$ John [$_{D'}$ no [$_{NP}$ inu]]]
John GEN dog
'John's dog'

This proposal parallels Abney's (1987) analysis of possessive *'s* in English as D. In the GB and Principles and Parameters tradition, this analysis of case particles is proposed by Kayne (1994) and developed further by Whitman (1999) and Whitman and Takezawa (1998).

I will simply assume for my purposes that one of the two analyses of Japanese case particles as independent case assigning heads is correct, without trying to choose between them. This much will secure the parallel between the Ezafe construction and Japanese case-markers. We will see additional reasons to prefer the independent head analysis of Japanese adjectival morphemes when we consider an interesting set of nominal ellipsis phenomena in Chapter 5.

4.3.4 Ezafe in Zazaki (Dimili)

One apparent difference between Japanese case-markers versus Farsi Ezafe concerns the fact that Farsi has only a single particle (*–é/–yé*), whereas Japanese has distinct morphemes for genitive modifiers (*no*) and for its two morphological classes of adjectives (*–i/–na*). Interestingly, there is an Ezafe language that appears to match the Japanese pattern more closely, and which also provides significant additional evidence for the general case-marking account of Ezafe.

The Indo-Iranian language Zazaki (Dimili) exhibits the Ezafe in a significantly more complex form than Modern Persian. Whereas Ezafe is invariant (up to phonological alternation) in Persian, in Zazaki the Ezafe element inflects according to the number

[10] John Whitman observes that under the KP account, specific Ks must be selected. T must somehow select *ga*, V (or v) must select *o*, D or N must select *no*, etc. This is somewhat problematic since these projections to not normally select specific adpositons (e.g., specific Ps); but rather select a lexical category, and license a case feature.

(singular/plural) and the gender (masculine/feminine) of the modified noun. Furthermore, and more importantly for our purposes, Zazaki distinguishes between what is called a **descriptive Ezafe**, which links a modified noun with an adjective, and a **genitive Ezafe**, which links a noun to another noun in a relation of possession, body-part or kinship. Table (36) gives the partial set of Zazaki Ezafe forms, drawn from Todd (1985).[11] Examples are provided in (37)-(42), also from Todd (1985):

(36) *Zazaki Ezafe Morphemes*

			Descriptive	**Genitive**
Masculine	Cons.	Stem	*-o*	*-e*
Masculine	Vowel	Stem	*-yo*	*-y*
Feminine	Cons.	Stem	*-a*	*-a*
Feminine	Vowel	Stem	*-ya*	*-y(a)*
Plural	Cons.	Stem	*-e*	*-e*
Plural	Vowel	Stem	*-y*	*-y*

(37) *Descriptive Ezafe - Masculine*

a. pir'tok-**o** find — 'good book' — ZA.
book-EZ good

b. laj-**o** genj — 'young son'
son-EZ young

(38) *Descriptive Ezafe - Feminine*

a. top-**a** wer'd-i — 'small ball' — ZA.
ball-EZ small-FEM

b. suk-**a** gird-i — 'large city'
city-EZ large-FEM

(39) *Descriptive Ezafe - Plural*

a. pir'tok-**e** gird-is — 'big books' — ZA.
book-EZ big-PL

b. sa-**y** wes-i — 'good apples'
apple-EZ good-PL

(40) *Genitive Ezafe - Masculine*

a. ban-**e** m n — 'my house' — ZA.
house-EZ me(OBL)

[11] The table in (36) ignores what Todd labels the "subordinated" Ezafe series, which occur in the context of certain oblique case environments. That Ezafe alternates in this circumstance again suggests that it is a case-marker.

b. dəst-**e** ay ‘her hand’
hand-EZ she(OBL)
c. dəd-**e** j ‘his uncle’
uncle-EZ him(OBL)

(41) *Genitive Ezafe - Feminine*
a. ling-**a** min ‘my foot’ ZA.
foot-EZ me (OBL)
b. sa-**ya** celeng-i ‘Cheleng’s apple’
apple-EZ Cheleng(OBL)

(42) *Genitive Ezafe - Plural*
a. ling-**e** min ‘my feet’ ZA.
feet-EZ me(OBL)
b. sa-**y** ma ‘our apples’
apple-EZ us(OBL)

Under the view of Ezafe as a case-marker, this suggests that Zazaki distinguishes at least cases within the nominal: one with which it marks NP/DP modifiers in the genitive relation, and one that it uses for adjectival modifiers in a descriptive relation.

This pattern is highly suggestive of the Japanese facts. Recall that Japanese contains a morpheme *–no*, used to link a noun with a NP/DP in a genitive modifying relation (43):

(43) a. Taroo **no** kyoodai ‘Taroo’s siblings’ JP.
Taroo GEN siblin
b. Taroo **no** hon ‘Taroo’s book’
Taroo GEN book
c. Nihonzin **no** gakusei ‘Japanese student (student who is Japanese)’
Japanese GEN student

In addition, Japanese contains morphemes *–i/–na*, used to link a noun with an attributive AP, an AP in a descriptive modifying relation: *–i* for true adjectives (44a,b) and *–na* for nominal adjectives (44c,d):

(44) a. utukusi **-i** tori ‘beautiful bird’ JP.
beautiful -CASE bird
b. taka **-i** hon ‘expensive book’
expensive -CASE book
c. kirei **-na** hana ‘pretty flower’
pretty -CASE flower
d. sizuka **-na** umi ‘quiet sea’
quiet -CASE sea

As we noted, the morpheme *no* in (43) is standardly classified in Japanese grammar books as a genitive case-marker. Given the Zazaki Ezafe patterns, where the genitive and descriptive linking morphology form a paradigm, it seems natural to analyze *–i* and *–na*

as having the same status as *no* as well. Specifically, it seems natural to analyze them also as case-markers. Under this idea, Japanese becomes, in effect, an Ezafe language.

4.3.5 More on the Genitive Ezafe and "Dependent Ezafe"

Certain facts about the Zazaki genitive Ezafe appear to provide further evidence for the status of Zazaki Ezafe as a case-phenomenon, and for the Zazaki Ezafe morphemes as belonging to a single paradigm. I will discuss them briefly here.

As the reader may have already observed from examples (40)-(42), nouns that follow genitive Ezafe appear in their oblique form. Thus in (40)-(42) all of the possessor nominals, including pronouns and proper names, are glossed as 'OBL'. Significantly, this oblique case-form is the same one induced by oblique postpositions, such as the dative P *–re* 'to' and the source P *fa* 'from' (45):

(45) a. min-re 'to me' ZA.
me(OBL)-to
b. celeng-i fa 'from Cheleng'
Cheleng(OBL) from

That Ezafe and postpositions induce the same case-form on their complements is further evidence that Ezafe is a case-phenomonon, and that Ezafe and P govern, or are associated a form of oblique case.

This view is also suggested by a Zazaki phenomenon referred to variously as "doubled," "strengthened," or "dependent" Ezafe (Todd 1985). Todd observes that "when a genitive ezafe phrase itself serves as a modifier in a larger genitive ezafe construction, the ezafe morpheme of the embedded phrase becomes /*de*/ for masculine or plural and /*da*/ for feminine. (p.139)" Todd gives the general pattern in (46), and the examples in (47):

(46) a. [HEAD-EZ [HEAD –**de** MOD]] (masculine or plural))
b. [HEAD-EZ [HEAD –**da** MOD]] (feminine)

(47) a. kut k-e [əm ryan-**de** ma] 'our neighbor's dog' ZA.
dog-EZ neighbor(OBL)-EZ us
b. ma-y [mar-**da** ay] 'her mother's mother'
mom-EZ mom(OBL)-EZ her
c. kut k-e [əmbazan-**de** əy] 'his friends' dogs'
dogs-EZ friends(OBL)-EZ him

Thus in (47a), the genitive Ezafe *kut k-e* 'dogs of" embeds the genitive Ezafe construction *əm ryan-de ma* 'neighbor of us'. In the latter, Ezafe surfaces in the dependent form *de*. Similarly for (47b,c).

Interestingly, the "dependent" Ezafe form is not confined to embedded genitive contexts. It also occurs in the objects of oblique post-positions (48):

(48) a. [embaz-**de** xwi] -**re** ‘to his friend’ ZA.
friend-EZ own -to
b. [mar-**da** to] **fa** ‘from your mother’
mom(OBL)-EZ you(OBL) from

Thus in (48b) we get ‘your mother/‘mother of you’ in the complement of the source postposition *fa*. The form of the Ezafe is the dependent form *da*, not the form expected for femine stems ending in a vowel, viz., *–y(a)*.

On closer inspection, (47b) and (48b) show an interesting convergence. First, the case form of the noun *ma* ‘mother’ following the Ezafe *–y* in (47b) is oblique (*mar*), identical to the case form of the head noun governed by the source preposition *fa* ‘from’ in (48b). This is what we expect given the discussion of (45): Ezafe and postpositions both appear to govern, or be associated with, oblique case. Second, however, the form of Ezafe following *–y* in (47b) is dependent (*da*), and identical to that which appears in a possessive nominal governed by the source preposition *fa* ‘from’ (48b). These correlated facts suggest that dependent Ezafe is actually something like a composite case form – essentially a combination of Ezafe plus oblique case-marking, or double oblique, or “doubled Ezafe” as Todd (1985) also refers to it.[12] Thus we might view both the form of the nominal *mar* and the form of the Ezafe *da* as reflecting assignment of oblique case from the outside - i.e., from Ezafe or an oblique assigning P.

Finally, observe, following Todd (1985) that when a noun phrase contains both genitive and descriptive Ezafe an interesting alternation occurs depending on the modification relations. Specifically, if the adjective modifies a genitively modified phrase, then the form of Ezafe remains the expected descriptive one (49a-c):

(49) a. [[HEAD-**GEN.EZ** MOD]-**DES-EZ** ADJ]
b. [dəst-**e** min]-**o** cep ‘my left hand’ ZA.
hand-EZ me(OBL)-EZ left
c. [pos’tal-**e** min]-**e** gird-i ‘my large shoes’
shoe-EZ me(OBL)-EZ large-PL

However, if the adjective modifies a nominal <u>within</u> a genitive Ezafe, then the expected descriptive Ezafe shifts to the dependent form (*de/da*) (50a-c):

(50) a. [[HEAD-**GEN.EZ** [HEAD-**DEP.EZ** ADJ]
b. a’qil-**e** [mar’dim-**de** pil-i] ‘the wisdom of older people’ ZA.
wisdom-EZ people-EZ older-PL
c. ‘boy-**a** [vi’lik-**da** sur-i] ‘the fragrance of the red flower’
smell-EZ flower-EZ red-FEM

The crucial point to draw attention to here is that in the oblique subordinate context, descriptive Ezafe and genitive Ezafe collapse into the same dependent form. This

[12] In work in preparation with R. Larson, we relate this paradigm to the phenomenon of “double case marking” or Suffixaufnahme found in old Georgian and languages of the Caucausus, and discussed recently in an extensive collection by Plank (1995).

provides fairly direct evidence, it seems, that genitive and descriptive Ezafe are in fact members of the same paradigm. Given the parallels between Japanese adjectival morphology and Zazaki Ezafe, it accordingly provides indirect evidence that the Japanese genitive *no*, and the descriptive adjectival morphemes *–i/–na* might be considered members of the same paradigm too.

4.4 Basic Theoretical Questions

The analysis of Ezafe as a case-marker appears convincing. However if this account is correct, important theoretical questions arise. Accepting that Ezafe occurs to case-mark complements of non-verbal elements, how do modifiers fit in? For example, why would modifying adjectives need case, and what is their case-assigner?

4.4.1 Generalized Case Filter

One simple proposal adopted in Yamakido (2000) derives from van Riemsdijk (1983) and Larson (1987), who suggest that case is obligatory for all [+N] categories. Larson (1987) states this as a generalization of the Case Filter of Chomsky (1981: 49), which only requires phonetically contentful NPs to receive case:

Extended Case Filter: All [+N] categories must receive case. (Larson 1987: 251)

This extension has the effect of requiring all nouns and adjectives, in all functions, to be case-marked. Hence adjectives are expected to bear case even when they are functioning as nominal modifiers, as in Japanese.

The Extended Case Filter idea is plausible given the point observed by van Riemsdijk (1983) that it is uniquely nominals and adjectivals that bear case. On the surface, however, the extension would appear to lose an important connection available under the original principle, which requires case only on NPs (nominals). A number of authors have proposed that the Case Filter can be derived as consequence of theta-theory. Specifically, Chomsky (1986) attributes to Joseph Aoun the idea that case-marking is required to make argument NPs "visible" for theta-marking. Without case an NP cannot receive a thematic role, resulting in ungrammaticality under the Theta-Criterion. The "Visibility Principle" would seem to confine the requirement of case to NPs since the assumption is that NP is a unique category of arguments. In particular, adjectival modifiers in nominals would not seem to require case under this view, since they are not analyzed as arguments.

The Extended Case Filter also provides no answer to the question of where case comes from with a modifying adjective. This question is particularly pressing with "invariant case-marking" of the sort represented by Ezafe. Covariant case-marking on attributive adjective might plausibly be regarded as a form of concord or agreement: a nominal receives a case from an external source (T, V or P) and its adjectival modifiers

receive case through agreement with the nominal head.[13] However invariant case-marking appears precisely not to be a form of agreement or concord. But then what is the source of case in this instance?

Recently, Larson and Yamakido (2005a,b) have explored an approach to nominal structure in which adjectival modifiers do in fact play an argument-like role. Their approach is based on early work by Larson (1991) on the projection of quantificational phrases like DP. I will briefly discuss the proposal by Larson and Yamakido (2005a,b) as a means of providing further support for an Extended Case Filter that includes APs, even in their function as modifiers.

4.4.2 Case and the Structure of DP

The basis of Larson and Yamakido's (2005a,b) approach is the semantic analysis of determiners introduced by Barwise and Cooper (1981) and Keenan and Stavi (1984), according to which determiners express quantificational relations between sets. Begin from the simple point that the sentences in (51a) and (52a) have truth-conditions that can be expressed using sets, as in (51b) and (52b), respectively:

(51) a. All birds fly./Every bird flies.
b. $\{x: bird(x)\} \subseteq \{x: flies(x)\}$

(52) a. Some birds fly/A bird flies.
b. $\{x: bird(x)\} \cap \{x: flies(x)\} \neq \varnothing$

Each of these examples consists of a noun, a verb, and quantification determiner. Clearly, in (51) and (52) the set of birds ($\{x: bird(x)\}$) is contributed by the noun *bird(s)*, and the set of fliers ($\{x: flies(x)\}$) is contributed by the predicate *fly*/*flies*. It follows, then, that the semantic contribution of *all/every* and of *some/a* must be the respective relations between the sets: *all/every* must contribute the subset relation, and *some/a* must contribute the non-empty intersection relation. Alternatively put, *all/every* must express the relation between sets ALL(X,Y), defined as in (53a), and *some/a* must express the relation SOME(X,Y) defined as in (53b). (53c,d) give two other familiar determiner relations, corresponding to what is expressed by *no*/*none-of* and *most*/*the_majority_of*:

(53) a. $ALL(X,Y)$ iff $Y \subseteq X$
b. $SOME(X,Y)$ iff $Y \cap X \neq \varnothing$
c. $NO(X,Y)$ iff $Y \cap X = \varnothing$
d. $MOST(X,Y)$ iff $|Y \cap X| > |Y - X|$

4.4.3 Projecting DP like VP

To say that quantificational determiners express relations between sets is to say that quantificational determiners have argument structure: they select one, two, or more set

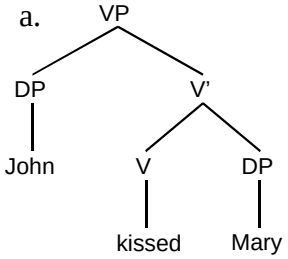
[13] See Carstens (2000) for a recent treatment of concord.

arguments. Larson (1991, forthcoming) suggests that, given this fact, the projection of quantificational categories such as DP and DegP might be analogized to the projection of thematic categories such as VP. Specifically, Larson proposes that, just as verbal argument roles are organized by a thematic hierarchy (54a), the set arguments of quantifiers are organized into a thematic hierarchy as well, but involving quantificational notions like scope (Θ_{SCOPE}) and restriction ($\Theta_{RESTRICT}$) rather than familiar verbal notions like agent (Θ_{AGENT}) and theme (Θ_{THEME}):

(54) a. V: $\Theta_{AGENT} > \Theta_{THEME} > \Theta_{GOAL} > \Theta_{OBLIQUE}$
b. D: $\Theta_{SCOPE} > \Theta_{RESTRICT} > \Theta_{NOBLIQUE}$ ("Nominal Oblique")

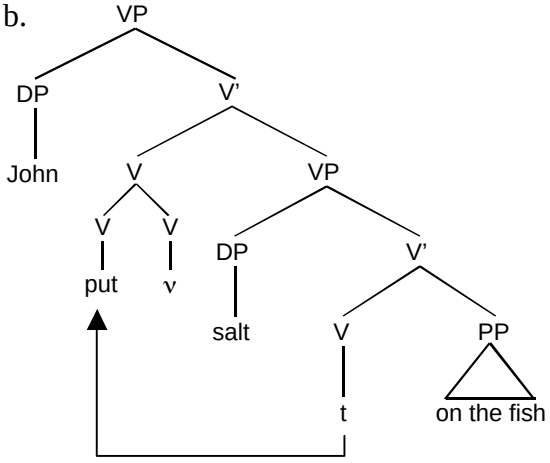
The parallel thematic analysis of D and V permits a parallel account of structure projection. In the shell theory of Larson (1988, forthcoming), transitive VPs receive a simple binary branching structure (55a), whereas ditransitive Vs receive a structure containing a phonetically null "light verb" ν that triggers V-raising (55b):

(55) a.



$\Theta_{AGENT} > \Theta_{THEME}$

b.



$\Theta_{AGENT} > \Theta_{THEME} > \Theta_{LOC}$

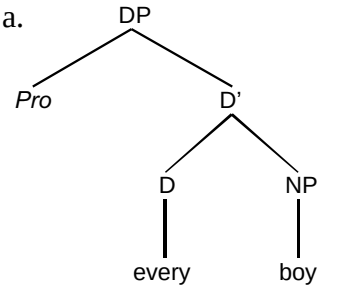
In both cases, arguments appearing higher in structure (as expressed by c-command) receive Θ -roles that are correspondingly higher on the thematic hierarchy.

In a similar way, DPs can be assigned a structure that reflects the thematic hierarchy for D. Simple quantificational DPs correspond to transitive structures and receive the binary branching structure in (56a). "Ditransitive" (that is, triadic) determiners like *every...except* or *more ...than* receive a structure containing a phonetically null "light determiner" δ that triggers D-raising (56b):[14]

[14] The *Pro* in (56a,b) is a pro-predicate argument corresponding to the scope argument, whose content is given by the phrase that DP is sister to at LF (ia-d):

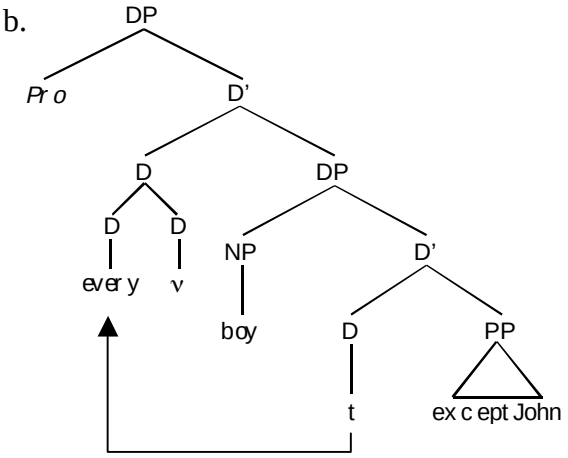
(i) a. $[_{DP}$ *Pro* $[_{D'}$ D NP]]
Θ_{SCOPE} $\Theta_{RESTRICT}$
b. $[_{DP}$ *Pro* $[_{D'}$ D NP]] $[_{XP}$ . . . ti . . .]
|
|___GETS VALUE FROM___|

(56) a.



$\Theta_{SCOPE} > \Theta_{RESTRICT}$

b.

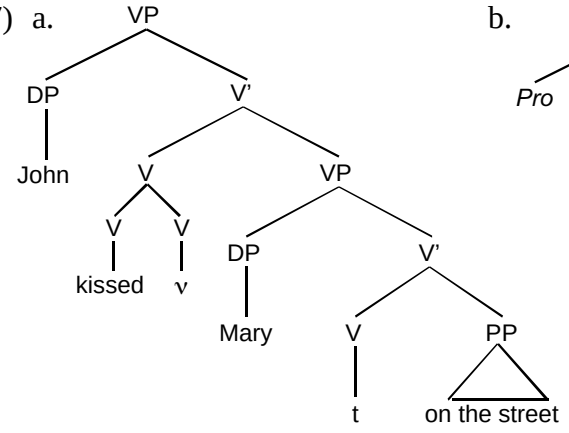


$\Theta_{SCOPE} > \Theta_{RESTRICT} > \Theta_{NOBLIQUE}$

4.4.4 Modifiers

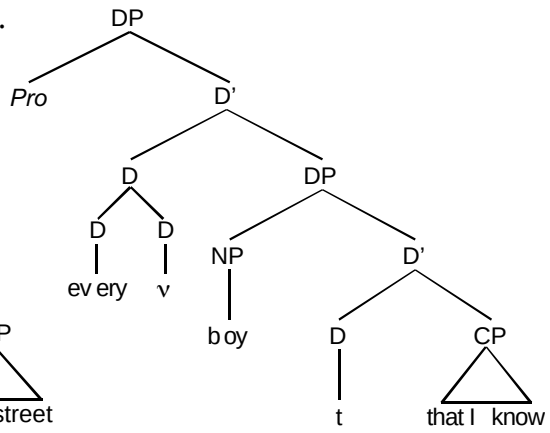
Within this general framework, verbal and nominal modifiers like those in (57) are analyzed, not as adjuncts attached high on the right, but rather as oblique complements, which project low on the left and combine with the head before other arguments:[15]

(57) a.



$\Theta_{AGENT} > \Theta_{THEME} > \Theta_{LOC}$

b.



$\Theta_{SCOPE} > \Theta_{RESTRICT} > \Theta_{NOBLIQUE}$

As discussed in Larson (1991) and Larson and Yamakido (2005a,b), this analysis raises a number of interesting questions. An analysis of DP modification as in (57b) can be extended to other postnominal modifiers, including PPs (58), reduced relative clauses (59), and combinations of them (60). The former two simply involve PP and RC in the same position as CP in (57b). The latter involves recursive DP shells and multiple raising to light heads:

[15] See Larson (1991) and Larson and Yamakido (2005a,b) for arguments in favor of this view.

(58) a. the man [$_{PP}$ at the podium]

b. [$_{DP}$ *Pro* [$_{D'}$ the [$_{DP}$ man [$_{D'}$ t [$_{PP}$ at the podium]]]]]

(59) a. three women [$_{RC}$ capable of lifting a sofa]

b. [$_{DP}$ *Pro* [$_{D'}$ three [$_{DP}$ women [$_{D'}$ t [$_{RC}$ capable of lifting a sofa]]]]]

(60) a. every book [$_{PP}$ on the shelf] [$_{RC}$ published since WWII]

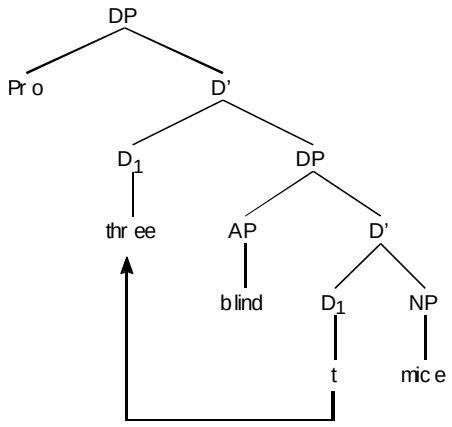
b. [$_{DP}$ *Pro* [$_{D'}$ every [$_{DP}$ book [$_{D'}$ t [$_{DP}$ [$_{PP}$ on the shelf] [$_{D'}$ t [$_{RC}$ published since 1965]]]]]]]

But now consider <u>pre</u>nominal modifiers, APs like those in (61), which are semantically equivalent to copular relative clauses. How are these to be accounted for?

(61) a. the **tall** woman (cf. *the woman who is tall*)
b. every **beautiful** house (cf. *every house that is beautiful*)
c. three **blind** mice (cf. *three mice that are blind*)

Base generation of AP in a Spec position along the lines in (62) turns out to be problematic:

(62)



On a Θ-role based approach, projecting AP in the position in (62), would require postulation of an <u>optional</u> oblique Θ-role (Θ_X) between two obligatory roles in our hierarchy, as in (63):

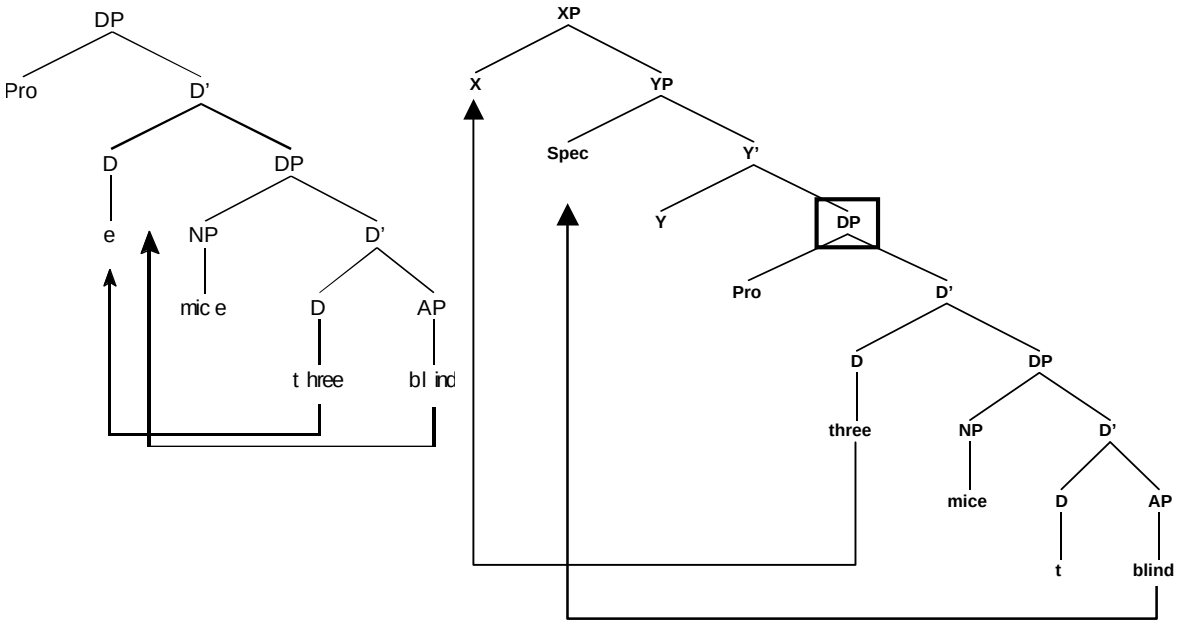
(63) $\Theta_{SCOPE} > (\Theta_X) > \Theta_{RESTRICT}$

Even worse, given the wide rangeof pronominal modifiers possible, we would seem to have to allow for a very large number of optional oblique Θ-roles between our two obligatory ones (64). This looks unpromising:

(64) a. three **Japanese** mice
b. three **blind Japanese** mice
c. three **grey blind Japanese** mice
d. three **furry grey blind Japanese** mice
e. three **small furry grey blind Japanese** mice
f. three **excellent small furry grey blind Japanese** mice

The only obvious alternative is that prenominal position is a derived position for adjectives in English, not a base position. That is, we are led to resurrect the view of early transformationalists that intersective attributive APs originate in the position of RCs, and obtain their surface position by movement, along the lines shown in either (65a) or (65b):[16]

(65) a. b.



However this raises the natural question as to why restrictive adjectives must move from their base position. Why can't they remain in postnominal position like PPs, finite and reduced relative clauses?

[16] In (65a) *blind* would raise and adjoin to DP; in (65b) would raise to the head of a functional category, perhaps of the kind proposed by Cinque (1994) and Scott (2002) and the D head would subsequently raise to a higher site.

4.4.5 Case in DP

Larson and Yamakido (2005a,b) propose that it is case that is the driving force. On the account sketched above, DP is like VP in that:

- D selects thematic arguments.
- DP syntax is right-descending.
- DP modifiers are lowest complements of D and begin in post-head position.

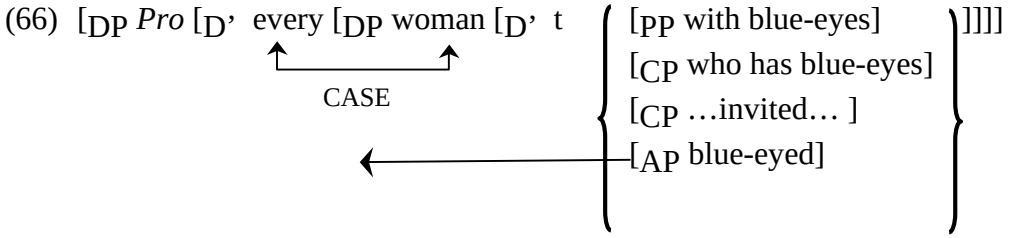
Suppose now that DP is also like VP in deploying its own system of case-marking; specifically suppose that:

- [+N] complements of D need case - they bear a case feature that must be checked.
- D/δ can (in general) check case on its internal argument, just as V/ν checks one accusative on an internal argument of V.

Then we will have the following consequences:

- D will in general check case on its NP restriction.
- DP-modifiers that do <u>not</u> have case features to be checked (PPs, CPs and disguised CPs) will remain *in situ*.
- DP-modifiers that bear case features (APs) will be required to move to a site where they can check case (e.g., by Concord).

This yields the general picture in (66). The determiner *every* checks its one structural case on its nominal restriction (*woman*) exhausting its case-checking potential. English postnominal PPs and CPs do not bear case features, and therefore can stay in their base position. Likewise, for reduced relative clauses, Larson and Yamakido analyze as covert CPs, following Kayne (1994). However, APs that do not occur inside reduced relatives cannot remain in place, and must move to a site where their case can be checked by the D head, presumably by some form of concord.

(66) 

4.4.6 Case and Ezafe

As Larson and Yamakido (2005a,b) discusses, this approach yields an attractive account of invariant case on modifiers, as exhibited by the Ezafe languages. Suppose that a language had in its D-system, the equivalent of a "generalized genitive preposition" – an item that could be inserted to check case on [+N] determiner complements. A single, additional case would then become available for each such Case-marker, allowing APs/NPs/nominalPPs to remain *in situ*. Relative clauses and non-nominal PPs would not require such an element and so none would appear.

Larson and Yamakido propose that this is what's happening in the Ezafe construction. Modifying NPs, APs and (nominal) PPs are selected by D and generated post-nominally as usual. As [+N] elements they bear case features, and are case-licensed by Ezafe in their base-position. We will tentatively consider Ezafe to form an XP phrase with its complement, but to cliticize onto the preceding [+N] element for phonological reasons. So the analysis, for a simple Farsi NP like (67a), is as in (67b). The definite determiner *in* checks its one case feature on its restriction. Ezafe is inserted and licenses the remaining modifers in their base positions:

(67) a. in ketâb - é sabz - é jâleb
DEF book-EZ green- EZ interesting 'the interesting green book'

b. [$_{DP}$ *Pro* [$_{D'}$ în [$_{DP}$ ketâb [$_{D'}$ t [$_{DP}$ [$_{XP}$ é sabz] [$_{D'}$ t [$_{XP}$ é jâleb]]]]]]]

CASE CASE CASE

Again, relative clauses (CPs) and non-nominal PPs do not require case. Hence they can appear in their base site (like English RCs and PPs) without the need for a licensing Ezafe. Under this proposal, Ezafe languages are special in so far as they reveal the deep position of all nominal modifiers because they have a special case-marking device.[17]

Larson and Yamakido (2005a,b) note interesting evidence for the tie between D and Ezafe from Kurmanji, which also has the Ezafe construction, but which differs from Farsi in important subtleties. In brief, Kurmanji exhibits an alternation in the form of Ezafe according to definiteness. Kurmanji <u>definite</u> DPs with iterated modifiers show so-called **primary Ezafe** between the noun and its first modifier, but a distinct **secondary Ezafe** thereafter (68a). By contrast, Kurmanji <u>indefinite</u> DPs with iterated modifiers show **secondary Ezafe** throughout (68b). A selectional relation between Ezafe and (null definite/indefinite) D is thus directly expressed in Ezafe morphology. Examples in (68) are from Pikkert (1991):

(68) a. kitêb-**ên** bas-**î** nû 'the good new books' KU.
book-**1EZ(PL)** good-**2EZ(PL)** new

b. xani-n-**e** bas-**î** nû 'some good, new houses'
house-INDEF(PL)-2EZ(PL) good-**2EZ(PL)** new

[17] Larson and Yamakido (2005a,b) also discuss evidence for their case-based approach to DP modifiers from English indefinite pronoun constructions and Modern Greek polydefiniteness, however I will not repeat that discussion here.

To summarize the main ideas of this section, I began with the question of why adjectival (and nominal) modifiers in the Ezafe construction should require case. I proposed (following Yamakido 2000) to adopt the Extended Case Filter of Larson (1987) according to which all [+N] categories require case. I then explored the source of invariant case-marking in nominals, under the approach to DP structure developed in Larson (1991) and Larson and Yamakido (2005a,b). According to the latter, DP and VP are significantly parallel in so far as both categories are projected from their thematic structure, and both involve modifiers as low innermost complements. I explored the question of why only certain complements – PPs, RCs, and reduced RCs typically appear in postnominal position and suggested a case-based explanation, again following Larson and Yamakido (2005a,b). Assuming that [+N] modifiers are arguments of D, that all [+N] arguments of D require case (i.e., bear a case feature that must be checked), and that D (like V) in general has one case to assign, we derive that [+N] modifiers will not in general be able to remain in their postnominal site. Within this framework, Eazfe is proposed as a special case in which a language has a generalized case-marking element – analogous to a generalized genitive preposition – that it can insert to license postnominal APs, and NPs. So the required case arises from Ezafe in this instance.

4.5 Extending the Case-marking Hypothesis to Other Japanese Adjectival Constructions

I proposed above that the inflectional items appearing with Japanese adjectives in prenominal modification are case-markers, and furthermore that case is required on <u>all</u> adjectives by virtue of their status as [+N]. This hypothesis leads us to expect case-markers on adjectives in other contexts as well. In this section I show that the case-marking hypothesis can indeed be extended naturally to a variety of Japanese adjectival constructions.

We have noted that the morphology on prenominal modifying adjectives differs according to whether A is a nominal adjective (NA) or a true adjective (TA). As it turns out, this morphological split extends quite generally across Japanese: nominal adjectives and true adjectives bear different morphology in their other contexts of occurrence as well. We will look at NAs first and then at TAs.

4.5.1 Nominal Adjectives and *–Ni* in Predicational Constructions

I noted earlier that NA *–na* appearing in prenominal modification derives from a composite form *ni aru*, which I suggested to consist of the dative case-marker (*–ni*) plus the copula (*aru*), and which is also the source of the copula *da*. I proposed that *–na* preserved the original case-marking function *ni* in the historical derivation. Interestingly, *ni* is precisely the morpheme that appears on NAs in certain predicational constructions such as small clauses (69), resultative secondary predicatives (70) and depictive secondary predicatives (71):[18]

[18] Most depictive secondary predicates in Japanese are expressed by the form of "NP + *de*" (Koizumi 1994), as in (i); the subject-oriented depictive noun *hadaka* 'nakedness' in (ia) and the object-oriented depictive noun *nama* 'raw' in (ib) are both marked with *de*:

(69) a. Taroo ga musuko o yuumei-**ni** si-ta. SMALL CLAUSE JP.
Taroo NOM son ACC famous make-PST
'Taroo made his son famous.'

b. Hanako ga kirei-**ni** nat-ta.
Hanako NOM pretty become-PST
'Hanako became pretty.'

c. Taroo ga musuko o aware-**ni** kanzi-ta.
Taroo NOM son ACC miserable feel-PST
'Taroo felt his son miserable.'

(70) a. Taroo ga teeburu o kirei-**ni** huita. RESULTATIVE SEC. PRED
Taroo NOM table ACC clean wiped
'Taroo wiped a table clean.' (=(5) in Washio 1997; slightly modified)

b. Taroo ga pan-kizi o taira-**ni** nobasita.
Taroo NOM bread-dough ACC flat roll out
'Taroo rolled the dough flat.'

c. Taroo ga kabe o makka-**ni** nutta.
Taroo NOM wall ACC crimson painted
'Taroo painted the wall crimson red.'

(71) a. Taroo ga genki-**ni** kikoku sita. DEPICTIVE SEC. PRED
Taroo NOM fine returned home
'Taroo returned home sound.'

b. Taroo ga kimoti o arata-**ni** (Amerika-e) tabidat-ta.
Taroo NOM spirits ACC fresh America-to start on a trip-PST
'Taroo started on a trip (to America) with his spirits fresh.'

In all these constructions, *–ni* is obligatory in standard Japanese, and is identical in form to the dative case-marker (or postposition) *ni* that appears in verbal contexts such as in (72a,b):

(i) a. Taroo ga hadaka-**de** hon o yonda. JP.
Taroo NOM nakedness book ACC read
'Taroo read a book naked/nude.' (=(3a) in Koizumi 1994)

b. Taroo ga katuo o nama-**de** tabeta.
Taroo NOM bonito ACC raw ate
'Taroo ate the bonito raw.' (=(4a) in Koizumi 1994)

Note that, given that the secondary predicates in (i) are nouns, (ia) literally means "Taroo read a book in (a state of) nakedness," and (ib) literally means "Taroo ate the bonito in (a state of) raw."

The particle *de* found in (i) is also used to mark instrumental nouns. For example, in (iia) the noun *hasi* 'chopsticks' is an instrument for Taroo to eat bonito; in (iib) the noun *hikooki* 'airplane' is an instrument for Taroo to go to Tokyo. Both nouns are marked with *de*:

(ii) a. Taroo ga katuo o hasi-**de** tabeta. *Instrumental* JP.
Taroo NOM bonito ACC chopsticks ate
'Taroo ate the bonito with chopsticks.'

b. Taroo ga Tokyo e hikooki-**de** itta.
Taroo NOM Tokyo to airplane went
'Taroo went to Tokyo by air.'

(72) a. Taroo ga Hanako-**ni** hon o age-ta. JP.
Taroo NOM Hanako DAT book ACC gave-PST
'Taroo made his son famous.'
b. Taroo ga Tokyoo-**ni** itta.
Taroo NOM Tokyo-DAT went
'Taroo went <u>to</u> Tokyo.'

It is natural to suggest then that the *–ni* appearing in (69)-(71) represents the dative case-marker (or postposition) as well.

The idea that *ni* appearing in these NA constructions has a case-marking function is supported by morphological variation found in the northern part of Japan, such as Tsugaru dialect. It is well-known that in these areas the dative case-marker (or postposition) *ni* is realized as *sa*. Compare (72a,b) with (73a,b) respectively:

(73) *Tsugaru dialect*
a. Taroo ga Hanako **sa** hon o ageta. JP.
Taroo NOM H. DAT book ACC gave
'Taroo gave a book <u>to</u> Hanako.'
b. Taroo ga Tokyoo-**sa** itta.
Taroo NOM Tokyo-DAT went
'Taroo went <u>to</u> Tokyo.'

Interestingly, the morpheme *–ni* typically appearing in NA constructions as in (69)-(71) is also replaced by *sa* in these dialects, as shown in (74a-c):[19]

(74) *Tsugaru dialect (NA)*
a. Taroo ga Hanako o siawase **sa** sita. JP.
Taroo NOM Hanako ACC happy made
'Taroo made Hanako happy.'
b, Umi ga sizuka **sa** natta.
sea NOM quiet became
'The sea became quiet.'
c. Taroo ga pan-kizi o taira **sa** tataita.
Taroo NOM bread-dough ACC flat pounded
'Taroo pounded the dough flat.' (Yamakido 2003)

This strongly suggests that NA *–ni* and the dative case-marker (or postposition) *ni* are in fact identical.

The proposal that the NA inflectional morpheme *–ni* in Japanese (and *–sa* in Tsugaru dialect) in these constructions is a case-marker can also be supported by appeal to other languages, such as Russian. We saw earlier that adjectives in Russian agree in case with

[19] The Tsugaru dialect data in (74) report judgments of Norimi Kimura, and students at Hirosaki University and Hirosaki Gakuin University, to whom I am grateful for their help. The interpretation of these data is my own.

the nominal of which they are predicated. Alternatively, they can get fixed case.[20] [21] As shown in (75), adjectives in causative and depictive secondary predicative constructions can be marked with invariant instrumental case:[22] [23]

(75) a. Ivan sdelal Natashu pecal'noj. RU.
Ivan.NOM made Natascha.ACC sad.**INSTR**
'Ivan made Natasha sad.'

b. Ivan vernulsja domoj golodnym.
Ivan.NOM returned home hungry.**INSTR**
'Ivan returned home hungry.' (Babby 1998)

c. Ivan el rybu syroj.
Ivan.NOM ate fish.ACC raw.**INSTR**
'Ivan ate fish raw.'

The parallelism between Japanese *–ni* and Russian oblique case-marking in constructions such as small clauses and depictive secondary predicatives again suggests that the NA inflection *–ni* may be analyzed as invariant case-marking.[24]

4.5.2 True Adjectives and *–Ku* in Predicational Constructions

Japanese true adjectives can also appear in small clause, resultative secondary predicative and depictive secondary predicative constructions (76)-(77). In these contexts, TAs are marked with *–ku* in standard Japanese:

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[20] The choice between nominative case and instrumental case is possible only when the verb is either Past or Future (Cubberley 2002: 211).

[21] There is a slight change of the meaning between adjectives marked with nominative and instrumental, as Cubberley (2002) says "Nominative represents a permanent feature or characteristic of the subject, instrumental a transitory feature. (p. 211)"

[22] Fixed instrumental case also appears on adjectives in primary predicative constructions (i):
(i) Ivan byl golodnym. 'Ivan was hungry.' RU.
Ivan.NOM was hungry.**INSTR**

[23] The case-marking alternation is impossible with attributive adjectives (i), except when the case of the modified noun is instrumental (ii):
(i) *umnoj(u) devuska RU.
smart.**INSTR** girl.NOM
(ii) Ivan tanceval s umnoj(u) devuskoj(u).
Ivan danced.SG with smart.**INSTR**.FEM.SG girl.**INSTR**.FEM.SG
'Ivan danced with a/the smart girl.'

[24] Note that adjectives in Russian cannot appear with instrumental case in resultative secondary predicative constructions, which I will discuss later.

(76) a. Taroo ga Hanako o utukusi-**ku** si-ta. SMALL CLAUSE JP.
Taroo NOM Hanako ACC beautiful make-PST
'Taroo made Hanako beautiful.'

b. Hanako ga kasiko-**ku** nat-ta.
Hanako NOM intellignet become-PST
'Hanako became clever.'

c. Taroo ga sono mondai o muzukasi-**ku** kanzi-ta.
Taroo NOM the problem ACC difficult feel-PST
'Taroo felt the problem difficult.'

(77) a. Taroo ga koori o tiisa-**ku** kudai-ta. RESULTATIVE SEC PRED
Taroo NOM ice ACC small crush-PST
'Taroo crushed ice small.'

b. Taroo ga kabe o aka-**ku** nut-ta.
Taroo NOM wall ACC red paint-PST
'Taroo painted the wall red.'

(78) a. Taroo ga sabisi-**ku** syokuzi si-ta. DEPICTIVE SEC PRED
Taroo NOM lonely dine-PST
'Taroo dined lonely/alone.'

b. Sumi ga aka-**ku** moe-te iru.
charcoal NOM red burn be
'The charcoal is burning red.'

Again in all these constructions, *–ku* is obligatory in standard Japanese and cannot be omitted.

The argument that *–ku* is a case-marker for TAs in these contexts is less direct than with *–ni*. Unlike *–ni,* the historical derivation of *–ku* is obscure, hence it is not possible to link it directly to an old case-marking form. Furthermore, *–ku,* unlike *–ni*, is not morphologically identical to any synchronic form that is unambiguously a case-marker. Nonetheless various indirect arguments might be made. For one thing we might simply argue by analogy that since the distribution of *–ku* on TAs in these constructions is parallel to that of NA *–ni*, then if the latter is a case-marker, it is reasonable to assume the former is as well.

The idea of TA *–ku* as a case-marker can be further supported by distributional parallels that TA *–ku* shares with TA *–i*. In some circumstances, the TA morpheme *–ku* is interchangeable with *–i*, which mainly appears in pronominal and (primary) predicative positions. Japanese allows multiple attributive adjectives to modify a single noun. In such cases, all but the right-most occurrence of *–i* can be replaced with *–ku*, with no change of meaning. Compare (79a-d):[25]

[25] The default form of multiple attributive adjectives is that all but the right-most adjective are marked with *–ku* followed by a conjunctive particle *–te*:

(i) ooki-**ku-te** taka-**ku-te** aka-**i** kuruma JP.
big expensive red car
'big, expensive, red car'

(79) a ooki-**i** taka-**i** aka-**i** kuruma JP.
big expensive red car
'big, expensive, red car'
b. ooki-**ku** taka-**i** aka-**i** kuruma
c. ooki-**ku** taka-**ku** aka-**i** kuruma
d. *ooki-**ku** taka-**ku** aka-**ku** kuruma

This suggests that the TA morpheme *–ku* has the same function as *–i*, and we have argued that the latter is a case-marker.

Furthermore, in some dialects of Japanese spoken in western Japan, TA *–ku* is replaced by *–i* in certain constructions. As seen in (76) and (77), *–ku* occurs in small clause and resultative secondary predicative constructions in standard Japanese; however, in Wakayama, Osaka, Kyoto dialects, *–ku* is replaced with *–i* (80)-(82). In (80c), (81) and (82), the morpheme *ni* is inserted after TA-*i* for emphasis (Umegaki 1944). In (82), the morpheme *–i* is recorded as optional:[26] [27]

(80) *Wakayama Dialect (TA)* Murauchi (1962)
a. Ooki-**i** natte… JP.
big become
'(It/You) become(s) big, (and …)'
cf. ooki-**ku** natte … (Standard Japanese)
b. Utukusi-**i** kesyoo si-toki.
beautiful makeup do-imperative
'Do make (yourself$_i$) up beautiful$_i$'
cf. utukusi-**ku** kesyoo … (Standard Japanese)
c. Ooki-**i** **ni** kiru.
big cut
'(I) cut (something$_i$) big$_i$'
cf. ooki-**ku** kiru (Standard Japanese)

[26] The grammatical status and semantic function of the morpheme *–ni* are not clear at this point.

[27] *–Ku* tends to be dropped before *naru* 'become' in several dialects spoken in western Japan such as Toyama and Hiroshima dialects. In standard Japanese, *–ku* appears in ∅ in (i)-(iii):

(i) *Toyama Dialect* (Shimono 1983)
a. utukusi-∅ nat-ta b. aka-∅ natta JP.
beautiful become-PST red become-PST
'(It) became beautiful.' '(It) became red.'

(ii) *Hiroshima Dialect* (Hirayama, *et al.* 1998)
uresi-∅ naru
happy become
'(I) become happy.'

(iii) *Toyooka Dialect* (Kamata 1982)
naga-∅ naru
long become
'(It) become long.'

(81) *Osaka Dilaect (TA)* Umegaki (1944)

a. Dandan zuuzuusi-**i** **ni** nari … JP.
gradually impudent become
'(I) have become impudent gradually, (and …)
cf. zuuzuusi-**ku** nari … (Standard Japanese)

b. Mou tyotto suzusi-**i** **ni** natte kara, …
more little cool become after
'After it will become a bit cooler, …'
cf. suzusi-**ku** natte … (Standard Japanese)

(82) *Kyoto (Fushimi) Dialect (TA)* Okumura (1962)

utukusi(**-i**) **ni** soozi suru JP.
neat clean do
'(I) clean (it) tidy'
cf. utukusi-**ku** soozi suru (Standard Japanese)

Again, the distributional parallels between TA *–ku* and *–i* suggest that they have the same function, which I am proposing to be case-markers.

Thus examining NA *–ni* and TA *–ku* in small clause, depictive and resultative secondary predicative constructions, where the distribution of these morphemes is in parallel, we can find some support, admittedly circumstantial at this point, for the view that the TA morphemes *–i* and *–ku* as well as the NA morpheme *–ni* are forms of invariant case-markers.

4.5.3 *–Ni* and *–Ku* in Adverbials

The correspondence between *–ni* marking with nominal adjectives and *–ku* marking with true adjectives holds in another context as well: that of adverbials. The morpheme *–ni* can also appear on NAs in adverbial constructions (83a,b) including degree adverbials (83c):

(83) a. Hanako ga sizuka-**ni** arui-ta. ADVERBIAL JP.
Hanako NOM quiet walk-PST
'Hanako walked quietly.'

b. Taroo ga sintyoo-**ni** ziken o sirabeta.
Taroo NOM prudent matter ACC examine-PST
'Taroo examined the matter prudently.'

c. Taroo ga sono keikaku ni mooretu-**ni** hantai si-ta.
Taroo NOM the plan DAT fierce oppose do-PST
'Taroo strongly opposed to the plan.'

Correspondingly, TA *–ku* can also occur in adverbials (84a,b), including degree adverbials (84c):[28] [29]

(84) a. Hana ga utukusi-**ku** sai-ta. ADVERBIAL JP.
flower NOM beautiful bloom-PST
'Flowers bloomed beautifully.'
b. Taroo ga haya-**ku** oki-ta.
Taroo NOM early weke up-PST
'Taroo woke up early.'
c. Taroo ga hido-**ku** okot-ta.
Taroo NOM bad get angry-PST
'Taroo got angry terribly.'

The fact that the morphemes *–ni* and *–ku* attach to NAs and TAs (respectively) to derive adverbs makes our case-marking hypothesis more promising. In traditional grammar, word-level categories can be defined (in part) in terms of their semantic properties (Radford 1988), and adverbs are considered as forming an independent category from adjectives. While "adjectives denote states", "adverbs denote the manner in which something is done" (Radford 1988: 57). In English, adjectives and adverbs can be differentiated morphologically in that the latter generally carry a distinctive *–ly* inflection, as illustrated in (85) and (86):

---

[28] Nishiyama (1999, 2005) analyzes *–ku* in TA constructions as a predicative copula. See Namai (2002) for discussions against Nishiyama's idea.

[29] Some NA+ *–ni* and TA+ *–ku* can modify other adjectives as degree adverbs, as in (i):
(i) Kinoo wa mooretu-**ni** / sugo-**ku** atu-katta. JP.
yesterday TOP intense terrible hot-PST
'Yesterday was terribly hot.'
Interestingly, *–ku* on TAs as degree adverbs is sometimes replaced by *–i* without any change of meaning in colloquial speech, as in (ii):
(ii) a. Ame ga sugo-**ku**/-**i** fut-ta. JP.
rain NOM terrible fall-PST
'It rained terrib**ly**.'
b. Kinoo wa sugo-**ku**/-**i** atu-katta.
yesterday TOP terrible hot-PST
'Yesterday was terrib**ly** hot.'
More examples with this alternation include *era-i* 'awful' in Osaka dialect (iii):
(iii) a. Era-**ku**/-**i** kigen ga i-i. JP.
terrible mood NOM good
'You are terrib**ly** in a good mood.'
b. Era-**i** atu-∅ nat-ta.
terrible hot become-PST
'It has become terrib**ly** hot.' (Umegaki 1944)
Similar kind of alternation is observed in Engish adjective *real*/*really* in colloquial speech, as in (iv):
(iv) John is real**ly**/real nice.

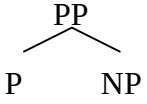
(85)

	ADJECTIVES	ADVERBS
a.	quiet	quiet**ly**
b.	sad	sad**ly**
c.	quick	quick**ly**
d.	careful	careful**ly**
e.	extreme	extreme**ly**

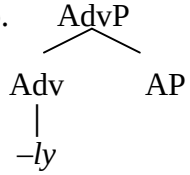
(86) a. a **quiet** person
Mary walked **quietly**.
b. John's **careful** examination of the matter
John examined the matter **carefully**.
c. Chris's **extreme** shyness (Baker 2003: 231)
Chris is **extremely** shy.

Larson (1987) analyzes that AdvP is related to AP, as PP is related to NP, with the parallel structures in (87):

(87) a.



b.



(=(22) in Larson 1987)

In Case theory, an NP in adjunct positions receives case through an accompanying preposition in general. In (88) a preposition must be present to assign case to NPs:

(88) a. John arrived *(**during**) [that period]. (=(23) in Larson 1987)
b. Eunice lives *(**at**) [some location nearby].
c. Max always talks *(**in**) [this fashion].

Now consider (89), where adjectives appear with *–ly* in adjunct positions:

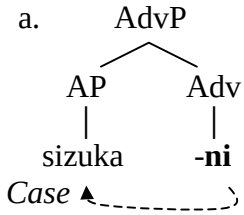
(89) a. John walks quick*(–**ly**). (=(27) in Larson 1987)
b. Eunice placed candidates local*(–**ly**).
c. Max always talks careless*(–**ly**).

Given that all [+N] categories, adjectives as well as nouns, must receive case, and that there is a strong parallelism between a preposition in (88) and *–ly* in (89), Larson (1987) proposes that the English *–ly* morpheme is "fundamentally a Case-marking element that allows a case-dependent category (AP) to appear in an adjunct site. (p. 251)"[30]

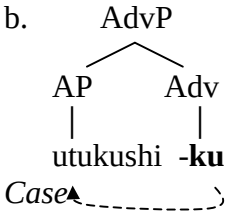
[30] There is a handful of adjectives in English, which do not take the morpheme *–ly* but are able to function as adverbs, including *fast*, *hard*, *long*, *early*, *late*, and *tall* (Huddleston 1984) (i):
(i) a. It rained [**early**/**late**] (=(28) in Larson 1987)
b. In those days Eunice worked [very **hard**].
c. Max always walks [that **fast**].

Japanese morphemes *–ni* and*–ku* are similar to the English *–ly* in that they attach to adjectives (NAs and TAs, respectively) in adjunct positions, deriving adverbs (as seen in the glosses for examples (83) and (84)). One way of applying Larson's analysis of English *–ly* to Japanese *–ni* and *–ku* would be to regard these items case-marking elements equivalent to postpositions; NAs and TAs in adjunct positions would then receive case from *–ni* and *–ku* (respectively), as illustrated in (90a,b). Alternatively, we might regard *–ni* and *–ku* as morphological case-marking itself, realized on the adjectival heads (91a,b), and assigned by a null adverbial element (Ø):

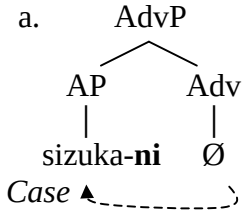
(90) a. NOMINAL ADJ



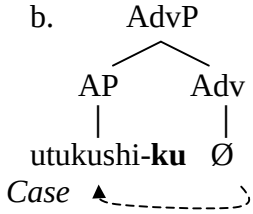
b. TRUE ADJ



(91) a. NOMINAL ADJ



b. TRUE ADJ



Following earlier discussion in connection with Ezafe I will assume the first type of analysis is correct. As we will see, in chapter 5 that there are in fact grounds for regarding *–ku* as an independent head, supporting the analysis in (90a,b).

Although Japanese *–ni* and *–ku*, and English *–ly* are all case-marking elements, only those in Japanese can appear in small clauses and secondary predicative constructions. This does not mean that their characteristics are different from that of *–ly*, however. For example, some resultative constructions in English allow for adjectives to alternate with adverbs with virtually no difference in meaning (Washio 1997), as illustrated in (92):

(92) a. He tied his shoelaces tight/tightly.
b. He tied his shoelaces loose/loosely.
c. He spread the butter thick/thickly.
d. He spread the butter thin/thinly. (Washio 1997: 17)

Larson (1987) analyzes these as "bearing the special feature [+F] that allows them to receive case", despite the absence of an overt case assigner, *–ly*. This idea is partially motivated by the parallelism with a certain class of NPs, which are able to appear as adverbs even without an overt P, as in (ii):

(ii) a. John arrived [that **day**]. (=(24) in Larson 1987)
b. Eunice lives [some **place** nearby].
c. Max always talks [this **way**].

Larson analyzes these NPs (which he calls "bare-NP adverbs") as "bearing a special feature [+F] (inherited through their heads ["N" such as *day* and *way*]) that assigns the required oblique case. (p. 251)"

As observed by Washio (1997), these adjectives (*tight*, *loose*, *thick*, *thin*) in (92) specify the state of objects (*shoelaces* and *butter*), but also they describe the manner an action takes place.[31] Thus, the difference between adjectives and adverbs is obscure in some circumstances.

We can find something similar in Russian. As discussed earlier, adjectives in Russian can appear in depictive secondary predicative constructions, but not in resultative secondary predicative constructions. Examples below illustrate subject-oriented and object-oriented depictive predicative adjectives with invariant instrumental case-marking:

(75b) Ivan vernulsja domoj golodnym. RU.
Ivan.NOM returned home hungry.**INSTR**
'Ivan returned home hungry.' (Babby 1998)

(75c) Ivan el rybu syroj.
Ivan.NOM ate fish.ACC raw.**INSTR**

How are resultative secondary predicates expressed in Russian? Adjectives in such constructions appear with the morpheme *–o*, as seen in (93):[32]

(93) a. Ivan vyter stol nacist**o**. RU.
Ivan.NOM wiped table clean
'Ivan wiped the table clean.'
b. Ivan vyter stol nasux**o**.
Ivan.NOM wiped table dry
'Ivan wiped the table dry.'

Interestingly, adverbs are formed from adjectives with the same ending, *–o* (94):

[31] Washio (1997) calls "spurious resultatives" with the following properties:

(A) They involve an activity such that a particular manner of action directly leads to a particular state,
(B) It makes no significant difference if the adjective is taken as specifying the result state of specifying the manner of action so that, typically, the adjective can be replaced with the corresponding adverb with virtually no difference in meaning,
(C) They permit either one of the adjectives that form the antonym pair, and
(D) The standard paraphrase ("x causes y to become z") often fails, especially with one of the antonymous adjectives. (Washio 1997: 17)

Spurious resultatives are also common in Japanese, as in (i):

(i) Mary wa keeki o tiisa-ku kit-ta. JP.
Mary TOP cake ACC small cut-PST
'Mary cut the cake small. (=(64) in Washio 1997)

According to Washio, this means "Mary made a small piece out of the cake by cutting it."

[32] I am grateful to Masha Vassilieva for the Russian data in (93).

(94)

	ADJECTIVES		ADVERBS		
a.	krasiv-yi	'beautiful.MAS.SG'	krasiv**o**	'beautiful**ly**'	RU.
b.	strann-yj	'strange.MAS.SG'	strann**o**	'strange**ly**'	
c.	xoros-yj	'good'	xoros**o**	'well'	
d.	dal'ok-ij	'distant'	daleok**o**	'far'	
e.	m'agk-ij	'soft'	m'agk**o**	'soft**ly**'	

According to Cubberley (2002), the adverbial formation is "not by suffixation: the form in question is simply that of the neuter short form, ending in *–o*. (p.169)" However, what is important here is that adjectives in resultative and adverbial constructions take the same ending *–o*.[33]

The table (95) summarizes the particles to mark on adjectives in small clauses, secondary predicative constructions and adverbials in Japanese, Russian and English:

(95)

	Japanese NAs	Japanese TAs	Russian As	English As
SMALL CLAUSES	*–ni*	*–ku*	INSTRUMENTAL*	∅
DEPICTIVES	*–ni*	*–ku*	INSTRUMENTAL*	∅
RESULTATIVES	*–ni*	*–ku*	*–o*	∅ (/*–ly***)
ADVERBIALS	*–ni*	*–ku*	*–o*	*–ly*

(*Alternatively, co-variant case-marking is possible.)
(***–ly* is optional in spurious resultatives.)

As we can see, the distribution of NA *–ni* and TA *–ku* in Japanese overlaps with instrumental case-marker and adverbial marking, which is analyzed as case-marking (Larson 1987). Now we have come to the conclusion that both NA *–ni* and TA *–ku* are case-markers, as well as NA *–na* and TA *–i* (96):[34]

[33] According to Napoli (1975), adverbs in some variation of Italian show number and gender agreement, as in (i):

(i) Maria ha parla svelt**a**. IT.
Maria spoke.3SG.FEM fast.**FEM.SG**
'Maria spoke with her words coming out rapidly.' (Napoli 1975: 415)

[34] As discussed in section 4.5.1, the morpheme *–ni* appearing on NAs in small clause and secondary predicative constructions is replaced by *–sa* in Tsugaru dialect, as in (74); however, in adverbials NAs are marked with *–ni* in this dialect. Also, as seen in section 4.5.2, TA morpheme *–ku* is replaced by *–i* in small clause and secondary predicative constructions in Wakayama and Osaka dialects (see (80) and (81)), or simply dropped before verb *nar-u* 'become' in Toyama and Hiroshima dialects (see fn. 27); however, there are no instances in which *–ku* is replaced by *–i* or dropped in adverbials. These patterns are similar to that of English, where the case-marking system of adjectives in certain constructions is divided into two groups: (i) small clauses and secondary predicative constructions, and (ii) adverbials. I am grateful to Norimi Kimura and Satoshi Kinsui for discussion of the Tsugaru dialect and Osaka dialect data.

(96) **Case-Marking Hypothesis** (revised):
The morphemes ***–i***, ***–na***, ***–ku*** and ***–ni*** appearing in adjectival constructions in Japanese are case-markers.

Thus, Japanese true adjective (TA) and nominal adjective (NA) constructions are represented as in (97) and (98), where the morphemes *–i*, *–ku*, *–na* and *–ni* are case-markers:

(97) *True Adjectives (TA)*

a. [$_{AP}$ TA_{stem}–***i***] N — ATTRIBUTIVES
CASE
'*TA N*'

b. [$_{CP}$ TA_{stem}–***i*** ∅] N — RELATIVE CLAUSES
CASE be(PRES)
'*N* that is *TA*'

c. (N *ga*) TA_{stem}–***i*** ∅. — PRIMARY PREDICATIVES
NOM CASE be(PRES)
'*N* is *TA*.'

d. (N_1 *ga*) [$_{SC}$ N_2 o TA_{stem}–***ku***] su-ru. — SMALL CLAUSES (1)
NOM ACC CASE do-PRES
'N_1 makes N_2 *TA*.'

e. (N *ga*) [$_{SC}$ TA_{stem}–***ku***] na-ru. — SMALL CLAUSES (2)
NOM CASE become-PRES
'*N* becomes *TA*.'

f. (N_1 *ga*) [$_{SC}$ N_2 o TA_{stem}–***ku***] kanzi-ru. — SMALL CLAUSES (3)
NOM ACC CASE feel-PRES
'N_1 feels N_2 *TA*.'

g. (N_1 *ga*) [N_2 o TA_{stem}–***ku***] V. — SECONDARY PREDICATIVES
NOM ACC CASE
'N_1 *V* N_2 *TA*.' (≈ N_1 causes N_2 to become TA by N_1 V N_2 (RESULTATIVES))

h. (N_1 *ga*) [(N_2 o) TA_{stem}–***ku***] V. — ADVERBIALS
NOM ACC CASE
'N_1 *V* N_2 *TA*-ly.'

(98) *Nominal Adjectives (NA)*

a. [$_{AP}$ NA_{stem}–***na***] N — ATTRIBUTIVES
CASE
'*NA N*'

b. [$_{CP}$ NA_{stem}–***na*** ∅] N — RELATIVE CLAUSES
CASE be(PRES)
'*N* that is *NA*'

c. (N *ga*) NA_{stem} ∅ *da*. — PRIMARY PREDICATIVES
NOM CASE be(PRES)
'*N* is *NA*.'

d. (N_1 *ga*) [$_{SC}$ N_2 o NA_{stem}–***ni***] su-ru. SMALL CLAUSES (1)
NOM ACC CASE do-PRES
'*N_1* makes *N_2 NA*.'

e. (N *ga*) [$_{SC}$ NA_{stem}–***ni***] na-ru. SMALL CLAUSES (2)
NOM CASE become-PRES
'*N* becomes *NA*.'

f. (N_1 *ga*) [$_{SC}$ N_2 o NA_{stem}–***ni***] kanzi-ru. SMALL CLAUSES (3)
NOM ACC CASE feel-PRES
'*N_1* feels *N_2 NA*.'

g. (N_1 *ga*) [N_2 o NA_{stem}–***ni***] V. SECONDARY PREDICATIVES
NOM ACC CASE
'*N_1 V N_2 NA*.' (≈ N_1 causes N_2 to become NA by N_1 V N_2 (RESULTATIVES))

h. (N_1 *ga*) [(N_2 o) NA_{stem}–***ni***] V. ADVERBIALS
NOM ACC CASE
'*N_1 V N_2 NA*-ly.'

4.6 Conclusion

In this chapter I introduced the main hypothesis of this thesis, namely that the inflectional morphemes appearing in certain adjectival constructions in Japanese, TA –***i*** and –***ku***, and NA –***na*** and –***ni***, are (invariant) case-markers.

I began with exploration of TA –*i* and NA –*na* in prenominal modification. I introduced Kester's (1996) discussion of the schwa marking appearing on attributive adjectives in Dutch, and her argument to analyze it as case-marking. Then, I presented Ezafe constructions found in Indo-Iranian languages such as Modern Persian (Farsi), Kurdish and Zazaki. After reviewing Semian's (1994) argument that Farsi Ezafe is a case-marker, we observed striking similarities in the morphological patterns of Japanese (genitive case *no* TA –*i* and NA –*na*) and ezafe languages. Along the line of Larson and Yamakido (2005a,b), I addressed certain basic theoretical questions that arise with the invariant adjectival case, viz.: Why do modifying adjectives need case? Where does this case come from? What is the case-assigner? I briefly introduced the proposals of Larson and Yamakido (2005a,b) that attributive modifiers in DP constitute arguments of their determiner head (D), and that the latter is also a source of case.

Finally, I extended the case-marking analysis of adjectival morphology in DP to other adjectival constructions in Japanese, including small clauses, secondary predicate constructions, and adverbials. I showed that in these constructions Japanese TA –*ku* and NA –*ni* share the case-marking pattern of Russian and English. I also presented examples where TA –*ku* is replaced by the case-marker –*i* in some dialects of Japanese.

Chapter 5
Ku-Ellipsis[1]

5.1 Introduction

In the previous chapter, I proposed that inflectional morphemes appearing in certain adjectival constructions in Japanese, TA *–i* and *–ku*, and NA *–na* and *–ni*, are all forms of invariant case-markers. This chapter constitutes a technical argument for the case-marking hypothesis involving ellipsis. Japanese contains an elliptical construction in which a small set of Japanese TAs of space and time appear to license a null space/time nominal precisely when inflected with the morpheme *–ku*. Case-marking on adjectives is argued to license empty nouns in Dutch (Kester 1996). If *–ku* is analyzed as a case-marker, then the Japanese null nominals can be assimilated to the Dutch ones: both instances can be viewed as formal licensing of a null nominal by case-marking. In section 5.2, I introduce the basic data of nominal ellipsis with time and place adjectives and the morpheme *–ku*, and section 5.3 states the three basic licensing conditions that appear to govern the phenomenon. In section 5.4, I show that the *–ku* construction is elliptical, containing a null nominal of TIME or LOCATION, and argue against an alternative, nominalization analysis. Section 5.5 provides a detailed discussion of Kester's (1996a,b) Dutch facts, and her proposal that various elliptical nouns are licensed by the *schwa* morpheme that she analyzes as a case-marker (see chapter 4). In section 5.6, I explore a theoretical approach to the elliptical *–ku* construction based on the general theory of *pro* licensing advanced by Rizzi (1986). I also consider some exceptional cases. Finally, in section 5.7 I consider two more recent analyses of nominal ellipsis, (i) a variant of Rizzi (1986) advanced in López (2000), and (ii) the very recent theory of empty nouns proposed by Panagiotidis (2003), in which empty nominals are simply lexical elements, without intrinsic semantic content, and where no special formal licensing conditions are involved.

5.2 Nominal Ellipsis in Japanese

Nominal ellipsis in Japanese has been widely discussed in the case of genitives containing the morpheme *no*, such as (1a,b) (Kitagawa & Ross 1982; Saito & Murasugi 1990, 1999):

(1) a. Kono hon wa Taroo **no** **hon** da. JP.
this book TOP Taroo GEN book be
'This book is Taroo's book.'

b. Kono hon wa Taroo **no** da.
this book TOP Taroo GEN be
'This book is Taroo's.'

[1] Sections 5.2, 5.3, 5.4 and 5.6 are largely identical to Larson and Yamakido (2003).

Larson and Yamakido (2003) discusses a different form of nominal ellipsis, involving a small set of Japanese true adjectives (TAs) of space and time and the inflectional morpheme *–ku*.[2] The basic case is illustrated in (2) and (3). (2a) shows a regular attributive modification of TA marked with the morpheme *–i*; the overt nominal *tokoro* 'place' is modified by a spatial TA bearing *–i*, *huka-i* 'deep'. In (2b) the nominal is absent, and the adjective appears inflected with *–ku*. Similarly, (3a) shows the overt nominal *zidai* 'time' modified by a temporal adjective bearing *–i*, *huru-i* 'old'. In (3b) the nominal is absent, and the adjective appears inflected with *–ku*:[3]

(2) 'Taroo went to a deep place.'

a.	Taroo	ga	hukai-**i**	**tokoro**-made	itta.		JP.
	Taroo	NOM	deep-CASE	place-until	went		
b.	Taroo	ga	huka-**ku**	-made	itta.		
	Taroo	NOM	deep-CASE	-until	went		

(3) 'This legend is from old times.'

a.	Kono	densetu	ga	huru-**i**	**zidai**-kara	aru.		JP.
	this	legend	NOM	old-CASE	time-until	be		
b.	Kono	densetu	ga	huru-**ku**	-kara	aru.		
	this	legend	NOM	old-CASE	-from	be		

In the previous chapter, I proposed that TA inflection *–i* and *–ku* are case-markers. While the former appears in prenominal and primary predicative constructions, the latter appears in small clause, secondary predicative, and adverbial constructions. However, they can alternate in certain circumstances. Then, why does only *–ku* allow the following noun referring to time or place to be deleted? As discussed below, this *–ku* construction displays a complex and interesting distribution.

5.3 Licensing the *–Ku* Construction

The *–ku* construction appears to have three basic licensing conditions.

5.3.1 The *–Ku* Requirement

First, it requires a local adjective inflected with *–ku*. Although Japanese attributive adjectives typically appear in the "attributive conjugation", marked with *–i*, (4a,b) show that the attributive conjugation is not sufficient to license the *–ku* construction:

[2] There is no nominal elliptical construction involving NAs (and the morpheme *–ni*).

[3] Following chapter 4, the TA inflectional morphemes *–i* and *–ku* are both glossed with "CASE".

(4) a. *Kono densetu ga huru-**i** -kara aru. JP.
this legend NOM old-CASE -from be
'This legend is from old times.'
b. *Taroo ga hukak-**i** -made itta.
Taroo NOM deep-CASE -until went
'Taroo went to a deep place.'

Furthermore, the *ku*-marked adjective must occur adjacent to the site of the "missing noun". As seen in the previous chapter, Japanese allows multiple attributive adjectives to modify a single noun. In such cases, all but the right-most occurrence of *–i* can be replaced with *–ku*, with no change of meaning. Compare (5a-d) (repeated from (72) in chapter 4):[4]

(5) 'big, expensive, red car'
a. ooki-**i** taka-**i** aka-**i** kuruma JP.
big-CASE expensive-CASE red-CASE car
b. ooki-**ku** taka-**i** aka-**i** kuruma
c. ooki-**ku** taka-**ku** aka-**i** kuruma
d. *ooki-**ku** taka-**ku** aka-**ku** kuruma

Examples in (6) show that in a sequence consisting of a *ku*-marked spatio-temporal adjective followed by an adjective with *–i*, a missing nominal is not allowed:

(6) a. Taroo ga huka-**ku** kura-**i** tokoro-made itta. JP.
Taroo NOM deep-CASE dark-CASE place-until went
'Taroo went to a deep, dark place.'
b. *Taroo ga huka-**ku** kura-**i** ____-made itta.
Taroo NOM deep-CASE deep-CASE ____-until went

Thus, the *ku*-marked adjective must be immediately adjacent to where the "missing noun" would go.

5.3.2 The Spatio-Temporal Adjective Requirement

The second requirement is that the *ku*-inflected TA must be spatio-temporal. This is illustrated in (7) and (8), which contrast with (2) and (3), respectively. Although the nominal *tokoro* 'place' accepts the adjective *kura(-i)* 'dark', ellipsis is not licensed (7). Likewise, although the nominal *zidai* 'time' accepts the adjective *kura(-i)* 'dark', ellipsis is not licensed (8):

[4] For discussion of *–ku* in multiple attributive adjective constructions, see fn. 25 in chapter 4.

(7) a. Taroo ga kurai-**i** **tokoro**-made itta. JP.
Taroo NOM dark-CASE place-until went
'Taroo went to a dark place.'
b. *Taroo ga kura-**ku**-made itta.
Taroo NOM dark-CASE-until went

(8) a. Kono densetu ga kura-**i** **zidai**-kara aru. JP.
this legend NOM dark-CASE time-from be
'This legend is from dark days.'
b. *Kono densetu ga kura-**ku**-kara aru.
this legend NOM dark-CASE-from be

The result is general. The list of TAs participating in the *–ku* construction is shown in (9). With one exception (9*l*), all of these adjectives are spatial and/or temporal in meaning:

(9) a. huka-i 'deep' g. huru-i 'old' JP.
b. asa-i 'shallow' h. waka-i 'young'
c. taka-i 'high' i. osana-i 'young'
d. hiku-i 'low' j. too-i 'far (away)'
e. haya-i 'early' k. tika-i 'near (in space or time)'
f. oso-i 'late' l. oo-i 'many, much'

Furthermore, the nominals formed from these modifiers are ones referring to locations or time intervals, as illustrated in (10a-k):

(10) a. Taroo ga **huka**-**ku**-made itta. JP.
Taroo NOM deep-CASE-until went
'Taroo went to a deep place.'
b. ?Sono hune wa kekkoo **asa**-**ku**-ni sizun-de ita.
that boat TOP pretty shallow-CASE-at sink was
'The boat sank in a pretty shallow point.'
c. Taroo ga kanari **taka**-**ku**-made ton-da.
Taroo NOM pretty high-CASE-to flew/jumped
'Taroo flew up/jumped to a pretty high point.'
d. ?Hanako wa tiisa-i node, **hiku**-**ku**-kara zyanpu site yokat-ta.
Hanako TOP little because low-CASE-from jump do good-PST
'Because she was little, Hanako could jump from a low place.'
e. Taroo ga **haya**-**ku**-kara **oso**-**ku**-made hataraita.
Taroo NOM early-CASE-from late-CASE-till worked
'Taroo worked from early to late.'
f. Kono densetu wa **huru**-**ku**-kara tutae-rare-te iru.
this legend TOP old-CASE-from be hand down be
'This legend has been handed down from old days/ancient times.'

g. ?Taroo wa **waka-ku**-ni nakunatta.
Taroo TOP young-CASE-in passed away
'Taroo passed away in his youth.'

h. Taroo ga **osana-ku**-yori sai sugure-te ita.
Taroo NOM **young**-CASE-from talent excellent was
'Taroo has been talented since he was young.' (Kawabata 1976)

i. Hanako ga **too-ku**-e itta.
Hanako NOM far-CASE-to went
'Hanako went to a great distance/ far-off.'

j. Hanako ga **tika-ku**-e itta.
Hanako NOM near-CASE -to went
'Hanako went to a nearby place.'

k. Hanako ga 12-zi **tika-ku**-made benkyoo-sita.
Hanako NOM 12-o'clock near-CASE -until study-did
'Hanako studied nearly until 12 o'clock.'

The one exception is the adjective *oo-i* 'many, much' (9*l*). Although this form is not spatio-temporal in meaning, *oo-**ku*** is well-formed; moreover, elliptical nominals with *oo-ku* need not refer to locations or times, as seen in (11):

(11) Hanako ni hagemasi no tegami ga **oo-ku**-kara yoserareta.
Hanako DAT encouragement GEN letter NOM many-CASE-from was sent
'Letters of encouragement were sent by many (people) to Hanako.'

We will return to this form later.

5.3.3 The Need for Spatio-Temporal P

Finally, the *–ku* construction seems in general to be available only in the context of a governing spatio-temporal postposition like *–made* 'until/to', *–e* 'to' or *–ni* 'at/in', *–kara* 'from' and *–yori* 'from'. This is shown in (12a-e) (which repeat some earlier examples):

(12) a. Taroo ga huka-**ku-made** itta. JP.
Taroo NOM deep-CASE-until went
'Taroo went to a deep place.'

b. Hanako ga too-**ku-e** itta.
Hanako NOM far-CASE-to went
'Hanako went to a great distance/ far-off.'

c. Taroo ga eki no tika-**ku-ni** sunde-iru.
Taroo NOM station GEN near-CASE-at live-be
''Taroo lives near the station.'

d. Taroo ga haya-**ku-kara** oso-**ku-made** hataraita.
Taroo NOM early-CASE-from late-CASE-until worked
'Taroo worked from early to late.'

e. Taroo ga osana-**ku**-**yori** sai sugure-te ita.
Taroo NOM young-CASE-from talent excellent was
'Taroo has been talented since he was young.'

Ku-elliptical nominals are generally disallowed as subjects or objects, in genitives, or as the objects of non-spatio-temporal postpositions (13a-d):

(13) a. *Huru-**ku** ga yomigaetta. (Subject) JP.
old-CASE NOM revived
'The old days arose in my mind.'
(cf. Huru-**i** zidai ga yomigaetta.)
old-CASE time/days NOM revived
b. *Hanako ga taka-**ku** o katazuketa. (Object)
Hanako NOM high-CASE ACC tidied
''Hanako tidied up a high place.'
(cf. Hanako ga taka-i tokoro o katazuketa.)
Hanako NOM high-CASE place ACC tidied
c. *Taroo ga haya-**ku** no meeting-e itta. (Genitive)
Taroo NOM early-CASE GEN meeting-to went
'Taroo went to an early meeting.'
(cf. Taroo ga haya-**i** zikan no meeting-e itta.)
Taroo NOM early-CASE time GEN meeting-to went
d. *Taroo ga huru-**ku** ni tuite hanasita. (Object of P)
Taroo NOM old-CASE DAT about talked
'Taroo talked about the old times.'
(cf. Taroo ga huru-**i** zidai ni tuite hanasita.)
Taroo NOM old-CASE time DAT about talked

To my knowledge, there are only three exceptions to this generalization. The form *oo-ku* 'many of them' may appear in positions just discussed, as shown in (14a-c):

(14) a. Sono party-de oo-**ku** ga yopparatta. (Subject) JP.
the party-at many-CASE NOM got drunk
'Many got drunk at the party.'
b. Hanako ga sore-ni tuite oo-**ku** o katara-nakatta. (Object)
Hanako NOM it-DAT about much-CASE ACC talk-NEG.PST
'Hanako did not talk much about it.'
c. Hanako ga oo-**ku** no hito ni atta. (Genitive)
Hanako NOM many-CASE GEN person DAT met
'Hanako met many people.'

The remaining two exceptions are the pair of adjectives *too-i* 'far(away)' and *tika-i* 'near(by)'. These can appear in genitives (15), and in the object and subject positions of verbs (16):[5] [6]

(15) a. too-**ku** no mati
far-CASE GEN town
'a distant/far-off town'

b. tika-**ku** no eki JP.
near-CASE GEN station
'a nearby station'

(16) a. Hanako ga too-**ku** o mita.
Hanako NOM far-CASE ACC saw
'Hanako saw the distant place.'

b. Too-**ku** ga mieta. JP.
far-CASE NOM was visible
'The distant place could be seen.'

5.4 Two Analyses

In considering these data, two natural ideas present themselves. One is that *–ku* represents a nominalizing morpheme, which affixes to a spatio-temporal adjective and creates a noun with spatio-temporal reference. Call this "Analysis 1":[7]

Analysis 1 (Nominalization): *–Ku* is a nominalizing morpheme, which converts a spatio-temporal A into an N

$[_A$ huka] 'deep' → $[_N [_A$ huka] -**ku**]] 'deep place'

The second idea is that the *–ku* construction is elliptical, containing a covert noun or pronoun ∅ referring to LOCATION or TIME. Call this "Analysis 2":[8]

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[5] *Too-**ku** + no* + N 'far N' can be different from *too-**i*** N 'far N' in meaning, as shown in (i):

(i) a. Too-**ku** no sinrui yori tika-ku no tanin. (Proverb) JP.
far-CASE GEN relative than near-CASE GEN unrelated person
'A neighbor is better than a relative living far.

b. too-**i** sinrui 'a distant relative'
far-CASE relative

TA *too-i* 'far' in (ib) has non-intersective reading.

[6] The investigation of the *–ku* construction with published sources has found cases of TA*–ku* + *no* for the other TAs listed in (9), like *taka(-i)* 'high' as in (i):

(i) Iti-dan taka-**ku** **no** karesansui-teien o nagame, … JP.
one-step high-CASE GEN dry landscape garden ACC overlook
'Overlook the garden (entirely composed of rocks and sand) at one step higher, (and …)
(From a travel guidebook to Kyoto, *Tabing 13: Kyoto* 1993)

I am grateful to Yoshio Endo for help with locating this example.

[7] An analysis of this kind is suggested in Martin (1975: 398). I am grateful to S. Kuno for this reference.

[8] An analysis of this kind (in a non-generative framework) is anticipated in Kawabata (1976).

Analysis 2 (Ellipsis): The *–ku* construction is elliptical, containing a covert noun ∅ referring to LOCATION or TIME:

[$_{NP}$ [$_{AP}$ huka-i] tokoro] 'deep place'
[$_{NP}$ [$_{AP}$ huka-ku] ∅]

5.4.1 Against the Nominalization Approach

Analysis 1 is simple, and it accounts for the first two constraints on the *–ku* construction directly. The need for the morpheme *–ku* follows immediately from its status as the nominalizing element. The need for the *ku*-marked adjective to occur adjacent to where the "missing nominal" would have been followed from the fact that TA + *–ku* constitutes a derived noun. Finally, the fact that *–ku* is restricted to spatio-temporal adjectives, and the existence of exceptions, might be seen as reflecting lexical constraints on this derivational morpheme.

Despite these virtues, there are reasons to doubt the nominalization account. Recall *ku*-marking in attributive adjective sequences like (5b,c). These *ku*-marked TAs cannot plausibly be analyzed as nominalizations. If that is correct, a nominalization account will not yield a unified treatment of attributive *–ku*. By contrast, the ellipsis account takes the *ku*-marked adjective to be in construction with a noun or noun projection – just as in (5b,c); hence, it offers the possibility of a unified account.

Analysis 1 also encounters difficulty with the third constraint noted earlier: the fact that the *–ku* construction is largely restricted to the complements of spatio-temporal postpositions. On the nominalization account, it is hard to see why this restriction should hold, given that examples with overt time and place nominals are not similarly restricted. Compare (17a,b):

(17) a. Taroo ga huru-**i** **zidai** o hurikaetta. JP.
Taroo NOM old-CASE time ACC looked back
'Taroo looked back upon the old times.'
b. *Taroo ga huru-**ku** o hurikaetta.
Taroo NOM old-CASE ACC looked back

By contrast, the ellipsis analysis offers an approach to these facts in terms of recoverability. As discussed below, it is natural to understand the need for a spatio-temporal adjective or postposition in terms of the need to recover a spatio-temporal noun in the ellipsis site.[9]

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[9] It is important to note that in Tokushima dialect TA inflectional morpheme *–ku* does not exist anywhere, and it is consistently replaced by other TA morphemes (ia) or simply dropped (ib). (As in standard Japanese, *–i* is used in attributive and predicative environments.):

(i) *Tokushima Dialect (TA)* (Hirayama, *et al*. 1997c)
a. Atu-ka-t-te / atu(:)-t kanawa-n-wa.
hot bear-not
'This hot weather is too much for me.'
cf. Atu-**ku**-te … (Standard Japanese)

5.4.2 Spatio-Temporal *pro*

There is an additional, interesting piece of data supporting the ellipsis account. The grammar of Japanese exhibits a strong requirement on nominal modifiers that they occur in pre-nominal position. Examples (18a,b) illustrate this constraint:

(18) '(Shodenji-temple) is deep in the heart of Mt. Funayama.' JP.

a.	(Syooden-zi	wa)	Funayama	no	huka-**i**	hutokoro	ni	aru.
	Shodenji-temple	TOP	Funayama	GEN	deep-CASE	heart	at	be
b.	*				hutokoro	huka-**i**		
					heart	deep-CASE		

Surprisingly, in certain contexts *ku*-inflected adjectives appear to violate this constraint. They can occur post-nominally, as seen in (19). For instance, in (19a), TA *huka(-i)* 'deep' inflected with *–ku* appears after noun *hutokoro* 'heart'. Compare it with (18b):[10]

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b. Motto tika-**i** yore-ya. (Mori 1982)
more close come, move to
'Come closer.'
cf. Motto tika-**ku** … (Standard Japanese)

Interestingly, *–ku* in nominal elliptical constructions is dropped as well (ii):

(ii) Kono tika-∅ ni kusuriya aru-ka. (Mori 1982)
this near at drugstore be-Q
'Is there a drugstore near hear?'
cf. tika-**ku** ni … (Standard Japanese)

This indicates that there is only one adjectival inflectional morpheme *–ku*; otherwise, *–ku* in nominal elliptical constructions should behave differently from that in adjectival constructions.

[10] I am grateful to Satoshi Kinsui for helpful discussions on the data in (19). More N TA-*ku* examples of this kind are in (i). (Examples in (i) are due to Satoshi Kinsui (p.c.).)

(i) a. asa haya-**ku** ni b. yoru oso-**ku** ni JP.
morning early-CASE at night late-CASE at
'in early morning' 'late at night'

c. mori no oku huka-**ku** ni
forest GEN inner part deep-CASE in
'in the deep end of the forest'

N TA-*ku* can be paraphrased as TA-*i* N. For example, (ic) above is paraphrased as below:

(ic') huka-**i** mori no oku ni
deep-CASE forest GEN inner part in

However, he points out the following interesting example where the pre-nominal – post-nominal pairs are non-synonymous, or where one of the members is unavailable (ii):

(ii) o-hiru tika-**ku** ni 'shortly before noon'
HON-noon near-case in

I have no analysis of such cases at present.

(19) a. (Syooden-zi wa) Funayama no hutokoro huka-**ku**-ni aru.
Shodenji-temple TOP Funayama GEN heart deep-CASE-at be
'(Shodenji temple) is deep in the heart of Mt. Funayama.'
(from a travel guide book, *Tabing 13: Kyoto* 1993)[11]

b. *O* to *wo* no kongoo wa, Heian zidai kanari haya-**ku** kara mi-eru …
o and wo GEN mixture TOP Heian period quite early-case from see-able
'The mixture of [Case-markers] "o" and "wo" can be observed from the quite early Heian period, …'
(from Yamaguchi *et al*. (1997) *A History of the Japanese Language*)

Work by Murasugi (1991) on topicalization of adjunct phrases in Japanese can illuminate cases like (19) under Analysis 2. Murasugi observes that location and time adjuncts undergo topicalization (20), whereas reason and manner adjuncts do not (21):

(20) a. Sono kyoositu wa Mary ga siken o uketa. (Location) JP.
that classroom TOP Mary NOM exam ACC took
'As for that classroom, Mary took an exam there.'

b. Sono hi wa Mary ga siken o uketa. (Time)
that day TOP Mary NOM exam ACC took
'As for that day, Mary took an exam then.'

(21) a. *Sono riyuu wa Mary ga kubi ni natta. (Reason)
that reason TOP Mary NOM was fired
'As for that reason, Mary was fired for it.'

b. *Sono hoohoo wa Mary ga teiri o syoomeisita. (Manner)
that method TOP Mary NOM theorem ACC proved
'As for that method, Mary proved a theorem with it.'

Murasugi attributes this difference to a differential availability of *pro*. In brief, she proposes that Japanese topicalizations are actually left-dislocation structures involving a null pronoun, and that the contrast between (20) and (21) reflects the fact that Japanese contains null pronouns of location and time, pro_{LOC} and pro_{TEMP}, but does not contain equivalent forms for reason and manner, pro_{REASON} and pro_{MANNER}. (20a,b) are thus acceptable because the structure in (22a) is available to them; by contrast, (21a,b) are unacceptable, because the structure in (22b) is unavailable since the required proforms are absent:

(22) a. DP . . . $pro_{\text{LOC/TEMP}}$ √

b. DP . . . $pro_{\text{REASON/MANNER}}$ ×

Note that Murasugi's basic contrast is visible in English dislocations as well; compare (20) vs. (21) with (23) vs. (24).

[11] I am grateful to Yoshio Endo for help with locating example (19a).

(23) a. That place, I saw him <u>there</u>. (Location)
b. That day, I was sick <u>then</u>. (Time)
(cf. That man, I saw <u>him</u>.)

(24) a. *That reason, I left <u>therefore</u>. (Reason)
b. *?That way, I spoke <u>so/thus</u>. (Manner)

We get time and place dislocations quite freely in English, but not reason and manner dislocations.

Suppose now that we adopt analysis 2 and take the missing noun ∅ in *ku*-ellipsis to be one of Murasugi's empty pronouns pro_{LOC} or pro_{TEMP}, as shown in (25a). Then (19a,b) can be analyzed as DP-internal left dislocations, as shown in (25b):

(25) a. $[_{NP}\ [_{AP}$ huka-ku $]$ pro_{LOC} $]$
b. $[_{PP}\ [_{DP}\ [_{DP}$ Funayama no hutokoro$]_{\mathbf{i}}$ $[_{NP}$ huka-**ku** **pro**$_{\mathbf{i}}$ $]]$ -ni$]$
GEN heart deep-CASE at

Notice that under this proposal, the modifier *huka-ku* does <u>not</u> follow the noun it modifies, but rather precedes it, following the normal pattern of attributives in Japanese. It is simply that the noun being modified is not the overt nominal *hutokoro* 'heart', but rather the null nominal *pro*. The analysis in (25) is further supported by the pause break that Japanese speakers perceive between N and A-*ku* in examples like (19a,b), indicative of a dislocation structure. Thus under Analysis 2, the apparent word order problem raised by (19a,b) can be neatly resolved.

5.5 Elliptical Nouns in Dutch (Kester 1996)

As seen in the previous chapter, Dutch attributive adjectives exhibit the inflectional suffix [–e], pronounced as *schwa*, and Kester (1996) analyzes it as case-marking. In the spirit of her work, I proposed that the inflectional morphemes on Japanese adjectives (*–i, –na, –ku, –ni*) are also invariant case-markers.

The *schwa* morpheme on adjectives that Kester analyzes as a case-marker is argued to license empty nouns in Dutch (Kester 1996). Dutch allows for a null noun in adjectival contexts in a wide distribution. For example, in English *pro* is not allowed in elliptical constructions bracketed in (26a). Instead, the "dummy" element *one* must be inserted (26b). Interestingly, the counterpart of (26a) is fully grammatical in Dutch (27):

(26) a. *John bought the expensive car and [the pretty].[12]
b. John bought the expensive car and [the pretty **one**].

[12] There is a disagreement on judgment of English examples like (26a). For example, some people find the one that Kester (1996) uses as an ungrammatical example acceptable (ia). Another acceptable example of this kind is (ib):
(i) a. ?John bought the red car and the green. (Kester 1996: 227)
b. ?Don't drink the cold coffee. Drink the hot.

(27) Jan kocht de rode auto en [de groene **pro**]. DU.
John bought the red car and the green
'John bought the red car and the green one' (Kester 1996: 231)

The only exception in English is found in the "human construction", where *pro* is specified as [+human, +generic, +plural] (28); the adjective cannot inflect for numbers (29a) and must be preceded by the definite article *the* (29b):

(28) the homeless, the poor, the rich, the blind, the disabled, … (Kester 1996: 227)

(29) a. *I met a **rich**/two **riches**.
b. **The rich**/***Rich** *pro* are lonely. (Kester 1996: 228)

By contrast, in Dutch, not only are the default features [+human, +generic, +plural] allowed (30a), the elliptical construction can also be used in the singular (30b) and in existential contexts (30c) (Kester 1996: 231):[13]

(30) a. [Rijik**e**n] worden alleen maar rijker. DU.
rich become only richer
'The rich only become richer.'
b. [Een ziek**e**] heeft recht op een goede verzorging.
a sick has right to a good care
'A sick person has a right to good care.'
c. Ik zag [twee blind**e**n] de straat oversteken.
I saw two blind the street cross
'I saw two blind two people cross the street,'

According to Kester (1996), the wider distribution of small *pro* in elliptical constructions in Dutch is due to the presence of inflectional morphology on attributive adjectives [–e], *schwa*, which she analyzes as case-marking: *schwa* must be present in the constructions like (27) and (30) only for reasons of "formal licensing" in the sense of Rizzi (1986).

Given that TA morpheme *–ku* in Japanese is analyzed as a case-marker, the Japanese null nominals in the *–ku* construction can be assimilated to the Dutch ones: both instances can be viewed as licensing of a null nominal by case-marking. In the next section, we will discuss how *pro* is licensed and how adjectival morphology plays a crucial role in licensing in Dutch and Japanese.

[13] The morpheme [–n] following the schwa [–e] on adjectives in (30a) and (30c) is a plural marker.

5.6 Licensing *Pro*

Appeal to small *pro* not only explains superficially anomalous examples like (19a,b), it also offers an attractive approach to the constraints on the *–ku* construction discussed earlier. Specifically, these constraints can be understood in terms of the general theory of *pro* licensing advanced by Rizzi (1986).

5.6.1 GB Style Approach (Rizzi 1986)

According to Rizzi (1986), *pro* is subject to a dual licensing requirement: *pro* must have a formal licenser, which identifies its presence and position; it must also have what we will call a "material licenser", which identifies its content (31):

(31) *Pro* Licensing (Rizzi 1986)
   a. *Formal licenser*: identifies presence and position
   b. *Material licenser*: identifies featural content

Kester (1996) has applied these proposals to nominal ellipsis constructions in Dutch.[14] (32) and (33) are sample cases. (32a) is an instance of the so-called "Partitive Genitive Construction", whose structure for Kester is roughly as in (32b). (33a) is what we will call the "Attributive Construction", with structure in (33b):

(32) Partitive Genitive Construction
   a. Er is [iets verschrikkelijk-**s**] gebeurd. DU.
      there is something terrible happened
      'Something terrible has happened.'
   b. [$_{DP}$ iets [$_{AgrP}$ [$_{AP}$ verschrikkelijk] -**s** *pro*]]
   c. *Formal licenser*: genitive *–s*
      Material licenser: mass noun that forms part of the quantifier *iets* 'something'

(33) Attributive Construction
   a. Jan had de rode auto en [de groen-**e**] gekocht. DU.
      Jan had the red car and the green bought
      'Jan bought the red car and the green one.'
   b. [$_{DP}$ de [$_{AgrP}$ [$_{AP}$ groen] -e *pro*]]
   c. *Formal licenser*: default case element *–e*
      Material licenser: antecedent noun *auto* 'car'

Very briefly, in the Partitive Genitive Construction in (32), the adjectival inflection *–s* is analyzed as the formal licenser of *pro*; the material licenser of *pro* – the element that supplies its featural content - is a mass nominal element that is incorporated within the quantifier *iets* 'something'. A similar story holds for the Attributive Construction in (33).

[14] Kester's analysis applies proposals on ellipsis due to Lobeck (1995).

The formal licenser of *pro* is the adjectival inflection *–e*; the material licenser of *pro* is the antecedent noun *auto*.[15]

These ideas can be extended to the Japanese *–ku* construction. First, in the *–ku* construction, *–ku* is a case-marker, which heads a functional phrase (FP) and is the formal licenser of *pro*, as shown in (34b):

(34) a. Kono densetu wa huru-**ku**-kara aru. (=(3b))
this legend TOP old-CASE-from be
'This legend is from old times.'

b. $[_{DP}\ [_{FP}\ [_{AP}$ huru] **-ku** ***pro***]]
|___| FORMAL LICENSING

This accounts for why *–ku* must be present in this construction, and also why it must be local to the ellipsis site (*pro*). The need for a local, formal licenser holds in all cases of *pro* licensing. The situation is fully parallel to the Dutch cases just discussed.

The question of the material licenser in the *–ku* construction is a bit more involved. As noted earlier, under the ellipsis analysis we can view the need for a spatio-temporal adjective and/or postposition as reflecting the need to recover a null noun of space or time. Under this reasoning it seems that either the adjective or the postposition might be the material licenser of *pro*. But which one? Larson and Yamakido (2002) pursues the possibility of the postposition as the true material licenser of *pro*, so that in (35a), *pro* gets its locative features from *–kara* 'from' (35b):

(35) a. Kono densetu wa huru-**ku**-kara aru. (=(34a))
this legend TOP old-CASE-from be
'This legend is from old times.'

b. $[_{PP}\ [_{DP}\ [_{FP}\ [_{AP}$ huru] -ku ***pro***]] **-kara**]
|_____| MATERIAL LICENSING

If the adjective were the licenser, then there would be no reason why a spatio-temporal postposition would be required higher up in the structure. Recall that a temporal adjective + an overt temporal noun can occur without a temporal postposition (36a); by contrast, the equivalent *ku*-form cannot (36b). If *pro* were licensed by *–ku* and the adjective, then all licensing would be complete within DP, hence it would be quite unclear why (36b) is bad:

(36) a. Taroo ga $[_{DP}$ huru-**i** **zidai**] o hurikaetta. (=(17)) JP.
Taroo NOM old-CASE time ACC looked back
'Taroo looked back upon the old times.'

b. *Taroo ga $[_{DP}$ huru-**ku** pro_{TEMP}] o hurikaetta.
Taroo NOM old-CASE ACC looked back

[15] Kester (1996) extends her analysis of *pro* licensing to other Germanic languages including Swedish and German, as well as Spanish and Finno-Urgric languages, which all have some forms of adjectival morphology.

By contrast, if the postposition is the material licenser, then its presence is required to supply *pro*'s content. The need for an appropriate adjective can then be understood as a semantic fact. If we take pro_{LOC} and pro_{TEMP} to be "pure" spatial and temporal proforms, then they can be modified only by semantically compatible adjectives, one sharing the same interpretable features, that is, an adjective of space or time.

There is one puzzle that arises with this proposal that deserves comment. In the Dutch cases in (32) and (33), nominal *pro* is materially licensed by a nominal source. In the Partitive Genitive Construction (32b), it is licensed by the mass nominal incorporated into the determiner. In the Attributive Construction (33b), it is licensed by an antecedent noun. But under the proposal in (35b), for example, this pattern appears to fail. *Pro* appears to be materially licensed by a non-nominal source, P.

Larson and Yamakido (2003) suggests a tentative solution to this puzzle based on research by Watanabe (1993) on spatio-temporal prepositions and postpositions. Beginning from data on Navaho and Celtic, he argues that spatio-temporal prepositions and postpositions are in fact universally composed of two distinct parts: a pure relational element (P) and a nominal location phrase (LP), which can be understood as either location in space or location in time. On this idea, (37a) is underlyingly structured as in (37b):

(37) a. $[_{P}$ in $[_{DP}$ the house]]
b. $[_{P}$ in $[_{LP}$ LOCATION OF $[_{DP}$ the house]]]

In some languages or language families, like Navaho and Celtic, the nominal location element is spelled out morphologically; in others, it is presumably incorporated into P.

Notice now that if Watanabe's proposal is correct, it provides a solution to our puzzle. If we take the material licenser of *pro* to be Watanabe's nominal LP (38), then our problem disappears:

(38) $[_{PP}$ $[_{LP}$ $[_{DP}$ $[_{FP}$ $[_{AP}$ huru] -ku ***pro***]] **LOCATION OF**] -kara]
|_____|

This suggests why A-*ku* must co-occur with a spatio-temporal P.

5.6.2 Exceptions

Earlier I noted certain exceptions to the claim that *ku*-ellipsis requires a space-time adjective and a governing space-time postposition. I observed that the adjective *oo(-i)* 'many, much' is not spatio-temporal in meaning; nonetheless *oo-ku* is well-formed, occurring with non-spatio-temporal reference. This was illustrated in (11) (repeated below):

(11) Hanako ni hagemasi no tegami ga **oo**-**ku**-kara yoserareta.
Hanako DAT encouragement GEN letter NOM many-CASE-from was sent
'Letters of encouragement were sent by many (people) to Hanako.'

Furthermore, *oo-ku*, *too-ku*, or *tika-ku* can all appear without a space-time postposition, as shown in (14a) and (16a,b) (repeated below):

(14a) Sono party-de oo-**ku** ga yopparatta. JP.
the party-at many-CASE NOM got drunk
'Many got drunk at the party.'

(16a) Hanako ga too-**ku** o mita.
Hanako NOM far-CASE ACC saw
'Hanako saw the distant place.'

(16b) Too-**ku** ga mieta.
far-CASE NOM was visible
'The distant place could be seen.'

A natural question is: How do we handle these cases under the proposals advanced above?

Larson and Yamakido's (2003) contention about the ellipsis in *oo-ku* is that it represents a fundamentally different phenomenon than that at issue here. To my knowledge, only Japanese shows ellipsis of a spatio-temporal noun with the properties described above. By contrast, many world languages, including English, show nominal ellipsis with the equivalents of *many* and *much* (39). In fact, the latter appears to be part of a more general pattern with partitive determiners/adjectives (40) (Sleeman 1996):

(39) a. **Many *pro*** will enter; few will win.
b. **Much *pro*** remains to be done.

(40) a. **All** / **many** / **most** / **several** / **a lot** / **few** / **none *pro*** (of the people) were surprised.
b. **All** / **much** / **most** / **some** / **lots** / **little** / **none *pro*** (of the gold) was recovered.

Larson and Yamakido (2003) suggests that the empty noun in *oo-ku* constructions like (11) and (14a) is equivalent to the *pro* occurring in (39) and (40). Specifically, although this *pro* is formally licensed by *–ku*, as usual, it is materially licensed in a fundamentally different way, equivalent to what happens with other partitives. They note that in Japanese, concepts like 'most', 'several', 'few', and 'none' are not expressed by adjectives, but rather by nouns. The only exception is *oo-* 'many/much'. Hence we speculate that the reason why partitive *pro* is observed only with *oo-* 'many/much' is simply that other relevant items that might have licensed it are missing from the category of A.

Regarding *too-ku* and *tika-ku*, Larson and Yamakido's (2003) account of their apparent exceptional behavior is rather different, but also related to something observable in the counterpart English forms. Observe first that English *near* and *far*, when they occur as attributive adjectives, seem to require the "extra" morphemes *by* and *away* (41a,b), despite the fact that the latter seem to be redundant (41c,d). In effect, *by* and *away* seem to be pleonastic elements in the dictionary sense, repeating information in the adjective, but nonetheless necessary for well formedness:

(41) a. a near *(**by**) house
b. a far *(**away**) land
c. **near** the house/**by** the house
d. **far** from the house /**away** from the house

Something similar is observed with *too-* in Japanese, as pointed out by Y. Endo (p.c.). In the *–ku* construction, *too-ku* can co-occur optionally with the nominal morpheme *enpoo* and *kanata*, both of which mean '(far) distance' (42). The relationship between the adjective and noun is not modification, as shown by the impossibility of modificational structures like (43); rather the presence of *enpoo*/*kanata* is pleonastic:

(42) a. too-ku (enpoo) -kara
far-CASE distance -from
'from a distant place'

b. too-ku (kanata) -e JP.
far-CASE distance -to
'to a distant place'

(43) 'from a distant place'
a. #too-i enpoo -kara JP.
far-CASE distance -from
b. #too-ku no kanata -kara
far-CASE GEN distance -from

Larson and Yamakido's suggestion is that Japanese *too-ku* and *tika-ku*, like English *far* and *near*, always require a pleonastic element when they occur attributively. The difference is that in Japanese, unlike English, this pleonastic element is nominal and can occur covertly. They furthermore propose that this nominal pleonastic element, which refers to location and which can surface morphologically as *enpoo* or *kanata* in the first case, is the material licenser for spatial *pro*. In effect, their suggestion is that *too-ku* and *tika-ku* can occur without the support of a locative postposition because they already contain the nominal location element that a postposition typically supplies. Since the formal and material licensing of $pro_{\text{LOC/TEMP}}$ is complete within NP/DP, in principle such *ku*-nominals can occur freely.

5.7 Recent Approaches to Nominal Ellipsis

The account of *ku*-ellipsis offered above follows a "classical" GB approach in which the elliptical element is analyzed as an empty pronoun (*pro*), whose presence and content must be licensed by certain local items under some version of the Empty Category Principle (Chomsky 1981). Below I will briefly consider two recent alternative accounts of nominal ellipsis, López (2000) and Panagiotidis (2003), and how the *ku*-facts bear on them.

5.7.1 Discourse-Linking (López 2000)

López (2000) argues for a general view of ellipsis phenomena whose main licensing principle for *pro* is not a purely syntactic (like the ECP), but contains an important discourse component as well. Specifically, López assumes the following three things:

- ellipsis is a *pro*-form
- the *pro*-form occurs at LF within the maximal projection of a functional head H
- the functional head H has the property of being **discoursed-linked**, and the latter is what licenses *pro*.

To illustrate, consider López's examples (44a-d):

(44) Some novels are decent, but
  a. **these** [e] are not.
  b. **his** [e] are not.
  c. **most** [e] are not.
  d. **many** [e] are not.

The boldfaced items have all been analyzed as of category D (Abney 1987). López argues that in each case the determiner can be argued to be D(iscourse)-linking, i.e., to "have a feature that instructs it to look for a discourse topic (p.190)" López suggests that only in this case is nominal ellipsis licensed.

The D-linking nature of demonstratives (44a) López takes to be uncontroversial since these elements are themselves anaphoric. A similar point might be made about the possessive pronoun (44b).

With regard to quantifiers like (44c,d), matters become more interesting. López observes that when the complement of a quantifier refers to something that is "discourse old", the latter must take the form of a partitive, not an NP. Compare (45a,b) (= López's (18a,b)). Revealingly, it is in just this context that nominal ellipsis can also occur (45c) (= López's (19)):

(45) a. [Some men]$_i$ came in. [Most **of the men**]$_i$ sat down.
  b. [Some men]$_i$ came in. [Most **men**]$_{\#i}$ sat down.
  c. [Some men]$_i$ came in. [Most **pro**]$_i$ sat down.

López makes the further interesting observation that it is just with quantifiers like *every* and *no*, which, for independent reasons, do not permit partitive complements, that nominal ellipsis is also forbidden; compare (46a-d) with (47a-d):

(46) a. [Some men]$_i$ came in. *[Every **of the men**]$_i$ sat down.
  b. [Some men]$_i$ came in. *[Every **pro**]$_i$ sat down.
  c. [Some men]$_i$ came in. *[No **of the men**]$_i$ sat down.
  d. [Some men]$_i$ came in. *[No **pro**]$_i$ sat down.

(47) a. [Some men]$_i$ came in. [Each **of the men**]$_i$ sat down.
  b. [Some men]$_i$ came in. [Each **pro**]$_i$ sat down.
  c. [Some men]$_i$ came in. [None **of the men**]$_i$ sat down.
  d. [Some men]$_i$ came in. [None **pro**]$_i$ sat down.

The López (2000) analysis of nominal ellipsis is plausible for the class of cases he examines, which involve discourse-referential nouns.[16] However, it is not clearly applicable to ellipsis of the kind found with *–ku* in Japanese. For one thing, the elliptical element licensed by *–ku* does not seem to be D-linked in any obvious way. As we have seen, the *pro* licensed by *–ku* is an empty noun, either of time (pro_{TEMP}) or space (pro_{LOC}). The latter need not refer to some discourse-old time or location, and in any case need not have an explicit nominal antecedent referring to a time or place and given inferentially from the local syntactic content.[17] Recall cases like (3b) (repeated below):

(3b) Kono densetu ga huru-**ku** -kara aru. JP.
this legend NOM old-CASE -from be
'This legend comes from old times"

Instead, the empty nominal is equivalent to a fixed overt form like *zidai* 'time' or *tokoro* 'place'.

Furthermore, although I have argued that *–ku* is the functional (case-marking) head that licenses the empty noun in *ku*-ellipsis, it is far from clear that *–ku* is itself referential or discourse-anaphoric in the sense required of licensing heads by López (2000).

I conclude that the classical licensing account of nominal *ku*-ellipsis (and of NP ellipsis generally) appears more promising than that given by López (2000). The latter appears applicable only to examples where the elliptical element is anaphoric on previously introduced discourse elements, and that simply does not seem to be the case here.

5.7.2 A Non-Licensing Approach (Panagiotidis 2003)

Panagiotidis (2003) offers a more radical approach to nominal ellipsis in which the notion of licensing is dispensed with altogether. I cannot present a full summary of the author's proposals here, but, in brief, elliptical nominals are analyzed as phonologically null versions of the broader class of empty nouns – items like *one*, which, Panagiotidis claims have no intrinsic semantic features, and require no formal licenser. Empty nouns (null or overt) are of category N^0. They are listed in the lexicon with their own particular set of formal features and occur in syntax wherever their formal features allow them to occur.

Panagiotidis (2003) does not give specific detailed analyses of the feature composition of null nominals and show how these features predict the distribution that

[16] It might be asked, however, how the account applies to cases like (i), involving a non-pronominal genitives. López (2000) mentions such examples but fails to discuss the sense in which D's like *Sam's* or 's might be understood as D-linked:
(i) Some novels are decent, but **Sam's** [e] are not.
They are certainly not anaphoric like demonstratives, nor partitive like quantifiers.

[17] López (2000) adopts a "narrow" notion of D-linking according to which the D-linked element requires an explicit linguistic antecedent in the discourse.

these null nominals have, but his general ideas appear applicable to the case of *ku*-ellipsis. I will not try to work out the details, but instead simply sketch the basic idea.

Suppose first that Japanese contains the formal nouns *zidai* 'time' and *tokoro* 'place', which are marked with the formal features [+TEMP] and [+LOC], respectively. Suppose that the Japanese lexicon also includes the null versions of these elements, pro_{TEMP} and pro_{LOC}. Suppose that Japanese temporal and spatial postpositions also bear the formal features [+TEMP] and [+LOC], respectively. Finally, suppose that *–ku* may come from the lexicon bearing either of the two formal features [+TEMP] or [+LOC], and that these may check the formal features on the corresponding null nouns (48):

(48) a. [AP **-ku** $pro_{\text{TEMP/LOC}}$]
agree

b. [huru **-ku** pro_{TEMP}] 'old times'

Now, I have argued that *–ku* is a counterpart to *–i*, and that *–i* and *–na* are case-marking functional heads. I have furthermore proposed that *–i* and *–na* are parallel in status to the Ezafe case-marking heads found in Zazaki. Recall now that in Zazaki, an Ezafe embedded within another Ezafe (49a), or in the domain of an oblique preposition (49b), exhibits a "doubled" or "strengthened" form *da*/*de*:[18]

(49) a. kut k-e [əm ryan-**de** ma] 'our neighbor's dog' ZA.
dog-EZ neighbor(OBL)-EZ us
b. [mar-**da** to] **fa** 'from your mother'
mom(OBL)-EZ you(OBL) from

This suggests, in the terms of Chomsky (2001), that a higher Ezafe element or governing P may be a "probe," and that a lower Ezafe may be a "target" for certain forms of agreement (50):

(50) a. EZ [HEAD EZ MOD]
agree

b. [HEAD EZ MOD] P
agree

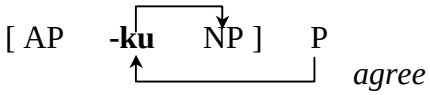
Suppose now that a similar relationship can hold between Japanese postpositions and the Ezafe-like element *–i*, *–na* and *–ku* (51):

(51) [AP **-ku** NP] P
agree

[18] See Chapter 4, section 4.3.4.

Then, it follows that a [+TEMP]/[+LOC] postposition will, in effect be able to agree with a [+TEMP]/[+LOC] empty noun, through the intermediary of *–ku* (52):

(52)



These remarks are offered as no more than a sketch of how the occurrence of null empty nouns of time and place might be analyzed within the general approach of Panagiotidis (2003), in such a way as to capture the licensing of these nouns by the combined presence of *–ku* and a spatio-temporal postposition. Although numerous details remain to be worked out, it seems the latter might constitute a genuine alternative to the older ECP style account that I have proposed here.

5.8 Conclusion

In this chapter, I have discussed an elliptical construction in which a small set of Japanese adjectives of space and time appear to license a null space/time nominal precisely when inflected with the morpheme *–ku*. Case-marking/case-markers are argued to license empty nouns in Dutch (Kester 1996), and Japanese *–ku* inflection appears to form a class with *–i* inflection insofar as *–i* and *–ku* can alternate in certain circumstances. I argued that if *–ku* is analyzed as a case-marker, like *–i*, then the Japanese null nominals can be assimilated to the Dutch ones: both instances can be viewed as licensing of a null nominal by case marking. I explored some of the intricacies of the *–ku* construction, including various apparent exceptions to the general licensing account offered here. I concluded by briefly considering two alternative accounts of nominal ellipsis and their prospects for analyzing *ku*-ellpisis.

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