3. EARLIER APPROACHES TO GRAMMAR

3.1. TRADITIONAL AND STRUCTURAL LINGUISTICS

3.1.1. Introduction

The two major approaches in the West prior to the fifties were traditional grammar and structural linguistics. Both of them come in various syntheses. Traditional grammar has its roots in Greek and Latin and is the source of many of the basic concepts that are commonly used in linguistic descriptions. Not only within traditional but also within more modern frameworks, verbs are divided into *transitive* and *intransitive*, or sentence structures are described in terms of *subject*, *object*, and *predicate*. However, although terms like these are part of our common analytical tools, there is no common consensus as to how such key terms should be defined. One can find them rather loosely defined or they may be taken to represent varying mixtures of syntactic and semantic criteria. By examining how these terms have been understood in Korean and in Chinese linguistics, we can see some fundamental differences in how information is structured in different types of languages. At the same time, this points to the areas where East-Asian languages may pose a challenge to grammatical frameworks and their basic concepts.

In Korean linguistics, traditional grammar was the main framework for syntactic studies until the sixties, after which it has coexisted with newer approaches. In general, research on Korean syntax has tried to follow original Western concepts rather closely. Notions found useful in Indo-European languages are often assumed to be equally valid cross-linguistically. I will therefore cite analyses of Korean when discussing what kind of consequences such an approach may have for a syntactic description.

Structural linguistics prevailed in the West roughly from the nineteen-thirties until the sixties. Involving a reaction against traditional grammar, structuralism emphasizes the need to be scientific. Sentences are empirically observable structures, which can be cut into smaller elements, the so-called 'immediate constituents'. For examples, *I ate a big apple* can be first cut as *I* / *ate a big apple*, then the second constituent can be further cut as *ate* / *a big apple*, and finally the last constituent is

divisible as *a / big / apple*. When the cutting is done, the elements are identified and labeled. The terminology used for labeling is largely derived from traditional grammar.

In China, the traditional Western type of grammar was rejected as inadequate in the 1930's and structuralism was found to offer a better approach to Chinese syntax. In mainland China, structuralism continues to provide the basis for linguistic description even today. In the process of adapting structuralism to Chinese, some of the basic linguistic concepts came to be defined differently from how they have been understood in traditional grammar. As a result, what is called subject and object or transitive and intransitive in the PRC, is not same thing as in the West. When discussing Mandarin Chinese, I will exemplify the main differences in the uses of these terms, as well as address the question of how well the redefining of the traditional concepts can account for the characteristics of Chinese grammar.

In the discussion that follows, the focus is on verb classification, grammatical relations, and basic discourse structuring. The notions most crucially involved in such considerations include subject, object, and transitivity. The presentation is therefore an examination of how well these notions, either in their traditional sense or in a structuralist application, can capture the basic characteristics of Korean and Chinese syntax.

3.1.2. Classification of predicates

3.1.2.1. The notion of transitivity

Traditionally, in the West, the starting point in grammatical analysis has been to classify verbs into two main groups according to their transitivity. From a syntactic point of view, transitive verbs are those that may take direct objects and thus can serve as predicates in transitive sentences; intransitive verbs do not have this capacity. Semantically speaking, transitive verbs are supposed to involve actions where something is extended or carried over from the subject to the object.[5] In "ideal" transitive sentences these two sides of the definition coincide, e.g. *He ate an apple*. Semantically, *the apple* is affected by the action of eating, and, syntactically, it conforms to the pattern generally associated with direct objects in English. Direct objects usually follow the predicate without a preceding preposition, while indirect objects and other types of complements tend to appear with prepositions. Compare below:

(24)	a. He kicked **me.**	**direct object**
	b. He gave it **to me.**	**indirect object**
	c. He slept **for an hour.**	**complement of time**

In practice, however, the syntactic and semantic features of transitivity do not always coincide as neatly as above. Verbs often take various kinds of less ideal objects (see Givón 1993, I: 108-110). We can find a number of transitive verbs whose objects are not semantically affected, such as: *I like flowers, He forgot my name, They saw an elephant.* In these examples, the second NP forms the goal of the action in an abstract sense. But by syntactic similarity and semantic analogy, such complements are likewise analyzed as objects.

There is no general consensus how far the semantics can be stretched. In English, motion verbs are generally excluded from the category of transitive verbs. Often there are both syntactic and semantic grounds for such a decision. The goals of motion verbs are typically marked differently from other types of complements (i.e. preceded by a preposition as in *go to school*) and semantically they denote places or directions of action rather than things or concepts manipulated physically or processed mentally. Yet, there are instances when an NP, which is not supposed to be an object, is marked as if it was: *He went home, He ran the whole way.* When criteria conflict like this, there are two basic options. One is to choose whether to prioritize surface form or to rely on semantics. The other is to find tests, either syntactic or semantic, that can distinguish "real" objects from non-objects. For an overview of difficulties associated with object diagnosis in a variety of languages, see Plank (1984 ed.).[6]

The reason why linguists have been preoccupied with object diagnosis and distinguishing between transitive and intransitive verbs is that these distinctions are potentially relevant for language analysis in a number of ways. We have already discussed transitivity in relation to marking patterns and clause structure. In addition, transitivity can be reflected in verbal morphology. Finnish is a language where transitive and intransitive verb pairs usually differ either in morphological form (*kaatua* 'fall' vs. *kaataa* 'fell' as in *fell a tree*) or in lexical choice (*kiehua* 'boil' as in *the water boils* vs. *keittää* 'boil' as in *he boiled the water*). There may also be a relationship between transitivity and grammatical processes. In English, transitivity coincides closely with verbs' ability to appear in the passive. In general, verbs that can take direct objects may also be cast into passive form, while those, which do not take direct object, are usually not passivizable.

What is not always realized is that these phenomena are not universal. The relationship between transitivity and clause structure, marking patterns, morphological form of the verb, and grammatical processes vary from language to language.

In English, a number of verbs can be used either transitively or intransitively without a change in morphology. In Finnish, there is no relationship between transitivity and passivizability. From this, we can predict that the significance of transitivity is likely to differ cross-linguistically. In languages where the object-taking capacity rather closely correlates with differences in marking patterns, with the morphological form of verbs, and with verbs' participation in certain grammatical processes, transitivity is a more useful basis for verb classification than in languages where there are just a few such correlations.

I will now examine transitivity in Korean and Chinese to see how adequate a basis it is for verb classification in these languages. The main questions are: i) How closely does accusative/direct-object marking correlate with semantic transitivity? ii) Is transitivity related to verbal morphology? iii) Is transitivity related to major grammatical processes such as passivizability? iv) Is there another fundamental organizing principle generally recognized in the target language, and is this principle related to transitivity?

3.1.2.2. Transitivity in Korean

3.1.2.2.1. Syntactic transitivity

The foundational grammar of Korean, *Wuli malpon* (Choy 1977 [1929]: 256-261), makes a four-way distinction vis-à-vis transitivity: i) there are verbs that show only intransitive behavior, ii) and verbs that show only transitive behavior; iii) some verbs can function either transitively or intransitively without a change in morphology; iv) finally, there are verb pairs that are related but morphologically different in their transitive and intransitive versions. Below there are examples of each type of verb:

(25) a. **always intransitive**: *khuta* 'be big', *issta* 'exist'
b. **always transitive**: *mekta* 'eat', *phalta* 'sell'
c. **intransitive or transitive**: *pwulta* 'blow', *wumcikita* 'move'
d. **morphologically related pairs**: *cwukta* 'die', *cwukita* 'kill'

The basic situation is rather straightforward. Korean uses the accusative case to mark direct objects, and clauses with direct objects are transitive. Transitivity tends to be reflected either in lexical choice or in verbal morphology. Some verbs like *wumcikita* 'move' are ambivalent, but their number in modern Korean is limited.[7] We can usually discern two clearly different senses between the transitive and the

intransitive use of such verbs. In example (26a), the verb 'move' is causative whereas the verb in (26b) is not.

(26) a. Yengswu-nun pawi-lul wumciki-ess-ta. **transitive,**
Yengswu-TOP stone-ACC move-PAST-DEC **causative**
'Yengswu moved the stone.'

b. Pawi-ka wumciki-ess-ta. **intransitive,**
stone-NOM move-PAST-DEC **non-causative**
'The stone moved.'

3.1.2.2.2. Semantic transitivity

The situation gets more complicated if we want to know when accusative marking is a signal of a direct object and, thus, transitivity. Compared to English, Korean has a stronger tendency to mark a range of complements in a way analogous to direct objects (cf. O'Grady 1991: 225-226). Accusative marking is not limited to prototypical transitive scenes where somebody affects, manipulates, or creates something, but it appears also in clauses where the second NP is not a conventional object. Compare the clauses below:

(27) a. Ku-nun cwul-ul ku-ess-ta.
he-TOP line-ACC draw-PAST-DEC
'He drew a line.'

b. Salam-tul-i cwul-ul se-ss-ta.
person-PLUR-NOM line-ACC stand-PAST-DEC
'People lined up.'

Clause (27a) is easily accepted as transitive because the action of drawing is directly aimed at producing the line. Clause (27b) is different in that the line is the formation in which the people stand, not what is to be achieved by standing. Traditionally verbs like *seta* 'stand' are not associated with transitive scenes.

Criteria are needed to decide what kind of semantics is required of a direct object. Sohn (1994: 83) gives the following rule of thumb: "...the direct object of a verb is semantically the patient (or theme) of the action denoted by the verb and is formally markable with the accusative case marking particle...". There is little question that patients are direct objects. What is, however, more subject to interpretation is what constitutes a theme that qualifies as a direct object. Traditionally *nolay-lul pwuluta* 'sing a song', *kkoch-ul cohahata* 'like flowers' or *yenge-lul alta* 'know

English' have been accepted as transitive, even though there is no prototypical patient. At the same time, other verbs with non-ideal object-like complements may be classified as intransitive. The verb *swita* is one those typically listed as intransitive and illustrated with examples like the one in (28a) rather with those of the type (28b):

(28) a. Halwu(-lul) swi-ess-ta.
one.day(-ACC) rest-PAST-DEC
'He was resting for one day.'

b. Olays tongan hakkyo-lul swi-ko.iss-ta.
long time school-ACC rest-PROG-DEC
'He is long absent from school.'

As the word 'one day' is a time expression, most analysts would view it as an adverbial which, in turn, means that the verb can be taken to be intransitive (see Sohn 1994: 83, Lee Hansol 1989: 43-44). In the (b) clause, however, the same verb appears with an NP that could be interpreted as an object of content. This makes the phrase *hakkyo-lul swita* 'absent the school' analoguous to such constructions as *skip/quit/neglect the school.*

On the other hand, a decision to accept a large number of non-patients as objects has consequences to the relationship between transitivity and verbal morphology. Clauses like (28b) may be called transitive but in that case we are not likely to find that a different verb form correlates with a transitive vs. intransitive use of the predicate. This raises the question, whether the crucial factor affecting verbal morphology is transitivity at all. It might be causation instead.

3.1.2.2.3. Testing transitivity

To sort out multiple uses of the object-like marking pattern, linguists have employed various types of tests. A common test is to see whether a clause can be cast into passive. That this is not a reliable indicator of transitivity in Korean, will be shown in section 3.2 (see also Choy 1977 [1929]: 256-261). The classic semantic test has been to ask whether or not a clause can be an answer to *What did X do to Y*? This helps to identify patients but does not solve the problem of themes or other types of object-like complements which are treated differently by different analysts.

Drawing the line between transitive and intransitive clauses is not easy in Korean. This can be seen from how principles and criteria are applied in practice. Sohn (1994: 83), for example, mentions passivizability as a criterion for transitivity, but does not apply it consistently to all verbs that take less-than-ideal objects. *Cata* 'sleep', he states, can take a direct object (1994: 222). Yet, he later classifies it as

intransitive (1994: 314). *Nolta* 'play', according to him, does not take direct object but is later listed as transitive (1994: 83). Neither *cata* nor *nolta* appear in the passive. See also Lee Hansol (1989: 43-44).[8] The point of these examples is not to seek mistakes but to illustrate the dilemma scholars face when operating with the notions *transitive verb* and *direct object* in East-Asian languages. Syntactic and semantic transitivity simply do not coincide in Korean the way they are supposed to do in traditional approaches. The traditional notion of transitivity refers to a cluster of phenomena that tend to coincide in certain languages but do not necessarily coincide the same way in others.

3.1.2.2.4. Alternative marking patterns

An additional ingredient in the Korean case marking system is that not only are there fuzzy boundaries between transitive and intransitive verbs, but there may also be alternative marking patterns with one and the same verb-complement combination. Attempts have been made to explain these phenomena in terms of relative transitivity.

In 1980, Hopper and Thompson published their famous Transitivity Hypothesis, claiming that transitivity should be viewed as a continuum; clauses can be more or less transitive, not just either or. According to this view, transitivity is the property of the whole clause, not just that of the verb. It is a multi-factor phenomenon encompassing features like affectedness, agentivity, perfectivity, and shows up as differences in marking patterns, word order, etc. Sohn seems to agree with this interpretation; he states that transitivity in Korean may be regarded as a matter of degree rather than a matter of dichotomy (Sohn 1994: 221-222, cf. 83-84). Lee Hyo Sang (1985: 145) too supports a gradient view of transitivity, explaining variation of case marking in causative sentences as springing from different degrees of causation. According to Lee, the accusative marking of the manipulee indicates stronger causation than the dative marking, and the nominative marking is associated with a mere permission or arrangement:

(29) a.

Apeci-nun	ai-**lul**	matang-eyse	nol-key	ha-yess-ta.
father-TOP	child-ACC	yard-in	play-RESULT	do-PAST-DEC

'The father forced/commanded the child to play in the yard.'

b.

Apeci-nun	ai-**eykey**	matang-eyse	nol-key	ha-yess-ta.
father-TOP	child-DAT	yard-in	play-RESULT	do-PAST-DEC

'The father told/asked the child to play in the yard.'

c. Apeci-nun	ai-**ka**	matang-eyse	nol-key	ha-yess-ta.
father-TOP	child-NOM	yard-in	play-RESULT	do-PAST-DEC

'The father arranged for/permitted the child to play in the yard.'

The same basic idea can be applied also to verbs of movement. These can be divided into subgroups according to whether they allow alternative marking of their complements. Those whose complements express the path of movement obligatorily assign the accusative case to it. Hong (1992: 20-22) states that they could be viewed as semitransitive.

(30) a. Yengswu-nun tali-**lul** kenne-ka-nta.
Yengswu-TOP bridge-ACC cross-go-DEC
'Yengswu is crossing the bridge.'

b. Yengswu-nun tam-**ul** neme-ka-nta.
Yengswu-TOP wall-ACC go.over-go-DEC
'Yengswu is going over the wall.'

If the case marker does not automatically follow from the type of the verb, the second NP may carry either the accusative *-ul/lul* or the locative *-eyse* or *-ey*. Such a difference in coding is associated with a semantic shift:

(31) a. Yengswu-nun wuntongcang-**ul** ttwi-ess-ta.
Yengswu-TOP playground-ACC run-PAST-DEC
'Yengswu ran in the playground / round the playground.'

b. Yengswu-nun wuntongcang-**eyse** ttwi-ess-ta.
Yengswu-TOP playground-in run-PAST-DEC
'Yengswu ran in the playground.'

A plausible interpretation of (31a) is that Yengswu is running around the playground covering the whole dimension of it. The clause (31b), in contrast, denotes that Yengswu's running takes place in the playground, but he could be merely running to and fro in it. This could be viewed as a difference between two case roles, i.e. path vs. location, or it could be interpreted as a difference between total and partial attainment, in which case the clause (31a) would be more transitive than the clause (31b). In addition, this kind of choice of marker may also be related to boundedness. The accusative, not the locative marking, allows a telic interpretation of the situation. Compare:

(32) a. Ku-nun san-**ul** ollaka-ss-ta.
he-TOP mountain-ACC climb-PAST-DEC
'He climbed the mountain (and reached the top).'

b. Ku-nun san-**ey** ollaka-ss-ta.
he-TOP mountain-to climb-PAST-DEC
'He climbed in the mountain
(but did not go all the way up to the top).'

There is, however, one more type of case marker alternation which is not attributable to semantic shifts but to discourse pragmatics. In general, the salience of central grammatical concepts is presented as a hierarchy: NP-1 > NP-2 > NP-3 > other. The most salient constituent is the subject followed by the object, indirect object and other constituents. By raising a word from its default position to the next one higher up, the speaker increases the prominence of that constituent. In Korean, this is used to focus indirect objects (Sohn 1994: 83). The result is a "double-object clause", i.e. a clause with two accusative NPs at the same time:

(33) a. Na-nun apeci-**eykey** ton-ul tuli-ess-ta.
I-TOP father-DAT money-ACC give-PAST-DEC
'I gave some money to my father.'

b. Na-nun apeci-**lul** ton-ul tuli-ess-ta
I-TOP father-ACC money-ACC give-PAST-DEC
'I gave my father some money.'

Similarly, other types of complements can be highlighted by treating them as if they were objects. These may include NPs expressing location, purpose, time, measurement, etc. The accusative marker, when attached to such a goal, enhances the prominence of this constituent (Sohn 1994: 83; cf. Kim 1981: 52).

(34) a. Yengswu-nun kwukeyng-**ul** ka-ss-ta.
Yengswu-TOP sightseeing-ACC go-PAST-DEC
'Yengswu went for sightseeing.'

b. Mia-nun san sikan-**ul** wul-ess-ta.
Mia-TOP three hour-ACC cry-PAST-DEC
'Mia cried for three hours.'

The Transitivity Hypothesis, even though attractive, does not distinguish between variation that springs from differences in causation, semantic role, boundedness, or salience. It offers parameters to rank clauses according to their transitivity but does not tie transitivity to verbal semantics or other grammatical phenomena.

3.1.2.2.5. Other traditional distinctions

Transitivity is one possible organizing principle but it does not seem to be the fundamental one in Korean. Another distinction that is recognized by Korean grammarians is that between 'action verbs' (*tongsa*) and 'descriptive verbs' (*hyengyongsa*). These two categories exhibit their own sets of endings in most structures. Transitivity coincides partly with this major distinction. Descriptive verbs are intransitive (e.g. *sulphuta* 'be sad'),[9] but there are both transitive (e.g. *mekta* 'eat') and intransitive action verbs (e.g. *ancta* 'sit'). The two classifications, even if combined, cannot account for the syntactic behavior of Korean verbs (cf. Lee Hansol 1989: 43-45).

3.1.2.2.6. Concluding remarks

From these examples we can gather that accusative case in Korean has more than one function. Besides marking prototypical patient-objects, it is also associated with paths and locative goals, and can be attached to NPs expressing other relationships such as recipient, and time. As an alternative marking pattern, it may be related to degree of causation, boundedness, or shifts in discourse focus.

The relationship between accusative marking and semantic transitivity is open to different interpretations by individual scholars. The two do not coincide the way they are supposed to do in traditional grammar. Yet, the validity of the notion of transitivity is often taken for granted. An examination of Korean grammars demonstrates that it is far from clear what the crucial characteristics really are. At any rate, we can conclude that, unlike in English, there is no clear correlation between transitivity and the ability of the verb to appear in the passive. To some extent, transitivity is reflected in verbal morphology. The relationship is clearest with prototypical objects of causative verbs. Transitivity is not a fundamental organizing principle in Korean. Nor does it suffice to complement the traditional distinction between action verbs and descriptive verbs, so that the two together would explain verbal behavior in Korean.

3.1.2.3. Transitivity in Chinese

3.1.2.3.1. Syntactic transitivity

In the People's Republic of China, structuralism was felt to be more 'scientific' and better equipped for describing Chinese than the traditional Western grammar. Thus, Chinese linguists adapted structuralism to meet the special characteristics of their language. This meant relying on syntactically observable phenomena rather than on semantics. In the structuralist approach, objects are discovered by cutting sentences into their immediate constituents. The element occurring right after the predicate without an intervening preposition, is called object (*bīnyǔ*). A verb that can appear with such an object is called transitive. (See, for example, the analyses in Lin 1990: 44, or Zhao 1983: 53). According to the common view in the PRC, all of the post-verbal NPs in the following sentences are objects:

(35) a. Tā dǎ **wǒ**
3sg hit I
'He is hitting me.'

b. Wǒmen qù **Shànghǎi**
we go Shanghai.
'We will go to Shanghai.'

c. Bié wán **huǒ**.
don't play fire
'Don't play with fire'

d. Tā zài **jiā**
3sg be.at home
'He is at home.'

e. Wǒ péngyou shì **lǎoshī**.
I friend be teacher
'My friend is a teacher.'

This use of the term *object* differs essentially from the traditional concept that is commonly used in English and Korean linguistics. Instead of being a preestablished notional category, object has become basically a preestablished structural slot. However, some additional distinctions are necessary to rule out other elements that may also occur in this postverbal position. A distinction is made between objects, which are unmarked, and prepositional constructions, which can be further cut into a preposition and its head. Compare the pair of clauses below:

(36) a. Wǒ shuō **Hànyǔ.** **object**
I speak Chinese
'I speak Chinese.'

b. Tā **duì** **wǒ** shuō **prepositional construction**
3sg towards I say
'He says to me'

The use of semantic criteria is limited but cannot be totally avoided. The inherent meaning of the postverbal NPs serves to distinguish objects from what are called complements, *bǔyǔ* in Chinese. Complements express duration, quantity, or frequency, and may be tested by asking if they provide answers to questions like "how long", "how much", "how often", etc., instead of expressing a "what" (Lin 1990: 44; Zhao 1983: 204). The next pair of clauses contrasts a complement and an object:

(37) a. Nǐ yào děng **shí** **fēn** **zhōng.** **complement**
you must wait ten minute time **of time**
'You must wait for ten minutes.'

b. Nǐ yào děng **wǒ.** **object**
you must wait I
'You must wait for me.'

The solution is convenient in that every NP in a sentence can be given a label without there being a remainder group, the status of which is unsure. On the other hand, this approach does not produce much information about the relationships between form, function, and meaning. In traditional grammar the notion of transitivity serves to link these three aspects. Within a structuralist framework, transitivity is reduced to a label that describes basically the form, i.e. the position alone.

As illustrated in (35a-e), the verbs that can take objects in the structuralist sense, range from the most stative predicates like *shì* 'be' and *zài* 'be at' to the most dynamic action verbs like *dǎ* 'hit'. Hence, the transitive verb class is so broad and diverse that the verbs are not likely to share many other features than their ability to be directly followed by a postverbal NP. There is no common semantic denominator for transitive verbs; the postverbal NP may be patient, goal, theme, locative, etc. Neither is transitivity reflected in verbal morphology. A predicate used in a transitive sense has the same form it has in its intransitive use: e.g. *guà* 'be hanging somewhere' or 'hang something', *fàng* 'be somewhere' or 'place something somewhere'. Finally, transitivity in the structuralist sense does not correlate with such

major grammatical processes as the *bèi* passive and the *bǎ* construction. Both processes require certain types of predicates, whose complements describe affected entities, but these predicates cannot be defined in terms of structural object-taking capacity. Thus, measured with marking phenomena, verbal morphology, and relation to grammatical processes, transitivity, if defined in structural terms, is not a concept that explains how verbs behave in Chinese grammar.

3.1.2.3.2. Semantic transitivity

An alternative approach is to apply a semantic view of transitivity to Chinese. This is what Li and Thompson do in their Functional Reference Grammar. They reserve the term *transitive* for those verbs that describe situations where one participant is doing something to or directing some behavior at another participant. According to their definition, verbs like *chī* 'eat', *kàn* 'read', and *mà* 'scold' are transitive, whereas *fēi* 'fly', *kū* 'cry', and *zhù* 'live' are classified as intransitive. (Li and Thompson 1989: 155-159.)

A semantic interpretation of transitivity has the advantage that it can be related to various types of grammatical phenomena. We can, for example, find verb pairs where one of the verbs lexicalizes a transitive meaning while the other expresses an intransitive situation: e.g. *shā* 'kill' and *sǐ* 'die'. On the whole, however, transitivity does not readily show up in the verbs themselves; a vast number of Chinese verbs can be used both transitively and intransitively depending on the construction they are placed in. If transitivity is to provide anything other than a way of labeling these two types of senses, we need to find a correlation between transitivity and grammatical processes.

There are two grammatical constructions that are often said to require transitive predicates. One is the *bǎ* sentence which is commonly described as indicating disposal or affectedness of the direct object (e.g. Li and Thompson 1989: 461, 468-480). Consequently, when we see a clause with *bǎ* we should be able to assume that it is transitive. Conversely, we would not expect to find an intransitive verb appearing in this construction. By and large this appears to be what can be attested in practice. Verbs like *fàng* 'put', *xiě* 'write', and *xǐ* 'wash' are compatible with the *bǎ* construction, whereas *zài* 'exist', *yǒu* 'have', and *shì* 'be' are not. Yet, there is also the problem of multiple senses and fuzzy boundaries. Verbs are versatile in their meaning and some of those which usually seem to be intransitive may, in some cases, appear to be transitive. In the example below, the verb *kū* 'cry' is used in two different ways (from *Chūjí Hànyǔ kèběn* 1993: 199):

(38) a. Mèng Jiāng-nū tīng le fēicháng shāngxīn,
Meng Jiang-girl hear PFV extremely broken hearted
'When Meng Jiang heard it, she was completely broken hearted'

b. tā **kū** a, **kū** a, **kū** ge bu tíng.
3sg cry PRT, cry PRT, cry PRT not stop
'she cried and cried and cried without stopping.'

c. Zuìhòu bǎ chéng qiáng dōu gěi **kū** dǎo le.
finally BA city wall all GEI cry collapse PFV
'Finally she cried down the city wall.'

In clause (38b) *kū* 'cry' is an ordinary intransitive verb. In (38c), however, it appears as the predicate of a *bǎ* sentence, which would suggest that it is here used transitively. Also semantically clause (38c) seems to possess the characteristics of a transitive clause; the crying of the girl is portrayed as causing the wall to collapse. The addition of *gěi* further enhances the disposal function of the construction (see Li and Thompson 1989: 482, 508).

Example (38) could be taken as support for a semantic view of transitivity. Because the semantic conditions for a *bǎ* sentence are fulfilled, the construction becomes acceptable even with a verb that normally would not qualify as transitive. Similarly, we could argue that there is a shift in verb meaning in the next example. Hence, *kū* 'cry' becomes 'mourn' and *xiào* 'laugh' means 'ridicule' when it takes a complement.

(39) a. Tā kū tā de zhàngfu.
3sg cry 3sg GEN husband
'She is mourning her husband.'

b. Tā xiào wǒ.
3sg laugh I
'He is laughing at me.' 'He's ridiculing me.'

Ultimately, however, semantic transitivity is a diffuse concept, unless it is explicitly defined in terms of semantic relations. This, in turn, requires a solid semantic theory. Otherwise we are left wondering when is a participant doing something to or directing some behavior at another participant? There are a number of semantic relationships where it is not clear how "directed" the action is, for example: *chàng gē* 'sing a song', *shuō Hànyǔ* 'speak Chinese', or *wàngjì zìjǐ de zérèn* 'forget one's duties'.

3.1.2.3.3. Testing transitivity

The notion of transitivity is based on the assumption that there is a correlation between a syntactic behavior and a certain semantic content. The major issues to test are: i) Is there a correlation between predicate meaning and the NP marking? ii) Is there a correlation between the meaning of a predicate and its participation in grammatical processes?

The answer to the first question is negative. As illustrated already, marking of the postverbal complement does not vary according to the type of the predicate. Unlike English, Chinese does not distinguish between direct participants of verbs like *dǎ* 'hit' and those of verbs like *qù* 'go' or *shì* 'be' by marking their complements differently. Instead, the crucial distinction in Chinese seems to be between direct and indirect participants of a given predicate. Recall example (36a) where the expression *shuō Hànyǔ* 'speak Chinese' contains a direct unmarked participant, whereas the indirect participant in (36b) is preceded by a preposition: *tā duì wǒ shuō* 'he says to me'. Further examples will be given in 3.1.2.3.4.

There are two syntactic processes that have been associated with transitivity in Chinese. One of them is the *bǎ* construction. There is, however, a complicating factor, namely the fact that the *bǎ* construction is a multi-factor phenomenon. The object in *bǎ* sentences is usually referential and known to the hearer. At the same time it is somehow manipulated, dealt with, or something happens to it. Thus, the acceptability of a *bǎ* sentence may be attributable to these factors rather than to transitivity per se. The examples below, both from Li and Thompson (1989: 468, 477), illustrate how clauses that do not fulfill these conditions are incompatible with a *bǎ* constructions despite the presence of an object-like NP:

(40) a. *Tā bǎ Zhāngsān kàn dào le.
3sg BA Zhangsan see arrive PFV/CRS
'He was able to see Zhangsan.'

b. *Tā bǎ gē chàng le.
3sg BA song sing PFV/CRS
'He sang the song.'

Another construction that requires rather dynamic verbs is the *bèi* passive. But this construction too is constrained by factors that have nothing to do with transitivity per se. Besides disposal, the *bèi* constructions tend to represent adverse situations (Li and Thompson 1989: 501-503). It could be the lack of adversity rather than transitivity that makes the *bèi* unacceptable with a particular verb. Hence, while verbs in *bèi* sentences are likely to be transitive, the inability to appear in such a

construction is no proof of intransitivity. For example the verb *xiàng* 'resemble' takes a direct object according to Li and Thompson (1989: 472) but does not appear in *bèi* constructions (Wang and Wang 1995: 91).

Finally, if we tested each verb with both *bǎ* and *bèi*, we may end up with contradicting results as some verbs may pass one of the tests but fail the other. Consider the examples below (from Li and Thompson 1989: 475, 496):

(41) a. incompatible with *bèi*

Tā	**bǎ**	nèi	ge	wèntí	**xiǎng**	le	hěn	jiǔ.
3sg	BA	that	CL	problem	think	PFV	very	long

'He thought about that problem for a long time.'

b. incompatible with *bǎ*

Zhāngsān	**bèi**	rén	**kànjiàn**	le.
Zhangsan	BEI	person	see	CRS

'Zhangsan was seen by people.'

3.1.2.3.4. Alternative marking patterns

Basically in Chinese, marking of postverbal NPs is related to semantic roles. Other types of differences in semantics or discourse prominence are usually expressed through means like verb compounding, *bǎ* construction, focus structures, etc. But there are some instances where a postverbal NP can be marked in two different ways without an apparent difference in semantic role. Typically, such cases involve a choice between an unmarked NP and a locative phrase. For example:

(42) a. Nǐ zuò **(zài) zhè-biān**, wǒ zuò **(zài) nà-biān.**
you sit (at) this-side, I sit (at) that-side
'I sit in this side and you sit in that side.'

b. Wô zhù **(zài) zhè ge fángzi-li.**
I live (at) this CL apartment-in
'I live in his this apartment.'

This kind of alternation is a limited phenomenon in Chinese. First, only a subset of verbs can take a postverbal locative and, second, only in certain cases can this locative be treated as if it was an object. While preverbal locative phrase may occur with almost any verb to describe the general location for the event or action, the postverbal location is restricted to verbs expressing displacement, posture, appear-

ance, and placement. It expresses where the subject (in the case of intransitive verbs) or the object (in the case of transitive verbs) is located as a result of the event or action in question. (Li and Thompson 1989: 398-406.)

Now, what is the difference between a postverbal locative phrase as contrasted with an unmarked NP? A poll among native speakers produced answers describing different types of situations where one or the other option would be preferred. For example, *Nǐ zuò **zài nǎr***? 'Where do you sit?' would be natural in a context where a person already has a seat. *Nǐ zuò **nǎr*** could be used to inquire where a person is going to sit. The verb *zhù* gave similar results. *Zhù **zài fángzi li*** 'live in an apartment' can be used when the actual location is at issue. An unmarked complement would be natural when people are discussing different places one could live in, as in *Zhù **fángzi** hěn shūfu, zhù **shāndòng** bù shūfu* 'It's comfortable to live in an apartment, it's uncomfortable to live in a cave.' (Yang Huan-dian, personal communication.) Pursuing the question further is out of the scope of this dissertation. The main point is that this kind of difference in coding cannot be captured with the notion of transitivity but must be tackled with concepts that take into account the discourse context.

3.1.2.3.5. Other traditional distinctions

Instead of transitivity, a distinction made traditionally in Chinese linguistics is that between 'ordinary' verbs (*dòngcí*) and adjectival verbs (*xíngróngcí*). The two have different syntactic properties, a major difference being that, as a rule, only adjectival predicates can be modified with *hěn* 'very', 'very much'. Again, this is a distinction that is not clear-cut. Verbs describing mental activities, such as *xǐhuan* 'like' or *pà* 'fear', may be intensified with *hěn* even though other verbs, such as *pǎo* 'run' or *dǎ* 'hit', may not.

Another difference is that adjectival predicates have a more restricted capacity to appear with object-like complements than ordinary verbs. It appears that adjectival predicates describing mental, psychological, or other transitory states are more prone to take object-like NPs than those describing more permanent situations.

(43) a. Nǐ **máng** zhe shénme?
you busy DUR what
'What are you busy with?'

b. Wǒ bu **tān** tā de míng.
I not greedy 3sg GEN fame
'I don't covet his fame.'

In structural analysis this kind of predicate ambiguity is handled with the concept of function. Adjectives like *máng* and *tān* are said to function as verbs (*dòngcí*) when they are in contexts like the one in clauses (43a, b). Compared to English, and especially to Korean, there is far less rigidity in Chinese as to what kind of element can function in a certain capacity. Nouns can function as predicates and verbs can function as subjects without any outward change in their form.

A common way of classifying clause types in Chinese linguistics is to do it according to the element that functions as the predicate (e.g. Chao 1968: 87). The predicate can be a noun, an adjective, a verb, or a clause.

(44) a. Jīntiān **xīngqītiān.** **noun as a predicate**
today Sunday.
'Today is Sunday.'

b. Hànyǔ hěn **nán.** **adjective as predicate**
Chinese very difficult
'Chinese is very difficult.'

c. Wǒ **mǎi** shuǐguǒ. **verb as predicate**
I buy fruit
'I'll buy some fruit.'

d. Mǎlì **gēzi** **dà.** **subject-predicate**
Mary stature big **construction as a predicate**
'Mary is tall.'

The clauses (44a-c) are straightforward illustrations of how certain types of predicates are used to form certain types of clauses. The last example (44d) is somewhat different, because it is taken to contain a complex predicate. The standard analysis in the PRC is to assume that this is a two-level structure. The NP *Mali* is the subject of the sentence as a whole. The predicate is considered to be a small clause: 'stature (is) big'. In a further cutting, the predicate can be divided into two constituents. On this level, we have the minor subject 'stature' and the minor predicate 'big'.

A classification like this relates predicate type with clause type but does not explain the relationship between the two. As illustrated in (43a-b), a lexical item can belong to more than one category and, hence, can form more than one type of clause. Sentences with a whole clause as a predicate constitute a mixed class with a variety of subtypes. At the same time, clauses with a verb as the predicate, exhibit further distinctions vis-à-vis how many nominal arguments the verb takes or what kind of grammatical processes the clause can participate in.

3.1.2.3.6. Concluding remarks

My conclusion is that none of the distinctions discussed so far constitutes a central organizing principle in Chinese. Transitivity defined in structural terms does not explain what constrains Chinese verbs in their complement taking, NP marking, or participation in grammatical processes. A semantic approach seems to be more promising, but it is not clear exactly what semantic transitivity is. Without a clear definition, transitivity cannot serve as a link between form, meaning, and syntactic behavior, which is central to the traditional concept of transitivity (cf. Li Ying-che 1971: 105). The traditional Chinese distinction between *dòngcí* and *xíngróngcí* captures some facets of verbal behavior but does not account for further distinctions within these groups. Some other basis is needed, if we want to subcategorize Chinese predicates in a way that explains their use in different types of clauses and syntactic constructions.

3.1.2.4. Comparison: syntactic transitivity in English, Korean, and Chinese

The tables below summarize the discussion of transitivity showing how English, Korean, and Chinese differ from each other. The results are based on linguistic literature and checked against three sample texts of each language. The Korean and the Chinese texts are the ones analyzed in chapter 4. The English texts are listed in the bibliography under 'Data sources'.

syntactic transitivity	**in English**	**in Korean**	**in Chinese**
correlates with semantic transitivity	rather closely	to some extent	no
reflected in verbal morphology or in lexical choice	to some extent	rather closely	to some extent
related to passivizability	yes	no	no
coincides with a major distinction in verbal behavior	yes	no	no

Table I. Syntactic transitivity in English, Korean, and Chinese.

The table represents a comparison of syntactic transitivity as it is related to semantic transitivity, morphology, grammatical processes, and other major distinctions in grammar. Syntactic transitivity is defined in terms of complement marking. The coding used for prototypical patients is taken to be the marking pattern for syntactically transitive clauses. In English and in Chinese this means an NP that follows the predicate without an intervening preposition. (Copula and existential verbs have not been considered.) In Korean the corresponding marking is an NP that carries the accusative marker. Semantic transitivity is tested by asking if the utterance could be an answer to *What did X do to Y*? All the texts are narrative stories characterized by concrete actions. Therefore, the results should be reasonably comparable.

3.1.3. Grammatical relations

3.1.3.1. On subjects and topics

The tradition in linguistic studies is to assume that there are two basic grammatical relations: subject and object. These two notions together with the predicate are used to explain basic clause types. Objects and object-like components were discussed together with transitivity in section 3.1.2.2. In this section, I examine subjects and subject-like elements.

According to the traditional view, subject is the doer of the action (actor) or the element that expresses what the sentence is about (topic). In English, the subject is the element that occurs right before the predicate verb and agrees with it in number: e.g. *He is laughing* vs. *They are laughing*. As the subject can be identified on grammatical grounds, the fact that not all subjects are actors or topics does not cause serious analytical problems. The following English examples illustrate how the features associated with subjects may be distributed in different ways among the elements of the sentence. Consider the NPs written in boldface in the following example:

(45)	a. **Mary** ate some apples.	b. Today **Mary** ate some apples.	c. **The apples** were eaten by Mary.
formal subject	x	x	x
semantic actor	x	x	-
sentence topic	x	-	x

Each of the above clauses contains a formal subject, a semantic actor, and a sentence topic. In (45a), the formal subject *Mary* is simultaneously also the actor and

the topic. In (45b), *Mary* is the subject and the actor but the word *today* is the sentence topic. In (45c), the subject and the topic coincide in *the apples,* but *Mary* is the actor. Thus, in every sentence in this example, the grammatical subject consists of a different blend of syntactic, semantic, and discourse properties.

Traditional approaches assume that subject is a universal notional category. It is taken to be basic, a grammatical primitive that can be identified in every language. Differences may be found on the area of marking patterns or syntactic properties of the subject, but the characterization of subjects as actors or what the sentence is about, is expected to be valid cross-linguistically.

Structural linguistics shares most of these basic assumptions about the subject. Sentences are described in terms of subject, object, predicate, etc. In theory, the cutting of the sentences is to precede the labeling of the elements. In practice, however, as pointed out by Palmer (1982: 128-129, 132), the decisions where to cut often depend on the grammatical identification of the elements.

Neither traditional nor structuralist approaches to grammar focus on the questions of what kind of blend and how relevant a notion the subject really is in a given language. Research done by Li and Thompson (1976) suggests that some languages are more insightfully described if topic rather than subject is taken to be basic. According to them, there are four types of languages in this respect: i) languages that are subject-prominent; ii) languages that are topic-prominent; iii) languages that are both subject-prominent and topic-prominent; iv) languages that are neither subject-prominent nor topic-prominent. English and other Indo-European languages belong to the first type. In such languages subject is a crucial grammatical relation. Every sentence is likely to contain a subject, even if it just appears in the form of an empty *it*. The subject is easily identifiable and plays an important role in grammatical processes. (Cf. Givón 1993, I: 94.) Chinese and the Lolo-Burmese languages Lisu and Lahu are examples of topic-prominent languages. In them, there is no need for a "dummy" subject. Topic rather than subject plays a significant role in sentence construction and is easily identified on grammatical grounds. Subject is not even a necessary part of a Chinese sentence. Korean and Japanese are subject-prominent and topic-prominent. Subject and topic are both formally marked and play important roles in grammar. Finally, there are Philippine languages like Tagalog where the subject and the topic have merged and are not distinguishable in all sentence types. (Li and Thompson 1976: 459-460.)

Given that English, Korean, and Chinese are all different vis-à-vis subject prominence, we can expect that they will also differ in how adequately the notion of subject can capture essential features of their sentence structure. I will first examine traditional analyses of subject and topic in Korean, and then take up similar questions in Chinese, adding a structuralist point of view.

3.1.3.2. Subjects and subject-like elements in Korean

3.1.3.2.1. Using formal criteria

The common way of identifying grammatical relations in Korean is to rely on formal marking patterns. The basic coding pattern for subjects is the nominative case marker *-i/ka* which is frequently called "the subject marker" in literature.

(46) a. Celmuni han salam-**i** tule-o-ass-ta.
young.man one person-NOM enter-come-PAST-DEC
'A young man came in.'

b. Nalssi-**ka** ttattusha-ta.
weather-NOM warm-DEC
'The weather is warm.'

Topics are marked with the particle *-un/nun*. When a subject or an object is simultaneously functioning as the topic of the sentence, the topic particle replaces the original case particle. In other relations, such as locative, instrumental, dative etc., the topic particle is added to the existing case particle. For example:

(47) a. **nominative = topic**
Yengswu-**nun** sakwa-lul mek-ess-ta.
Yengswu-TOP apple-ACC eat-PAST-DEC
'Yengswu ate an apple.'

b. **accusative = topic**
Ku sakwa-**nun** nwu-ka mek-ess-ni?
that apple-TOP who-NOM eat-PAST-Q
'That apple, who ate it?'

c. **locative = topic**
San twi-**ey-nun** cak-un cip-i iss-ta.
mountain back-in-TOP small-REL house-NOM exist
'Behind the mountain, there is a little house.'

In clause (47a) the notions of subject, actor, and topic all coincide in the NP *Yengswu*. The clause (47b) contains a topic 'that apple' and a subject 'who'. Semantically the topic is a patient; consequently the NP 'that' apple is a topicalized object. In (47c), the locative phrase 'behind the mountain' has been marked as the topic. The subject is the NP 'little house'. None of these sentences pose problems for traditional analyses as each constituent is easily identified. The challenge comes from sentences like the one below:

(48) Meyli-**nun** son-**i** cak-ta.
Mary-TOP hand-NOM small-DEC
'Mary has small hands.'

By formal criteria this sentence appears to contain two subjects. Both of the NPs could be marked the same way in this sentence. The TOP-NOM coding is the most neutral pattern, but NOM-NOM, TOP-TOP, and NOM-TOP markings are all existing possibilities. Also, semantically, both of the NPs are rather subject-like. The sentence as a whole is about Mary but, more specifically, it is about her hands. The traditional conclusion has been that this is a sentence with two subjects, a "double-subject sentence".

A drawback with such an analysis is that two NPs whose functions are not identical are labeled the same way. The sentence as a whole is about Mary but only the subject NP bears a direct grammatical relation to the verb (i.e. *What is small? - The hands are small.* Not: *Mary is small.*) The features traditionally ascribed to subjects have been distributed between the subject and the topic. Traditional approaches fail to capture this phenomenon because they do not distinguish between the notions subject and topic. Even if they use the term topic, it is just an additional label, not a separate concept.

3.1.3.2.2. Distinguishing subjects from topics

More modern analyses of East-Asian languages keep the terms subject and topic distinct, treating them as two different types of notions. For example, Sohn (1994), has adopted Chafe's (1976) definition of topic as the element which "sets a spatial, temporal, or individual framework within which the main predication holds" (Sohn 1994: 191). Thus, clauses like (48) are analyzed as consisting of a separate topic, a subject, and a predicate. If understood in this way, we can recognize four different types of situations in Korean. Sentences can have a topic only, a subject only, a subject which at the same time functions as the topic, or there could be two different NPs, one of which is the subject while the other is the topic.[10] The following examples illustrate these possibilities (cf. Li and Thompson 1989: 85-92):

(49) a. **Onul-un** ka-ci mos-ha-nta. **topic only**
today-TOP go-NML cannot-do-DEC
'Today it is not possible to go there.'

b. **Nwun-i** o-nta. **subject only**
snow-NOM come-DEC
'It is snowing.'

c. **Chinkwu-nun** tule-o-ass-ta. **subject = topic**
friend-TOP enter-come-PAST-DEC
'The friend came in.'

d. **Meyli-nun** **meli-ka** aphu-ta. **topic + subject**
Mary-TOP head-NOM ache-DEC
'Mary has headache.'

3.1.3.2.3. Concluding remarks

In traditional approaches there has been a tendency to equate case markers with certain grammatical relations. The accusative case has been analyzed as the object marker, the nominative case has been thought as the subject marker, and topic particle has been interpreted either as a subject = topic or an object = topic. With such a basic assumption, it is hard to discern what kind of other possible functions these particles may have. As was shown in 3.1.2.2., accusative case in Korean is by no means restricted to prototypical direct objects. Similarly, the nominative and the topic particle have more than one function as will be illustrate in 3.2.3.2.

The conclusion so far is that the properties commonly associated with subjects in one language may be distributed differently in another. A Korean sentence does not necessarily contain a subject, and when it does, there may simultaneously be a topic which is distinct from the subject. The nominative case and the topic marker provide a starting point for subject and topic identification. However, there is no one-to-one correspondence between syntactic coding and a certain relation or a function. Besides their basic function, these particles are used for other purposes as well. Traditional grammar lacks a separate notion for topic. This hampers the analysis of sentences which are most readily explained in terms of both subject and topic.

3.1.3.3. Subjects and subject-like elements in Chinese

3.1.3.3.1. Using formal criteria

In Chinese, subjects are not marked with case markers. Neither is there anything like the agreement in English which would help one to determine which NP is the subject. In absence of formal clues, a variety of opinions have been expressed concerning how sentences in Chinese should be analyzed. In general, subject identification has been based either on the position of the NP or on semantic criteria. The structuralist approach employed in mainland China, has taken the former stand,

identifying subjects mainly by their preverbal position (see e.g. Lin 1990, Zhao 1983).[11]

(50) a. **Lìlì** chī le sān kē táng.
Lili eat PFV three CL candy
'Lili ate three candies.'

b. **Miàntiáo** mài wán le.
noodle sell finish PFV/CRS
'The noodles have been sold out.'

c. **Mǎlì** shi lǎoshī.
Mary be teacher
'Mary is teacher.'

These clauses represent the three basic types of subjects distinguished in the structuralist framework. The boldface NPs are: *shīshì zhǔyǔ* or 'actor subject' in (50a), *shòushì zhǔyǔ* or 'patient subject' in (50b), and *dāngshì zhǔyǔ*, which could be translated as 'thing' or 'theme subject' in (50c).

The structuralist approach takes the preverbal NP position to signal subjecthood, while the postverbal position is associated with objects, no matter what the semantic relations are. There are some interesting consequences of such an interpretation. Consider the following pair of clauses:

(51) a. **Tàiyáng** chū lái le. **subject**
sun come.out come CRS
'The sun came out.'

b. Chū **tàiyáng** le **object**
come.out sun CRS
'Out came the sun.'

In both clauses, *tàiyáng* 'the sun' is the entity that comes out. In the structuralist analysis, this NP is interpreted as a subject in one position and as an object in another position. Hence, if we are concerned with the meaning of these clauses, not only labeling the constituents, both the subject and the object (in structuralist sense) must be further described with semantic labels.

This is not to say that preverbal position would not be associated with subjects and postverbal position with objects. Prototypically this is the situation, as in *Tā dǎ wǒ* 'He hits me'. However, the position of an element also has functions other than

just signaling a certain relation. This is obscured in a structuralist approach that equates certain positions with certain grammatical relations.

3.1.3.3.2. Using semantic criteria

To illustrate how different functions emerge from different combinations of a grammatical relation and a position, let us switch to another interpretation of subject. Li and Thompson (1989: 20) use semantic criteria for identifying subjects in Chinese. The two alternative analyses are contrasted below:

		Li and Thompson	structuralist view
(52)	a. Lái le **rén** le. come PFV person CRS 'Somebody came.'	**subject** **indefinite**	**object**
	b. **Rén** lái le. person come PFV/CRS 'The person came.'	**subject** **definite**	**subject**

In Chinese preverbal NPs are usually definite. Postverbal NPs may be either definite or indefinite; those of one-participant verbs tend to be indefinite. Because the structuralist approach has defined the function of the word order a priori, it must ignore the semantic similarity between the two clauses, i.e. that in both of them the NP is a semantic actor. For the same reason, it does not capture the relationship between position and definiteness. Hence, a definite NP is interpreted as a subject and an indefinite NP as an object. Now, compare the above example with the next one where both clauses contain a patient-NP. Again, the semantic relation does not change when the position or definiteness changes (from Li and Thompson 1989: 21):

		Li and Thompson	structuralistic view
(53)	a. Wǒ zài mǎi **shū** le. I DUR buy book CRS 'I am buying a book.'	**object** **indefinite**	**object**
	b. **Shū** wǒ mǎi le. book I buy CRS 'The book, I bought it.'	**object** **definite**	**subject**

3.1.3.3.3. Distinguishing subjects from topics

Like traditional grammar, structuralism does not distinguish subjects from topics. In Chinese the consequence is that we end up with a variety of different kinds of subjects: actors, patients, locations, time, etc. If, on the other hand, the two notions are kept distinct, both subjects and topics can be described as having certain characteristics. The subject bears a grammatical relation to the verb. Within certain limits it is possible to predict what kind of subject a verb will take. Topics are not this way constrained. The topic provides the scope for the comment that follows but does not need to be an argument of the predicate (Li and Thompson 1976: 463; 1989: 15). This loose connection to the predicate can be clearly seen in the next example where the topic is a mere adjunct at the beginning of the sentences (from Li and Thompson 1989: 97).

(54) **Dàxué** xiànzài duōbàn shi nán-nǚ.
university now most be boy-girl
'Universities, most are coeducational nowadays.'

In topic-prominent languages, sentences like this are perfectly normal; they are in no way marked or derived constructions. Topics, unlike subjects, are also readily identifiable in topic-prominent languages. Li and Thompson (1989: 86) define topic in Chinese as the element that comes first in the sentence. Optionally, it may be followed by a pause or a pause particle:

(55) **Nèi zhī gǒu (a/me/ne)**, wǒ yǐjīng kàn guo le.
that CL dog I already see EXP CRS
'That dog, I have already seen.'

The topic does not necessarily coincide with the subject. As in example (54), a clause can contain a separate subject in addition to the topic. Li and Thompson (1989: 85-92) list the following possibilities: a sentence in Chinese can be interpreted as having i) a topic only, ii) a subject only, iii) a subject which at the same time functions as the topic, or iv) a subject and a topic which are distinct from each other. The alternatives are illustrated below:

(56) a. **Wūzi** yǐjīng sǎo hǎo le. **topic only**
room already wipe good PFV/CRS
'The room has been swept already.'

b. Xià **xuě** le. descend snow CRS 'It is snowing.'		**subject only**
c. **Péngyou** lái le. friend come PFV/CRS 'The friend came.'		**topic = subject**
d. **Mǎlì yǎnjing** hěn dà. Mary eye very big 'Mary has big eyes.'		**topic + subject**

Semantically the topic can have any kind of relation to the predicate (e.g. *wūzi* = patient, *péngyou* = actor) or none at all (*Mǎlì*). Grammatically it is marked by its position. Subjects, in contrast, do not have a fixed position but may occur clause initially (*péngyou*) or postverbally (*xuě*, *yǎnjing*). They, however, bear a relation to the predicate. A distinction between the topic and the subject along these lines is commonly accepted among Western-oriented linguists (see, for example, Tsao 1979, Liu 1982, Huang 1994, etc. for Mandarin, or Matthews and Yip for Cantonese 1994).

Now, let us compare how clauses like (56a-d) are usually analyzed in the PRC. The underlined NPs would be interpreted as follows:

(57)	a. wūzi	**subject**
	b. xuě	**object**
	c. péngyou	**subject**
	d. Mǎlì	**the main subject** (subject of the sentence)
	yǎnjing	**secondary subject** (subject of the predicate part)

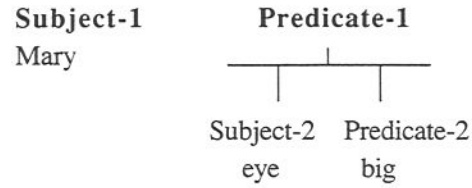
We can notice that what in China is called subject, is what Li and Thompson call topic. Li and Thompson's topic may or may not coincide with the subject, whereas within the structuralist framework the two always coincide. In other words, the structuralist approach does not distinguish topics in their own right. The term 'topic', when used in linguistic literature in China, tends to be an extra semantic label for certain types of subjects (cf. Chao's analysis 1968: 67-104).

This difference in interpretation has repercussions on several areas of grammar. I take up only the question of the so-called double-subject constructions, or what is called *zhǔwéi-wèiyǔjù* in Chinese, a 'sentence with a subject-predicate construction as predicate'.

(58) Mǎlì yǎnjing dà.
Mary eye big
'Mary has big eyes.'

If topics are not distinguished from subjects, the logical conclusion is that this sentence contains two subjects. In the PRC, the first NP is taken to be the main subject in the sentence as a whole. The predicate is considered to be a small clause consisting of a subject 'eyes' and predicate 'big'. (Cf. Chao 1968: 95-97) This is to assume a two-level structure for the clause:

(59)



With a structuralist interpretation, it is necessary to posit a special category for predicates which are made up of a clause. But if we adopt the analysis suggested by Li and Thompson (1989: 85-95), the structure is simply TOP + SUB + PREDICATE and the predicate slot is filled with an adjective. In this alternative analysis, topics are identified by position, whereas subjects are non-patient arguments that bear a grammatical relation to the predicate verb.

3.1.3.3.4. Concluding remarks

As illustrated, it is hard to define subject in Chinese in purely syntactic terms, except by equating it with clause-initial position, in which case we must totally disregard semantics. A semantic definition of subject, on the other hand, does not correspond to a grammatical form or a position. A distinct notion for topic can clarify various aspects of sentence structure. At the same time, it provides a basis for studying what kind of syntactic, semantic, and pragmatic properties are associated with subjects and objects in Chinese.

3.1.3.4. Comparison: subject and topic as syntactic notions

The table below summarizes the discussion of subjects and topics in English, Korean, and Chinese presenting the main syntactic differences of these notions in the three languages.

	English	Korean	Chinese
the prominent notion	subject	subject & topic	topic
grounds for subject identification	preverbal position & agreement with the predicate	case marking (in complementary distribution with the topic marker)	no marking & no agreement
ground for topic identification	position	position & marking	position & optional pause or particle

Table II. Subject and topic in English, Korean, and Chinese

3.1.4. Discourse

3.1.4.1. Discourse structuring as coded in sentences

In this section I discuss questions related to how structures are used together to create a coherent text. The basic ingredients for producing a coherent text include: how to introduce new participants, how to refer back to already evoked participants (anaphora), and how to highlight what is relevant and downplay what is less important. In other words, languages need means for signaling differences in relative importance of information. Such means, we can predict, must be somehow observable in the sentences. They may show up as various kinds of markers, as changes in word order, or as choices of a certain grammatical construction instead of another which basically has the "same meaning". Yet, sentences in isolation do not reveal how whole texts are structured because phenomena related to discourse structure are parts of larger organizing patterns.

Discourse structuring deals with strategies rather than with hard and fast rules. There are certain typical patterns which emerge if we take whole texts and study them systematically. For example, there is a general tendency in languages to place new information towards the end of the sentence. Often this is done with so-called presentative sentences which are used to introduce new participants to the text. There may also be markers associated with new information. Old information, on the other hand, typically occurs more towards the beginning of the sentence, and there can be other marking devices signaling that the information in question is

assumed to be in the consciousness of the hearer. When several topics have been evoked, some of them may be contrasted one with another. This too is likely to show up somehow in the linguistic structuring. Consider the following example:

(60) a. My aunt had a big fat cat.
b. I didn't especially like that cat
c. but, unfortunately, the cat was very fond of me.
d. It would often jump onto my lap
e. and 0 refuse to go away.

In English, the definite and indefinite article play an important role in basic discourse structuring. In clause (60a), *a big fat cat* is assumed to be new to the hearer and is therefore found at the end of the sentence and marked with the indefinite article. In the next sentence the NP *cat* is already an established participant; now it carries the demonstrative pronoun *that*. The pronoun simultaneously individuates the cat and contrasts it with the class of cats in general. In (60c) *the cat* is a subject = topic; it occurs in the clause-initial position and carries the definite article *the*. Finally, clauses (60d, e) continue the already established topic. The first reference back to *the cat* is done with a pronoun and, in the last clause, the NP is ellipted altogether. An additional device which plays an important role in spoken language is intonation adding more or less contrast to the NP *cat* in clauses (60b, c).

Now, let us imagine that the story is continued and for the next sentence there are two different structuring options. The impact is rather different depending on whether we choose (61a) or (61b):

(61) a. The cat was crawling with lice.
b. There were lice crawling on the cat.

Clause (61a) goes on talking about the cat adding one more and, plausibly, the most important reason why the cat was not very attractive. This creates a cumulative effect and an expectation that the story will go on and tell us more about the cat. Clause (61b), on the other hand, diverts the attention from the cat to a new participant, *the lice*. The use of a presentative construction raises the expectation that what is going to follow is something about the lice rather than about the cat. The topic changes and the cumulative effect that was created in (60a-e) is diminished.[12]

These are some means English employs for discourse structuring. They illustrate how crucial the discourse context is for understanding grammatical phenomena, such as marking patterns or the position of an NP. In the next two sections I

will examine Korean and Chinese from a discourse perspective, concentrating on the most basic formulae for introducing, establishing, continuing, and contrasting NPs.

3.1.4.2. Discourse structuring and Korean sentences

3.1.4.2.1. Basic patterns

The basic pattern Korean employs for introducing, establishing and continuing topics in discourse can be characterized as: NOM - TOP - zero (= zero anaphora, ellipsis of NP or pronoun). This pattern is easily attested in children's stories which tend to be rather stereotyped in their opening passages. I illustrate this with an opening passage of one of the stories in Hwang (1987: 178):

(62) a. yes nal enu kiph-un san kol-ey
old day certain deep-MD mountain village in

hol emeni-wa atul ttal ilehke sey
lone mother-and son daughter like-this three

sikkwu-**ka** sal-ko.iss-ess-upnita.
family.member-NOM live-PROG-PAST-DEF

b. Hol emeni-**nun** nal-mata kokay neme maul
lone mother-TOP day-each hill across village

pwuca cip-ey ka-se
rich.person house-to go-and

c. ppallay-to hay-cwu-ko
laundry-also do-give-and

d. panga-to ccie-cwu-ko hay-se
mill-also grind-give-and do-so

e. ku phwumssak-ulo ssal-ina pap-ul
that wage-with uncooked.rice-or cooked.rice-ACC

ete-taka
get-while

f. ai-tul-kwa kyewu sal-a.ka-ko.iss-ess-upnita.
child-PLUR-with barely live-CONTIN-PROG-PAST-DEF

'Once upon a time, in a village deep in the mountains, there lived a family of three, a widowed mother, a son, and a daughter. Every day the widowed mother would go to the rich man's house over the hill, do the laundry, grind a mill, and receive either uncooked or cooked rice as a wage; thus she managed to go on living with the children.'

Below a rather literal translation of the same passage shows the relevant discourse-related phenomena. The Korean word order has been retained, the NP-markers are given in the translation, and zero signs denote missing NPs:

(63) **A widowed mother with a son and daughter three person family-NOM** there was.

The widowed mother-TOP	every day village crossed
0	to the rich man's house went
0	laundry (for them) did
0	(for them) a mill ground
0	uncooked or cooked rice as a wage received
0	thus with the children managed to go on living.

The NP *widowed mother* is introduced to the text in a noun phrase whose head is marked nominatively. Then, after being brought to the attention of the reader, it is chosen as the topic, moved to the clause-initial position and marked with the topic particle. In subsequent clauses, the same topic is further continued; this is expressed by omitting the NP. This corresponds roughly to the English formula: indefinite article - definite article - pronoun. The most striking differences between English and Korean involve the use of pronouns and ellipsis. Pronouns do exist in Korean but, compared to English, their use for anaphora is rather restricted. Instead, the typical cohesive device is ellipsis (Chang 1983: 254). It is often possible to build long anaphoric chains extending over several sentences. In English, in contrast, cohesion between sentences is typically achieved with pronouns, ellipsis being confined to clauses within one and the same sentence.

From what has been said above, we can conclude that both the nominative and topic particles play multiple roles as syntactic, semantic and discourse signals. Nominative case in Korean not only marks the subject, but it is also typically found in presentative constructions introducing new participants. New participants are usually indefinite, i.e. they are not assumed to be in the consciousness of the hearer.

Topics are normally definite, i.e. identifiable to the hearer. Hence, the Korean nominative vs. topic marking carries partly the same load as do the definite and indefinite articles in English.[13] For example:

(64) a. Chinkwu-**ka** tule-o-ass-ta.
friend-NOM enter-come-PAST-DEC
'A friend came in.' (e.g. as an answer to "Who came in?")

b. Chinkwu-**nun** tule-o-ass-ta.
friend-TOP enter-come-PAST-DEC
'The friend came in.'
(e.g. as an answer to "What did the friend do next?")

After an participant has been introduced to the text, the first NP is typically marked with a topic particle and the second NP is either in nominative or in accusative case. For example:

(65) a. Chinkwu-nun kulim-ul po-ass-ta.
friend-TOP picture-ACC see-PAST-DEC
'The friend saw a picture.'

b. Chinkwu-nun hwa-ka na-ss-ta.
friend-TOP anger-NOM occur-PAST-DEC
'The friend became angry.'

3.1.4.2.2. Deviations from the default

By deviating from the neutral pattern, either the first or the second NP can be contrasted:

(66) a. NP-TOP NP-NOM/ACC **neutral**
b. NP-**NOM** NP-NOM/ACC **first NP contrasted**
c. NP-TOP NP-**TOP** **second NP contrasted**

The following examples compare a neutral marking pattern with clauses where one of the participants has been contrasted:

(67) a. Yengswu-nun congi-ka philyoha-ta. **neutral**
Yengswu-TOP paper-NOM necessary-DEC
'Yengswu needs paper.'

b. Yengswu-**ka**	congi-ka	philyoha-ta.	**contrasted:**
Yengswu-NOM	paper-NOM	necessary-DEC	*Yengswu*
'Yengswu needs paper.'			
c. Yengswu-nun	congi-**nun**	philyoha-ta.	**contrasted:**
Yengswu-TOP	paper-TOP	necessary-DEC	*paper*
'Yengswu needs paper.'			

Clause (67a), which marks the topic with *-un/nun* and the subject with *-i/ka*, is neutral. In (67b), where both *Yengswu* and the NP 'paper' are marked nominatively, the first NP is a contrasted topic; it is *Yengswu* and not someone else who needs paper. If the subject 'paper' is to be contrasted, i.e. if it is paper that *Yengswu* needs and not something else, then not only the topic but also the NP 'paper' is marked with *-un/nun* (67c).

3.1.4.2.3. Concluding remarks

When variations in marking patterns are related to introducing, establishing, continuing, and contrasting NPs in the text, these kinds of strategies cannot be explained without examining what kinds of larger contexts they occur in. As discourse analysis is a relatively new area of study, it is not surprising that traditional approaches to grammar fail to realize the discourse function of nominative, accusative, and topic marking.

3.1.4.3. Discourse structuring and Chinese sentences

3.1.4.3.1. Basic patterns

In Chinese, the basic pattern for introducing and continuing topics can be characterized as: postverbal position - preverbal position - pronoun or ellipsis. This is illustrated with an excerpt from a story from *Chūjí Hànyǔ kèběn* (1993: 74):

(68) a. Yǒu **yi ge rén** jiào **tā de érzi** qù
exist one CL person call she GEN son go
mǎi huǒchái.
buy matches
'There was a person who told her son to go to buy matches.'

b. **Erzi** ná shang qián.
son take on money
'The son took some money'

c. **0** gāng yào zǒu,
just will go
'and was just about to go'

d. **tā** yòu jiào zhù érzi
she[14] again call stop son
'when she stopped him again'

e. **0** shuō: "Nǐ yào mǎi hǎo de..."
say you must buy good NML
'and said: "You must buy good ones".'

All the new participants in the first sentence are introduced in a postverbal position. The NP 'a person' appears in a presentative construction formed with the verb *yǒu*, while the NP 'son' is brought in as an object. In subsequent sentences, when 'the mother' and 'the son' are established participants, they appear in the preverbal position. A second reference in succession to the same NP is done with zero anaphora. Clause (68d) contains an example of pronominal reference. When written with characters, this *tā* can be unambiguously identified as feminine. But even in spoken Chinese, the identification of correct antecedent is ensured. The occurrence of a pronoun in the middle of a zero-anaphora chain alerts the reader/hearer to switch his attention to the other activated entity, i.e. 'to the mother'.

Because Chinese does not have case markers, word order plays an important role in basic discourse structuring. As stated earlier, word order can be used to signal definiteness vs. indefiniteness. Preverbal NPs are usually definite, while indefinite NPs tend to occur in the postverbal position. This is true especially about subjects. Objects in postverbal position seem to be more neutral. They may or may not be indefinite (e.g. the word 'son' in (68a, d). Once the participants have been established in a text, we can discern the following default:

(69) SUBJECT + PREDICATE + OBJECT
(definite) **(indefinite/definite)**

3.1.4.3.2. Deviations from the default

To move away the elements from their default positions, indicates contrast of some kind. The ordering SUB + OBJ + PRED, contrasts the object with other objects, while the reverse ordering, OBJ + SUB + PRED, contrasts the object as a topic with other topics. The following examples are from Li and Thompson (1989: 20-21):

(70) a Wǒ zài mǎi **shū** le. **postverbal object: indefinite**
I DUR buy book CRS
'I am buying a book.'

b. Wǒ **shū** mǎi le. **Preverbal object: definite**
I book buy PFV/CRS (contrastive)
'I bought the book.' (but not the dictionary)

c. **Shū** wǒ mǎi le. **Preverbal object: definite**
book I buy PFV/CRS (topic/contrastive)
'The book, I bought it.' (the dictionary I didn't want)

Subjects can be contrasted by various means, such as by using demonstrative pronouns, or intonation and appropriate pausing to signal that the subject is going to be contrasted with something that is to follow. Also, to use a pronoun when zero pronoun is expected, can have a contrastive effect. In the following examples (from Li and Thompson 1989: 669-671) the pronoun *wǒ* appears three times in this function:

(71) A: Xià yi bān huǒchē shénme shíhou kāi?
next one CL train what time leave
'When does the next train leave?'

B: a. **0** Bù xiǎode.
not know
'(I) don't know.'

b. **Wô** bù xiǎode.
I not know
'I don't know.' (perhaps someone else does)

(72) A1: Tā zài shénme dìfang chàng gē?
3sg at what place sing song
'Where is she singing?'

B1: Zài dàlǐtáng.
at auditorium
'In the auditorium.'

A2: **Wǒ** hái méi qù guo dàlǐtáng.
I still not go EXP auditorium
'I've never been to the auditorium.'

B2: Méi guānxi, **wǒ** qù guo.
not matter I go EXP
'(That) doesn't matter, I've been (there).'

3.1.4.3.3. Concluding remarks

Structuralist analyses of Chinese tend to lean to the formal properties of sentences. Hence, the discourse function of how the elements are ordered, or which elements are present on the surface, escapes attention. If a certain position is equated with a certain grammatical relation, it is hard to observe what the different strategies are that apply to subjects and objects in different positions. In the 50's and 60's, when problems dealing with grammatical relations were debated in China, discourse analysis was still in its infancy. Now, when there is a broad spectrum of literature available on discourse studies, we can hope that more research will be done on Chinese from this perspective.

3.1.4.4. Comparison: typical discourse formulae in English, Korean, and Chinese

The following table gives a rough characterization of discourse-structuring patterns in the three languages; it presents strategies rather than hard and fast rules. The table does not distinguish between various types of NPs, such as actors and patients, which behave somewhat differently. However, the table has been checked against the Korean and Chinese texts that are analyzed in chapter 4 (see also the Appendix) as well as against the English texts that are listed in the References under the heading 'Data sources'. All the texts compared for this purpose clearly exhibit the tendencies summarized below. The position of an NP is given as 1st NP if the NP in question occurs before the verb in English and Chinese, or towards the beginning of the sentence in Korean. The 2nd NP position refers to a postverbal position in English and in Chinese, and to the position towards the end of the sentence in Korean.

The exceptions to these tendencies are not many in the sample texts. There are some sentences where both the NP-1 and the NP-2 slot are occupied by a new participant. In that case, the first NP is specifically marked as indefinite. For example: ***Etten sunim-i*** *honcase cel-ul cikhi-mye*, lit. '**A certain monk** was keeping a temple alone'. Another type of exception deals with new participants that are treated as if they were known to hearer already at the first mentioning. This creates a sense of shared speech situation, as in the story that begins: *Timothy's mother made him a brand-new sunsuit for the first day of school.*

		English	Korean	Chinese
new information	**marking:**	indefinite article	nominative case	
	position:	2nd NP	2nd NP	2nd NP
old information	**marking:**	definite article	topic marker	
	position:	1st NP	1st NP	1st NP
participant tracking	**topic continued with:**	pronoun	zero	pronoun or zero
	contrast expressed with:	demonstrative pronouns, intonation	change to a non-default marker	change of word order, pronoun instead of zero
	restrictions on zero anaphora:	only within the same sentence	not limited by sentence boundaries	not limited by sentence boundaries

Table III. Reference tracking in English, Korean, and Chinese

3.2. EARLY GENERATIVE LINGUISTICS

3.2.1. Introduction

In various ways the appearance of Chomsky's theories brought a major change of focus in syntactic studies. His *Syntactic Structures* (1957) and *Aspects of the Theory of Syntax* (1965) formed the watershed. Prior to the fifties, grammarians focused on discovering regularities in sentence-forming patterns but they would not try to state what is or is not a possible sentence in a particular language. Chomsky's generative transformational grammar (TG) emphasized the need to be explicit. Rules and definitions should be exactly formulated leaving as little as possible to the intuition or knowledge of the reader. Distinctions cannot be based on subjective

criteria but have to be motivated with objective tests. Lexical items have to be specified so that this information together with the syntactic rules accounts for their grammatical behavior. The goal is that one could generate all the correct sentences of a language, and nothing more than the correct sentences. Moreover, TG represents an explicit attempt to produce a model for universal grammar. The rules and definitions must be specified for each language separately, but the approach itself is meant to be language independent.

Two central notions in TG are *deep structure* and *surface structure*. A certain deep structure can have several surface-structure representations. For example, *He likes to swim* and *He likes swimming* convey basically the same meaning. They are said to differ in their surface form but to represent the same underlying deep structure. The various surface structures are related through transformations. A passive transformation turns a sentence like *The cat ate the fish* into *The fish was eaten by the cat*. Similarly, a transformation called Equi-NP deletion explains the missing pronoun in *He sat down and, opened the book*. The original underlying form of this sentence is taken to be *He sat down and ___ he opened the book*. The NP *he* in the second clause can be omitted because it is coreferential with the pronoun in the first clause.

Transformations are explained in terms of syntactic rules and lexical subcategorization. Much effort is paid in formulating them as precisely as possible. For example, it is not enough just to state that transitive verbs can be involved in the passive transformation while intransitive verbs cannot, and to leave it to the reader to deduce which verb is transitive and which is not. Every single verb in the lexicon needs to be defined as either +transitive or -transitive. Those specified as +transitive have the capacity to take direct objects and can be involved in the passive transformation; -transitive verbs neither take objects, nor do they appear in the passive.

After the heydays of TG, Chomsky has continued to develop his theories. The Government and Binding Theory (GB) came out in the 1980s (Chomsky 1981; 1982; 1986). Instead of transformations, GB has movements and movement rules. The underlying form is called D-structure and the syntactic representation is known as S-structure. The most recent development is the minimalist program (Chomsky 1995). My aim in this section, however, is not to discuss different versions of the generative theory. Instead, I will concentrate on some of the basic assumptions about language that have not changed. Explicit rules and subcategorization of lexical items continue to be crucial goals. Verbs are divided into transitive and intransitive with as many additional subcategories as necessary. Subject and object are taken to be grammatical primitives. Semantics is derivative of syntactic structure, not a motivation for it. For Chomsky, grammar is primarily a study of syntactic structure.

In Korean linguistics, a Chomskyan approach to grammar has dominated syntactic studies during the past several decades. Introduced by young linguists who had received their training in the USA, transformational grammar soon became the main stream of study in the Republic of Korea (Lee Ki-moon 1983: 139). In mainland China, on the other hand, the influence of Chomsky's theories has been minimal, due to the Cultural Revolution which prevailed when interest in TG was strongest in the West (Norman 1993: 153). Transformational and GB perspectives on Chinese are found mainly in research carried out in Taiwan and outside the PRC.

In the next sections, I selectively take up some questions that arise when Korean or Chinese are viewed from a syntactocentric perspective à la Chomsky. I do not repeat the discussion on how to define subjects, objects, or transitivity (see 3.1), but will add further examples illustrating the kind of difficulties these notions have represented. This is done by taking up some of the common tests and criteria employed in generative linguistics. I examine the use of passive as a test for verb classification comparing what kind of characteristics this construction has in English, Korean, and Chinese. In the section of grammatical relations, I take up further questions related to subjects and topics. Finally, in relation to discourse structuring, I address problems concerning anaphora and NP deletion.

3.2.2. Classification of predicates

3.2.2.1. Transitivity and the passive test

In the TG approach, transitive verbs can appear in transitive strings. An example of such a string is *He kicked the cat*, where we have a subject NP followed by a predicate and its direct object. However, not all strings with a similar constituent structure automatically qualify as transitive. For example, *He ran home* is formally similar, but it is analyzed as intransitive. The two clauses can be distinguished by syntactic tests. The application of the passive transformation reveals that only the first one can be cast into passive, an ability which has become diagnostic for identifying direct objects and transitive strings. Another phenomenon, which correlates with passivizability, is a verb's ability to occur with manner adverbials (Chomsky 1965: 103-106.)[15] With these testing instruments one can produce a list which by and large accounts for the English verbs' ability to take direct objects and to undergo passive transformation.

However, the goal of unambiguously subcategorizing all predicates may be somewhat idealistic. Even in English, the correlation between transitivity and pas-

sivizability is not complete. See, for example, Rice's study (1987) on stative and imperfective verbs. Rice gives examples of verbs which in some contexts may appear in the passive even though they usually do not permit passive constructions. Consider the clauses below (adapted from Rice 1987: 180):

(73) a. Tommy resembles the milkman.
b. *The milkman is resembled by Tommy.
c. The milkman is unmistakably resembled by Tommy.
d. Everyone is resembled by someone.

In general, the passive of the verb *resemble* is unacceptable as clause (73b) illustrates. But it becomes more natural when a sense of absoluteness is added, as in (73c, d). Furthermore, sometimes a certain interpretation of the clause makes the passive acceptable; as was illustrated in section 2.1. in example (2): *The auditorium was left unattended by John.* Thus, to some extent, passivizability appears to be a relative matter.

Similarly, a verb's capacity to appear with an object NP may vary depending on what other elements are in the clause. In Finnish, intransitive verbs can be used transitively together with an adverbial (Hakulinen and Karlsson 1979: 178; Kangasmaa-Minn 1983: 255), as in:

(74) a. Nauro-i-n maha-**ni** kipeä-ksi.
laugh-PAST-1sg tummy-my ache-RESULT
Lit. 'I laughed my tummy aching'
or: 'I laughed so much that my tummy started to ache.'

b. Sinä juokse-t minu-**t** läkähdyksiin.
you run-2sg I-ACC exhausted
Lit. 'You are running me exhausted.'
or: 'You are running so much (or so quickly) that I get exhausted'.

Handling this kind of context variation is difficult in models assuming that all verbs in the lexicon can be specified unambiguously as either transitive or intransitive. What they normally do with verbs that show two types of behavior, is to split them into two homophonous entries. For example, the predicate in *He runs a company* is (+transitive), while the one in *He ran home* is (-transitive). But this solution cannot be applied to verbs that only under certain circumstances appear in passive or transitive constructions. Traditional approaches would content to classify them according to the their most typical behavior, but Chomsky's goal is to be exhaustive.

Thus, there is a need to specify the rules under which certain verbs sometimes deviate from their ascribed behavior.

The testing instruments commonly employed in TG, are originally based on studies of English. Care should be exercised if the same tests are applied to other languages. The reliability and usefulness of the passive test depends on the relationship between transitivity and the passive in a particular language. Hence, no simple correspondence between transitivity and passivizability should be assumed a priori.[16]

Another TG assumption which cannot be directly carried over to other languages is the view that passivization does not change the meaning of the transformed clause except for focus and presupposition. The GB counterpart of this standpoint is the principle that no loss of information is allowed in the passive movement. In English, these assumptions make sense because the passive is used for functions like topicalization, impersonalization, and focusing on the agent:

(75) a. The first prize was given to Mrs. Smith. **topicalization of object**
b. The thief has not been caught. **impersonalization**
c. This book was written by a young school girl. **focus on the agent**

In East-Asian languages, in contrast, the passive is typically associated with adversity rather than with discourse pragmatics. We therefore need to recognize the addition of information that may take place. Another issue is that in languages which have more than one passive construction, the distinct passives are likely to differ semantically (Keenan 1986: 259, 267).

That there is considerable variation between passive constructions in different languages has been pointed out in cross-linguistic studies like Siewierska (1984) and Andersen (1991). Siewierska (1984: 255, 259) concludes that there is not even one single property which all the constructions referred to as passive have in common. They differ in verbal morphology, case marking, word order, the overt presence of a passive agent, marking of a passive agent, transitivity restrictions, frequency of occurrence, and semantic and pragmatic functions. In the next sections, we will have a brief look at the passive in Korean and in Chinese, comparing their functions to those of the English passive.

3.2.2.2. The passive in Korean

3.2.2.2.1. Syntax

The canonical personal passive in Korean is formed by marking the verbal stem with the derivative suffix *-ki-/-hi-/-li-/-i-*. The agent, if at all present, appears in oblique case.

(76) a. Koyangi-nun cwi-lul cap-ass-ta.
cat-TOP mouse-ACC catch-PAST-DEC
'The cat caught a/the mouse.'

b. Cwi-nun koyangi-eykey cap-**hi**-ess-ta.
mouse-TOP cat-DAT catch-PASS-PAST-DEC
'The mouse was caught by a/the cat.'

A variant of this type of passive is what has been called indirect passive. This term is taken from Japanese grammar where an analogous construction exists. In the indirect passive, the subject corresponds, not to the direct object, but to the indirect object of an active sentence.

(77) Wuli-nun ton-ul totwuk-hanthey ppayas-ki-ess-ta.
we-TOP money-ACC thief-DAT take-PASS-PAST-DEC
'We had our money taken by a thief.'

There is also an impersonal type of passive in Korean. This is formed with the derivative suffix *-ci-*:

(78) Ku cem-ey kwanhaye uykyen-i kalla-**ci**-ess-ta.
that point-on about opinion-NOM split-PASS-PAST-DEC
'The opinions were divided on the point.'

A third way of forming passive is used with predicates of Sino-Korean origin. These consist of a noun and an auxiliary which in the active form is typically *hata* 'do'. The passive form is achieved with special passive auxiliaries such as *toyta* 'become', *patta* 'receive', *tanghata* 'suffer'.[17]

(79) a. cwulphan-**hata**
publishing-do
'to publish'

b. cwulphan-**toyta**
publishing-become
'be published'

The passive as a testing instrument is of limited use in Korean. As pointed out already by Choy (1977 [1929]: 256-261), there is no such a relationship between passivizability and transitivity as is found in many Indo-European languages. The fact that a verb cannot undergo passivization does not necessarily mean that it would be intransitive. For example, *kaluchita* 'teach', *cwuta* 'give', and *mwutta* 'ask' are transitive but cannot be used in the passive. On the other hand, few intransitive verbs may be passivized (e.g. *nalta* 'fly'). (Sohn 1994: 300-301). Yet, in Korean linguistic literature one can find instances that tests based on passivizability are used as a proof to settle the question whether a clause is transitive or not, or whether a noun phrase is a direct object or not (e.g. Lee Hansol 1989: 153; Sohn 1994: 83).

3.2.2.2.2. Semantics

Passive sentences in Korean tend to differ semantically from their active counterparts (Sohn 1994: 307). The passive formed with *-ki-/-hi-/-li-/i-* typically reports adversative events. Compare the following pair of clauses (from Klaiman 1988: 61) which represent two different views of the situation:

(80) a. Ku yeca-ka ce salam-uy tung-ul
That woman-NOM that man-GEN back-ACC
kulk-ess-ta.
scratch-PAST-DEC
'The woman scratched the man's back.'

b. Ku salam-uy tung-i ku yeca-eykey
that man-GEN back-NOM that woman-DAT
kulk-**hi**-ess-ta.
scratch-PASS-PAST-DEC
'The man's back was scratched by the woman.'

In the active version, the result of the woman's action could be either positive or negative to the man, i.e. he could experience the scratching as a relief from itching or as an injury. The passive rendering, on the other hand, is biased towards an adversative reading, i.e. the man is portrayed as a victim. This is incompatible with

claims that passivization does not change the meaning of the transformed sentence except for presupposition and focus (see e.g. Lee Chung-min 1973: 91). More often than not, when English employs a passive construction, the equivalent in Korean is an active sentence. It is even possible that the arrangement of the elements is the same as in the passive, but the predicate verb is in active form:

(81) a. Cyon-i ipalsa-eykey meli-lul kakk-ass-ta.
John-NOM barber-DAT hair-ACC cut-PAST-DEC
'John had his hair cut by the barber.'

If the verb in the example above takes the passive suffix, the interpretation of the sentence changes. In that case it is plausible that John gets his hair cut against his will rather than that he himself has requested the barber to cut his hair.

b. Cyon-i ipalsa-eykey meli-lul kakk-**i**-ess-ta.
John-NOM barber-DAT hair-ACC cut-PASS-PAST-DEC
'John got his hair cut by the barber.'

The Sino-Korean verbs are noun-verb compounds. When passivized, they exhibit interesting differences in their choice of auxiliary depending on their meaning. Consider the verbs 'respect' and 'insult'. In active form the auxiliary for both of them is the verb meaning 'do': *conkyeng-ul hata* 'respect-do' and *moyok-ul hata* 'insult-do'. But in the passive, the first one takes the auxiliary *patta* 'receive', while the latter selects the verb *tanghata* 'suffer'.

(82) a. Ku-nun haksayng-tul-eykey conkyeng-ul **pat-ass-ta.**
he-TOP student-PLUR-DAT respect-ACC receive-PAST-DEC
'He was respected by students.'

b. Ku-nun haksayng-tul-eykey moyok-ul **tangha-yess-ta.**
he-TOP student-PLUR-DAT insult-ACC suffer-PAST-DEC
'He was insulted by his students.'

The adversative passive seems to apply mainly to verbs describing situations where the patient is affected either physically or psychologically. Verbs of perception and cognition, or verbs which express activities or behavior with not-so-affected objects, tend to acquire a sense of potentiality or reflexivity in the passive form.

(83) a. San-i po-**i**-nta.
mountain-NOM see/PASS/REFL-DEC
'Mountains can be seen.' or 'Mountains are visible.'

b. Tul-**li**-se-yo?
hear-PASS/REFL-HON-POL
'Can you hear me?' 'Is it audible to you?'

c. Mwun-i yel-**li**-nta.
door-NOM open-PASS/REFL-DEC
'The door opens.' 'The door can be opened.'

d. Ilen sangphwum-un cal phal-**li**-nta.
this.kind goods-TOP well sell-PASS/REFL-DEC
'Goods of this kind sell well.'

From these examples we can deduce the following. In Korean, the active and the passive form of a sentence often differ from each other semantically. In TG and in GB, the two are supposed to be basically the same. Korean verbs also differ in the type of meaning they acquire when the passive suffix is added to them. The shift in meaning is not readily explainable in terms of syntactic properties but seems to be associated with the type of semantics the root verb represents. This suggests that the classification of verbs would be better based on semantic distinctions rather than deduced from their syntactic behavior.

3.2.2.2.3. Function

The status of the passive within the grammar of individual languages depends on the strategies available for expressing various communicative functions. The canonical personal passive exists in Korean but, compared to English, it is used less frequently. In English, an important function of the passive is topicalization, which switches the agent view of a situation over to the patient view. For this function, Korean can employ its relatively free word order or the possibility of marking the object NP as the topic.

(84) a. **Cwi-lul** koyangi-ka cwuk-i-ess-ta.
rat-ACC cat-NOM die-CAUS-PAST-DEC
'The rat was killed by a cat.'

b. **Cwi-nun** koyangi-ka cwuk-i-ess-ta.
rat-TOP cat-NOM die-CAUS-PAST-DEC
'The rat was killed by a cat.'

Another function for which English often uses the passive but Korean employs other devices, is impersonalization. In Korean, sentences can be made impersonal by simply omitting the agent.

(85) Namhan-eyse-nun acik-to hanca-lul
South Korea-in-TOP still-also Chinese.character-ACC
ssu-ko.iss-ta.
write-PROG-DEC
'Chinese characters are still used in South Korea.'

The passive can also be used to focus the agent, as in the English sentence *This song was composed by a nine-year-old child.* In Korean, a typical device to express agent focus is relativization:

(86) [I chayk-ul ssu]-n salam-i nay chinkwu-ta.
this book-ACC write-MD person-NOM my friend-be
'This book was written by my friend.'
Lit. 'The person who wrote this book is my friend.'

Topicalization, impersonalization and agent focus, are all related to discourse structuring. These are devices a speaker uses to link sentences together and to direct the attention of the reader/listener to those participants which are relevant for the continuation of the discourse theme. None of these functions of the passive is particularly central in Korean. Instead, it appears that the function of the passive in Korean is primarily semantic.

3.2.2.2.4. Concluding remarks

The passive in Korean and in English differ syntactically, semantically, and functionally. Passivizability and transitivity in Korean correlate only to the extent that intransitive verbs do not usually passivize (there are perhaps few exceptions, see Sohn 1994: 301). The change from active to passive form tends to add a semantic component not present in the active sentence. To investigate which verbs acquire what kind of meaning, a semantic basis for verb classification seems more promising than a purely syntactic one. The passive in Korean, when contrasted with English, also illustrates what may escape attention in a generative approach to grammar: the syntactic properties of the passive do not reveal how the construction functions in the system, i.e. how it is used.

3.2.2.3. The passive in Chinese

3.2.2.3.1. Syntax

The canonical personal passive in Chinese is formed with the coverb *bèi* (or alternatively with *gěi, jiào, ràng*). The agent, if overtly present, is marked only by its position right after *bèi*. The passive construction is more rare than in English.

(87) a. Wǒ **bèi** tā tī le.
I PASS 3sg kick PFV/CRS
'I was kicked by him.'

b. Tā **bèi** qiǎng le.
3sg PASS rob PFV/CRS
'He was robbed.'

Chinese also possesses the indirect variant of this passive. In the next example the indirect object appears as the subject of the passive sentence:

(88) Wǒmen bèi xiǎotōu tōu le qián.
we PASS thief steal PFV money
'We had our money taken by a thief.'

There is no clear relationship between transitivity and the *bèi* passive. If the semantic constraints for the passive are not fulfilled, syntactic transitivity *per se* does not make the passive acceptable. This is illustrated below with the verb *dǒng* 'understand' which takes direct objects but which cannot readily be cast into the passive. Conversely, there are verbs which are commonly defined as intransitive but which, in certain contexts, do appear in the passive, such as *kū* 'cry'. The examples below are from Li and Thompson (1989: 499) and Wang (1970: 107):

(89) a. *Tā shuō de huà **bèi** rén ren dōu **dǒng**.
3sg say NOM tell PASS person person all understand
'What s/he said was understood by everyone.'

b. Yǎnjing **bèi** tā **kū** hóng le.
eye PASS 3sg cry red PFV/CRS
'His eyes became red due to his crying.'

The *bèi* passive is incompatible with the potential infixes. This is illustrated below in (90a-b). A further restriction is that the predicate verb cannot usually appear

alone, but needs to be followed by another element, usually an aspect particle, an object, or a complement (91a-b).

(90) a. *Tā **bèi** rén **dǎ** **de** **sǐ**.
3sg PASS person hit can die
'He can be beaten to death.'

b. Tā **bèi** rén **dǎ** **sǐ** **le**.
3sg PASS person hit die PFV/CRS
'He was beaten to death.'

(91) a. *Yú **bèi** dìdi **chī**.
fish PASS younger.brother eat
'The fish will be eaten by my younger brother.'

b. Yú **bèi** dìdi **chī** **le**.
fish PASS younger.brother eat PFV/CRS
'The fish was eaten by my younger brother.'

This suggests that a factor conditioning the use of *bèi* may be related to telicity. All the examples illustrating when the passive cannot be used, contain an unbounded predicate, i.e. the action or event in question does not have an inherent endpoint. When such as an endpoint is provided, either by the meaning of the verb as such, or in combination with an object, a measure word or an aspect particle, then the passive construction becomes acceptable.

What in English is expressed in a passive sentence, is often most naturally translated with what is called a notionally passive sentence (*yìyìshàng de bèidòngjù*). Such sentences are formed by moving the object to initial position. The verb remains unmarked, and the agent has been omitted.

(92) Xìn yǐjīng xiě hǎo le.
letter already write good PFV/CRS
'The letter has been written already.'

3.2.2.3.2. Semantics

The *bèi* passive is typically associated with adversity and disposal describing something unfortunate happening to a person or a thing. Thus, clause (91b) not only conveys the meaning that it was the younger brother who ate the fish, but it carries a negative overtone that something went wrong: he should not have eaten it. For the

same reason, clause (92) could not be changed into a *bèi*-sentence, because there is no sense of adversity.

Unlike in Korean, Chinese verbs of perception and cognition behave the same way vis-à-vis passive as do more dynamic verbs like *dǎ* 'hit', *tī* 'kick', *chī* 'eat', etc. When passivized, they are usually associated with adversative meanings. In the next example, the active sentence with the verb *kànjiàn* 'see' is neutral, whereas in the passive version it is understood that *Zhāngsān* was seen against his will or, for some other reason, he should not have been seen (from Li and Thompson 1989: 495-496):

(93) a. Wǒ **kànjiàn** nǐ le.
I see you CRS
'I saw you.'

b. Zhāngsān **bèi** rén **kànjiàn** le.
Zhangsan PASS person see CRS
'Zhangsan was seen by people.

In modern Mandarin, however, the non-adversity use of the *bèi* construction is increasing due to influence from English. The phenomenon has been called "translatese" by Chao (1968: 703, cited in Li and Thompson 1989: 496). Non-adversative *bèi* passives can be attested especially in written language or with verbs borrowed or introduced during the modern age (Li and Thompson 1989: 496-497):

(94) Shěng-chéng bèi jiěfàng le.
province capital PASS liberate CRS
'The provincial capital has been liberated.'

Cheung (1994: 492-493) lists the following situations where *bèi* most commonly is used in non-adversative meaning: a) to be elected, selected, or considered as something, b) to be relocated or assigned to a place or position, c) to be turned or transformed into something, d) with some specific verbs. In all of these cases, the predicate verb is followed by a complex complement:

(95) a. Tā **bèi** (dàjiā) **xuǎn** zuò gōngrén dàibiǎo le.
he PASS everyone elect serve.as worker representative CRS
'He was elected (by everyone) to be the worker's representative.'

b. Tā **bèi** **sòng** dào nóngcūn qù gōngzuò le.
he PASS send arrive village go work CRS
'He was sent to work in the village.'

c. Zhè ge huàjù **bèi** **fānyì** chéng Fǎwén
this CL play PASS translate become French
hé Rìwén le.
and Japanese CRS
'This play has been translated into French and Japanese.'

d. Wǒmen dōu **bèi** tā de huà **gǎndòng** le.
we all PASS 3sg GEN words feel.moved CRS
'We were all touched by his words.'

The types illustrated in (95a, c) are attributed to foreign influence by Li and Thompson (1989: 497). The two others, (95b and d), can be explained in terms of disposal, which is the other major use of the *bèi* construction in Chinese. The term disposal essentially means that something happens to the direct object. In this use the object is affected, but not necessarily in a negative sense:

(96) Nà ge bìng rén bèi xiǎo Wáng sòng
that CL sick person PASS Little Wang send
dào yīyuàn qù le.
arrive hospital go CRS
'That sick person was taken to the hospital by Little Wang.'

In all of the sentences (95a-d), the object can be portrayed as somehow disposed or affected. An additional factor may be boundedness; the example sentences describe events that reach a certain endpoint. The sense of disposal and the boundedness are provided by the complements following the verb. These features may have facilitated the carrying over of the *bèi* passive into clauses where it originally would not have occurred. In clauses which portray neither adversity nor disposal or boundedness, the *bèi* construction is unacceptable:

(97) *Wǒ bèi zhǔrén huányīng le.
I PASS host welcome PFV
'I was welcomed by the host.'

For one more example, compare the following pair of sentences. Clause (98a), which does not contain a complement, is ungrammatical with *bèi*. In (98b) the passive form is acceptable because now the sentence describes to what extent the king was angered:

(98) a. *Guówáng bèi Afántí qì le.
king PASS Afanti anger CRS
'The king was angered by Afanti.'

b. Gúowáng bèi Afántí qì de shuō bu
king PASS Afanti anger CSC speak not
chū huà lái.
come.out Speech come
'The king was so angered by Afanti that he couldn't speak.'

3.2.2.3.3. Function

As illustrated above, it seems that the passive in Chinese primarily serves a semantic function (see Cheung 1994: 491). Unlike in English, there is no need to employ a passive construction for simply switching from the agent view to the patient view of the situation. The discourse-pragmatic effect English achieves by casting a clause into passive can in Chinese be achieved by topicalizing the object NP:

(99) Zhè ge wèntí yídìng huì jiějué.
this CL problem absolutely can resolve
'This problem can be resolved for sure.'

Topicalization can also be used for impersonalization, as illustrated below. The object NP is simply placed in the initial position and the subject NP (here in parenthesis) is omitted.

(100) Nǐ de xìn (wǒmen) yǐjīng shōu dào le.
you GEN letter (we) already receive arrive CRS
'Your letter has been received already.'

Passive is not needed for agent focus either. To highlight the agent, Chinese employs a construction formed with *shì ... de*.

(101) Zhè běn shū shì wǒ péngyou xiě de.
this CL book is my friend write NML
'This book was written by my friend.'

3.2.2.3.4. Concluding remarks

The notions of adversity and disposal, rather than syntactic transitivity, are the factors conditioning the use of the passive in Chinese. Verbs that appear in passive constructions typically express meanings which are compatible with a sense of adversity or disposal. Such a meaning is not necessarily an inherent part of the verb in isolation, but emerges when the verb is used in context. Active and passive sentences are not just different surface representations of the same semantic content but they tend to portray two different views of the situation. An additional factor associated with the passive is boundedness. This together with disposal seems to constrain the non-adversative use of the passive which has spread through translations from other languages. Basically, however, the discourse function that is an important factor in the English passive is expressed through other means in Chinese. To appreciate these characteristics of the Chinese passive, semantic and discourse functions need to be an integral part of the study of syntax. The syntacto-centric approach of Chomsky focuses on only a part of what is relevant if we want to understand when and why the passive is used in Chinese.

3.2.2.4. Comparison: functions of the passive in English, Korean, and Chinese

The table on the following page summarizes the main functions of the canonical passive in English, Korean, and Chinese. An empty slot does not necessarily mean that the language in question would lack such a function altogether. Rather, it shows that the particular function of the passive cannot be described as prevalent or central in that language.

3.2.3. Grammatical relations

3.2.3.1. More on subjects and topics

In English, topic differs clearly from the syntactic notions subject and object. When the topic does not coincide with the subject or with the object as it does in (102a-b), it either leaves a pronominal copy (102c), is clearly distinct from subject and object (102d), or is marked as another type of element (102e). For example:

	English	Korean	Chinese
semantic functions:			
affectedness/disposal		+	+
adversity		+	+
potentiality		+	
reflexivity		+	
discourse functions:		+	+
topicalization	+		
impersonalization	+		
agent focus	+		

Table IV. Functions of the passive in English, Korean, and Chinese

(102) a. **I** have seen that film only once. **topic = subject**
b. **This book** I have read already **topic = object**
c. **Bill, he** left already.
d. **In London** I met an old friend of mine.
e. **As for Mary,** we don't know where **she** is.

As we saw in the sections 3.1.3.2. and 3.1.3.3., the situation in Korean and in Chinese is different. Both languages contain topic-subject constructions which, in traditional approaches, have been called "double-subject" or "double-nominative sentences". These kinds of constructions have presented some special challenges to TG and its successors. A distinct topic is not usually included in the concepts they operate with. Hence, there is one nominative too many in the clause and this needs to be interpreted as a subject, as an object, or as something else that matches the inventory of analytical tools. Another area where East-Asian languages have challenged Chomskyan theories is the insistence that semantics be separated from the study of syntax. Topic-comment construction sentences do not necessarily differ in their constituent structure and outward form, but semantically there may be considerable

variation in the relationship between the topic and the rest of the sentence. In the next two sections, I examine what kinds of consequences some of these factors can have for the analysis of Korean and Chinese double-nominative sentences.

3.2.3.2. Topic-subject constructions in Korean

3.2.3.2.1. Part-whole relationship

In traditional approaches, Korean double-nominative sentences have been interpreted as having two subjects. For analysts working within TG frameworks, this is usually an unacceptable analysis. The other nominative has to be explained as something other than a subject. This has been done by positing an underlying structure from which the actually occurring clause can be derived. In sentences where the subject and the topic are in a part-whole relationship, the solution is to assume an underlying genitive.

(103) a. Meyli-**nun** son-**i** khu-ta. **surface structure**
Mary-TOP hand-NOM big-DEC
'Mary has big hands.'

b. Meyli-**uy** son-**i** khu-ta. **underlying structure**
Mary-GEN hand-NOM big-DEC
'Mary's hands are big.'

In TG, the above clauses are taken to represent the same deep structure. The clause (103a) is viewed as a mere surface variant for expressing the semantic content of (103b). The basic form is (103b) where the NP *Meyli* modifies the NP *son* and there is no topic at all.

The topic thus fused together with the subject, the main task is to write rules for the transformation and restrictions on when they apply. This is not necessarily easy in Korean as other factors than purely syntactico-semantic ones constrain what is a possible construction. The following example is from O'Grady (1991: 125, based on Kang 1988: 264):

(104) a. Cyonson-ssi-**ka** atul-**i** nwun-**i** khu-ta.
Johnson-Mr.-NOM son-NOM eye-NOM big-DEC
'It is Mr. Johnson whose son has big eyes.'

b. *Cyonson-ssi-**ka** kay-**ka** nwun-**i** khu-ta.
Johnson-Mr.-NOM dog-NOM eye-NOM big-DEC
'It is Mr. Johnson whose dog has big eyes.'

For a triple-nominative sentence like this to be acceptable, the NPs in question need to be in a possessor-possessed relationship. Strictly speaking, neither the son nor the dog are inherent features of Mr. Johnson. Yet, a father-child relationship can be construed as an inherent property while a man-dog relationship cannot. When exactly this is possible requires real-world knowledge and intuition of a native speaker.

The genitive solution works best in attributive sentences where a whole is described through its part. In other types of part-whole relationships the explanation becomes stretched. Consider the following examples illustrating a possessive relationship (105a) and existence in a location (105b):

(105) a. Na-**nun** ton-**i** iss-ta.
I-TOP money-NOM exist-DEC
'I have money.'

b. Hankwuk-**un** saca-**ka** eps-ta.
Korea-TOP lion-NOM not.exist-DEC
'There are no lions in Korea.'

Consider also clauses where the topic expresses a class which the subject is a member of. Without any sense of attribution (characterization of the whole) or possession (inalienable or alienable), it becomes increasingly difficult to motivate an underlying genitive.

(106) Kwail-**un** sakwa-**ka** coh-ta.
fruit-TOP apple-NOM good-DEC
'As for fruits, apples are good.'

3.2.3.2.2. Other relationships

Only a subset of topic-subject constructions involve a part-whole relationship. Frequently, the two NPs do not have any relation *per se*, but the hearer/reader with his real-world knowledge needs to construe a meaningful relationship between the two:

(107) Enehak-**un** chwicik-**i** elyep-ta.
linguistics-TOP employment-NOM difficult-DEC
'As for linguistics, the employment (situation) is difficult.'

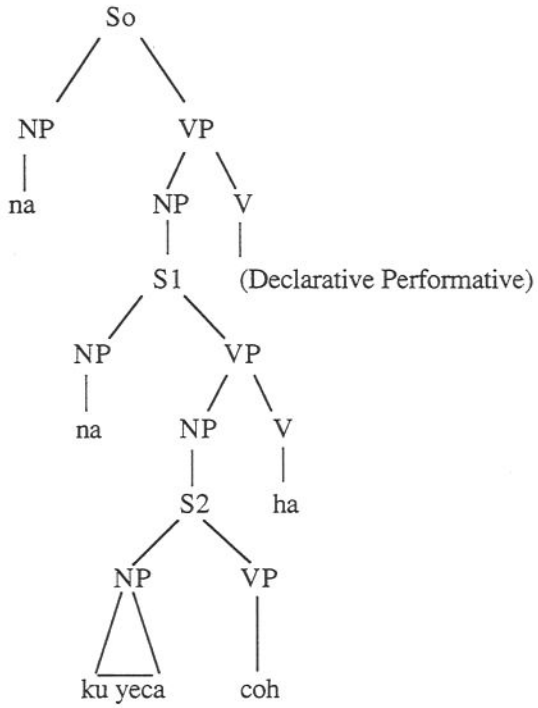
A sentence like (107) relies on the intuition and knowledge of the reader as to the possible relationship. Bak (1981) uses the term recoverability. Two NPs can appear in this kind of double nominative sentence as far as it is possible for the reader to recover the relationship between them.

Contrasting with sentences like (107), Korean also has a type of double-nominative sentence where the two NPs are in a clearly definable relationship to each other; the first NP refers to an experiencer and the second represents the thing or phenomenon that is experienced. The example below is from Lee Hong-Bae (1970: 24).

(108) Na-**nun** ku yeca-**ka** coh-ta.
I-TOP that woman-NOM good-DEC
'I like that woman.' lit. 'I, that woman is good.'

Lee suggests that the first NP is the subject and the second NP an object. To justify that, a series of transformations is needed to explain why the object-NP carries a nominative marker. The first step towards the solution is to search for a construction where the nominative marked 'woman' would have the double role of subject and object simultaneously. This condition is satisfied in the sentence below:

(109)



Lee thus derives the sentence (108) from 'I say that that woman is good', i.e. 'I say that I like that woman.' (Lee Hong-Bae 1970: 24-32). Now when the objecthood of the woman has been established, the hypothetical 'I say' is no more needed and can be deleted. Lee then constructs a series of transformations leading to the actual surface structure. Eight rules are needed for this task: Complementizer Placement, Sentence Ending Insertion, Equi-NP Deletion, NP-Raising, Extraposition, Subject Marker Insertion, Object Marker Insertion, and Performative Deletion (Lee Hong-Bae 1970: 46). This is a rather cumbersome analysis of a construction which represents a perfectly ordinary sentence in Korean. Below are a couple of more examples of sentences of the same type.

(110) a. Yengswu-**nun** congi-**ka** philyoha-ta.
Yengswu-TOP paper-NOM necessary-DEC
'Yengswu needs some paper.'

b. Na-**nun** Yengswu-**ka** pwulep-ta.
I-TOP Yengswu-NOM envious-DEC
'I envy Yengswu.'

Considering the overall meaning of these sentences, the subject-object interpretation does not appear farfetched. The predicate is a special type of adjective which Sohn (1994: 98), in fact, calls transitive sensory adjective. However, the object solution has its limits too. It does not fit another type of experiential sentence which is formed with an action verb, such as *tulta* 'enter' or *nata* 'come out'. In those sentences, the relationship between the topic and the subject is not that of a perceiver and what is perceived, but one between an experiencer and a process this person goes through.

(111) a. Ku-**nun** cam-**i** tul-ess-ta.
he-TOP sleep-NOM enter-PAST-DEC
'He fell asleep.'

b. Na-**nun** hwa-**ka** nass-ta.
I-TOP anger-NOM come.out
'I got angry.'

3.2.3.2.3. Concluding remarks

The purpose of these examples has been three-fold. First, I have wanted to illustrate that the possible relationships between the topic and the subject are many. If these are explained as derived structures, then each one of them must have an appropriate "original" form as well as rules that relate the two. No single underlying structure or a series of transformations can account for them. Second, the aim has been to show what kind of difficulties we run into if we try to fit the Korean clause structure to a two-way distinction (subject, object) when it would more readily fit a three-way distinction (subject, object, topic). Finally, semantics and real-world knowledge can be a crucial part of double-nominative constructions in Korean. The exact interpretation or the acceptability of such a sentence depends on the particular combination of the predicate and the two NPs. Therefore the ideal of producing exact rules for transformations may not be realistic in Korean.

3.2.3.3. Topic-subject constructions in Chinese

3.2.3.3.1. Part-whole relationships

As in Korean, a subset of topic-subject constructions in Chinese involve a subject and a topic that are in a part-whole relationship. In the attributive type, the whole is described through its part. For these sentences, an underlying genitive can be posited without much stretching of the semantics. Thus, example (112a) below can be explained as derived from (112b):

(112) a. **Tā** yǎnjing hěn dà.
3sg eye very big
'She has big eyes.'

b. **Tā** **de** **yǎnjing** hěn dà.
3sg GEN eye very big
'Her eyes are very big.' 'She has big eyes.'

In another type, the topic represents a class and the subject is a member of that class. For these sentences, the genitive solution is hard to maintain. The comment part does not describe the topic but is a statement about the subject; the topic just provides the scope for that statement, as in:

(113) **Shuǐguǒ**, píngguǒ hǎo chī.
fruit apple good eat
'As for fruits, apples are delicious.'

For a sentence like this, the underlying structure could be something like *Shuǐguǒ zhōng píngguǒ hǎo chī* 'Among fruits, apples are delicious.' However, a solution more in tune with the characteristics of Chinese would be to acknowledge the special role that topic plays in sentence structure. This has, in fact, been done by Gundel (1979, cited in Liu 1982), who suggests that topic exists as a separate constituent in deep structure.[18]

Unlike Korean, Chinese does not use topic-comment structures for expressing possession or existence in a location. These are formed with the verb *yǒu* 'have' that produces transitive sentences, as in *Tā yǒu qián* 'He has money', or *Mén pángbian yǒu shù* 'There is a tree beside the door'.

3.2.3.3.2. Other relationships

The other topic-subject constructions form a heterogeneous group. No single underlying structure suffices to describe them all as the exact relationship between the topic and the subject varies from sentence to sentence.

(114) a. **Zhèr** **de** **tiānqì** nǐ xíguàn le ma?
here GEN weather you get.used.to CRS Q
'Have you got used to the weather here?'

b. **Zuótiān** **de** **zuòyè** nǐmen yǒu wèntí ma?
yesterday GEN homework you have question Q
'Do you have questions about yesterday's homework?'

The exact relationship between the topic and the subject is left to the hearer/reader to deduce. In the example below the topic represents an instrument and the subject is an actor. This can be inferred from the meaning of verb and the semantics of the NPs:

(115) **Féizàoshuǐ**, nǐ néng chuī pàopào.
soap water you can blow bubble
'With soap water, you can blow bubbles.'

There is, however, one option that is open in Korean but which seems to be blocked in Chinese. Experiential sentences of the type 'I, snakes are frightening', or 'He, sleep entered' are not a Chinese pattern. Instead, transitive constructions are employed. Compare the clauses below with the Korean examples (108), (110), and (111).

(116) a. Wǒ xǐhuan tā.
I like 3sg
'I like him.'

b. Wǒ pà shé.
I fear snake
'I'm afraid of snakes.'

c. Tā shuì zháo le.
3sg sleep touch CRS
'He fell asleep.'

Chinese, on the other, poses some special complications due to the flexibility of its elements. The context and the particular combination of the elements affects their meaning which, in turn, affects the interpretation of the grammatical relations. Compare:

(117) a. **Tā** gōngzuò **hěn** **rènzhēn.**
3sg work very conscientious
'He is very conscientious about his work.'

b. Tā **gōngzuò** **hěn** **dāndiào.**
3sg work very boring
'His work is very boring.'

The above clauses are superficially very similar; both have the constituent structure TOP + SUB + PREDICATE. Most of the lexical items are also identical. Seemingly, the main difference is the adjective filling the predicate slot. Yet, the meaning of the adjective affects how the relationship between the topic and the subject is understood. The word *rènzhēn* 'conscientious' in (117a) describes a person or his attitude. Hence, the predicate is perceived as predicating something about the topic *tā,* i.e. what he is like. The subject *gōngzuò* 'work' expresses on which area this is true. In (117b), on the other hand, the adjective *dāndiào* 'monotonous', 'boring' is understood as describing the work, i.e. the subject. The topic is interpreted as expressing whose work is at issue: *tā de gōngzuò* 'his work'.

3.2.3.3.3. Concluding remarks

In Chinese, the problems with topic-subject constructions are basically similar to those in Korean. There are a number of possible relationships between the topic and the subject, even though some types found in Korean seem to be absent from Chinese (cf. Liu 1982: 109-110, 120). To explain these as derived structures, it is necessary to posit several different underlying structures. Hence, at least one transformationalist has concluded that topic should be viewed as a separate constituent in deep structure.

From a generative point of view, a special complication in Chinese is the great flexibility with which the elements in clauses acquire their meanings from the collocations they appear in. This addresses the fundamental issue about the relationship of semantics to the study of syntax. One of Chomsky's basic assumption is that the two domains should be kept separate. The semantic features that account for an element's behavior should be specified in the lexicon. But in Chinese such clear boundaries are hard to maintain. Explaining topic-subject constructions in purely syntactic terms is untenable. It seems that, more than in English, semantics and pragmatics are part of the Chinese syntax.

Relationship between the topic and the subject	**English**	**Korean**	**Chinese**
topic = subject:	x	x	x
topic and subject distinct:	x	x	x
topic ~ subject:			
attributed - attributing part	-	x	x
possessor - possessed	-	x	-
location - existent	-	x	x
class - member	-	x	x
scope - entity within it	-	x	x
experiencer - phenomenon	-	x	-

Table V. Relationships between topic and subject in English, Korean, and Chinese

3.2.3.4. Comparison: relationships between topic and subject in English, Korean, and Chinese

The table above summarizes what kinds of relationships there may be between the topic and the subject in English, Korean, and Chinese. It covers the examples found in the literature cited in this section as well as the sample texts used in this dissertation. The major alternatives are: a) the topic has all the subject features, i.e. the topic and subject coincide with each other, b) the topic has no subject features, i.e. the two are clearly distinct, and c) the topic has some subject-like features. Alternative (c) involves further subtypes.

3.2.4. Discourse

3.2.4.1. On antecedent identification

Problems related to anaphora have been an important subject of investigation particularly in the Government and Binding theory (GB) by Chomsky (1981). Among the problems arousing discussion is the question of correct identification of the antecedent in pronominalization and zero anaphora. In section 3.1.3.1, we saw the importance of making a distinction between subject and topic. Now we will look at these notions again but from another point of view. This time the focus is on reference-tracking mechanisms that guide the identification of antecedents in discourse.

Some of the characteristics of English reference tracking include: 1) The element monitored through discourse is the subject. In other words, tracing back in a text typically goes from subject to subject. 2) Agreement phenomena serve to solve ambiguities when potentially more than one NP could be the intended antecedent. The subject agrees with the predicate in number, and the pronouns have different forms for masculine and feminine in singular. 3) The scope of zero anaphora is strictly limited; an ellipted NP can refer to an antecedent across clause boundaries within one and the same sentence but not across sentences. (Foley and Van Valin 1984: 108-111, 322; Givón 1993, I: 94.) The following example is from Givón (1993, I: 235):

(118) a. After **the queen** said that,
b. **the king** went into a royal sulk.
c. **He** retired into the throne chamber,
d. **0** lay on the floor,

e. **0** quit eating
f. and **0** refused to talk.
g. Finally **the queen** had had enough,
h. so **she** gave him a piece of her mind.

At the beginning of the passage, both participants, *the king* and *the queen*, are mentioned with full NPs. After that, referring back to them is done with unstressed pronouns or zero anaphora. Notice that pronouns are omitted only when they refer back to an earlier subject within the sentence. Thus, the pronoun *him* in (118h) would be obligatory, even if the king had been mentioned in the previous clause. When a referent is discontinued and then reinstated, as is the case with *the queen* in (118g), this is typically coded with a full NP or some other definite device. (Givón 1993, I: 235-238.)

Besides these basic anaphoric devices, English also uses contrastive stress when the identification is problematic. Givón illustrates this with the following pair of clauses (1993, I: 236):

(119) a. **Mary** told Suzy, then **she** told Sally. **unstressed pronoun**
b. Mary told **Suzy**, then **SHE** told Sally. **stressed pronoun**

In (119a) the unstressed *she* refers back to the subject *Mary*. This is the normal default pattern. In (119b), the use of a stressed pronoun signals a deviation from the default: *SHE* cannot refer to *Mary* but to *Suzy*, which is the object of the preceding clause.

Contrastive stress is not revealed in writing, but, apart from that, the reference tracking in English lends itself rather well for formal descriptions with grammatical rules. By and large, the anaphoric system is syntactically oriented. This is not to say that principles of language use would not affect anaphora. Discourse-pragmatic constraints do play a role in English (see Levinson 1987). However, they are less pronounced than the syntactic ones and do not characterize the system as a whole.

In East-Asian languages, pragmatic and cultural inference seem to play a more prominent role in the reference-tracking system. The use of zero pronouns is prevalent and the scope of this device is considerably bigger than in English. There is no gender or number agreement that would help in the antecedent identification. Not surprisingly then, East-Asian languages have become a challenge for the GB theory (Huang 1994; Kuno 1987; O'Grady 1987; Yoon 1989), which claims that its binding principles are universal (Chen 1992: 4, 27-28). The next sections will illustrate some main characteristics of the reference-tracking mechanisms in Korean and

Chinese. The questions are: i) What does the system track in discourse anaphora? and ii) What are the major devices employed in the anaphoric system of this particular language?

3.2.4.2. Antecedent identification in Korean

3.2.4.2.1. The monitored element

The conditions for anaphora have generated much discussion in Korean (e.g. O'Grady 1987;Yoon 1989). The wide use of zero pronouns makes it important to formulate rules defining which NPs these zeros refer back to. The following excerpt is a translation of the opening passage of a folk story (Hwang 1987: 141-142). The bold face in the example shows where a major participant is mentioned with a full NP. The parentheses stand for zero pronouns indicating the identity of the omitted NPs.

(120) a. yes nal enu sikol-ey-nun
old day certain country-at-TOP
hyosengsule-n sonye Sim Ceng-i-ka
dutiful-MD girl Sim Ceng-VOC-NOM
sal-ko.iss-ess-upnita.
live-prog-PAST-DEF

b. Hol apeci son-eyse tongni pwuinney-tul-uy
lone father hand-at neighborhood woman-PLUR-GEN
ces-ul ete-mek-umye
milk-ACC get-eat-while

c. calana-ss-upnita
grow-PAST-DEF

d. Sim Ceng-i-uy emeni-nun maum cakha-ko
Sim Ceng-VOC-GEN mother-TOP mind good-and

e. yeyppu-n pwun i-si-ess-nuntey
pretty-MD person be-HON-PAST-but

f. kuman nappu-n pyeng-I tul-e
unfortunately bad-MD sickness-NOM enter-so

g. seysang-ul ttena-peli-si-ess-upnita.
world-ACC leave-finish-HON-PAST-DEF

h. Eli-n Ceng-i-lul an-ko hokun
young-MD Ceng-VOC-ACC hold-and or
ep-ko
carry.on.the.back-and

i. maul-ul tolatani-si-mye
village-ACC wander.around-HON-while

j. pwuinney-tul-uy ces-ul ete-mek-i-myense
woman-PLUR-GEN milk-ACC get-eat-CAUSE-while

k. khiw-ess-upnita.
raise-PAST-DEF

a. Once upon a time in the country there lived a dutiful girl, **Sim Ceng**.
b. **In the hands of widowed father**, (she) got milk from neighborhood mothers
c. (she) grew up.
d. **Sim Ceng's mother** was a good person and
e. (she) was pretty but
f. (she) got sick and
g. (she) passed away.
h. (He) Holding or carrying little Ceng
i. (he) wandering around the village and
j. (he) having the neighborhood mothers nurse (her)
k. (he) raised (her).

Below the same passage is arranged in a table form to better show the anaphoric relations. The word order and marking phenomena reflect the Korean text. A zero indicates where an NP would occur, had it been overtly stated in the text. Whenever possible, NPs belonging to the same topic chain are lined vertically under each other.

(121)

initial elements	topic	subject	object	predicate
a.		Sim Ceng-NOM		lived.
b. In the hands of widowed father		0	milk-ACC	getting
c.		0		grew up
d.	Mother-TOP	mind-NOM		good was and
e.	0	pretty person		was.
f. But	0	sickness-NOM		entered
g.	0		world-ACC	left.
h.	0		Ceng-ACC	holding or carrying
i.	0		village-ACC	wander-while
j.	0		milk-ACC	getting-feeding
k.	0		0	raised.

The main participant of the story, the little girl called *Sim Ceng*, is introduced right in the first clause. The next two clauses (121b, c) refer back to her through a zero pronoun. This is an instance of tracing an antecedent to the nearest subject. In (121d) the attention shifts to the mother which becomes the topic of the new sentence. The zero pronouns in the subsequent clauses (121e, f, g) are traced back to this topic, not to the subjects 'mind' or 'sickness'. The following zeros, however, do not refer to either one, but to the father who was introduced in a locative phrase in (121b). Nowhere in the passage has the NP 'father' appeared as a syntactic subject or object, nor has it been explicitly established as a topic. Hence, the monitored element does not seem to be any syntactically definable concept. Instead, we must turn to non-syntactic clues for the correct identification of the antecedent. For an analysis of participant reference in Korean, see 4.5.2.1.

3.2.4.2.2. Anaphoric devices

There are both semantic and pragmatic clues that convey anaphoric information. Indirectly the phrase 'in the hands of widowed father' involves the idea of the father taking care of Sim Ceng. Also, because the mother has died, the father is a sensible candidate for being the subject/topic of the remaining clauses. A further factor contributing towards this interpretation is the use of the honorific marker *-si-* in the predicate 'wander'. In the chart, the predicates carrying the honorific *-si-* are underlined. The neighborhood mothers are not likely to be referred to in this way. Sim Ceng's own mother having died, the only one that qualifies for the honorific marker is the father. Thus, the antecedents can be identified based on a mixture of syntactic, semantic, and pragmatic information.

3.2.4.2.3. Concluding remarks

This kind of anaphoric system violates some of the basic assumptions in the GB theory. The correct antecedent must be inferred from a cluster of factors, many of which may be non-syntactic. The monitored element is neither the subject nor the object. Nor can we necessarily trace an ellipted NP to a previous topic. An anaphoric which relies on semantic information and cultural or real-world knowledge, cannot easily be captured by a formal model.

3.2.4.3. Antecedent identification in Chinese

3.2.4.3.1. The monitored element

In Chinese, as in Korean, NP ellipsis is frequent and occurs also in sentences containing more than one theoretically possible antecedent. A key notion in tracing back in discourse is the topic. The following example from Li and Thompson (1989: 102) illustrates how the topic takes priority over the subject in determining which NP is the correct antecedent.

(122) Nèi kē shù yèzi dà; (suǒyǐ) wǒ bù xǐhuan...
that CL tree leaf big; (so) I not like
'That tree (TOP), the leaves (SUB) are big; (so) I don't like (it).'

The ellipted NP in (122) is the object of the verb 'like'. If the topic and the subject were equally possible candidates for the antecedent, the missing NP could refer back either to 'that tree' or to 'the leaves'. However, as shown with the pronoun in the English translation, *it* instead of *them*, the antecedent is the topic, not the subject.

Many analysts have concluded that the topic determines the pronominalization or the deletion of coreferential NPs in a topic chain (see, for example, the analyses of Tsao 1979, Liu 1982, Li and Thompson 1989, Huang 1994, etc.). The topic, however, is not the only element that can be tracked in Chinese discourse. Consider the following example which is a passage of a folk story. The story is about a man who was impatiently waiting for his rice plants to grow (from *Chūjí Hànyǔ kèběn* 1980: 55-56).

(123) a. Yǒu yī tiān
exist one day
'One day'

b. tā hūrán xiǎng chū ge "hǎo" bànfǎ,
he suddenly think come.out CL good method
'he suddenly came to think of a "good" method'

c. jiù jíjímángmáng pǎo dào tián li
then hastily run arrive field in
'he hastily ran to the field'

d. bǎ méi kē miáo dōu wǎng shang bá le bá.
BA every CL plant all toward up pull PFV pull
'and pulled every plant upward'

e. Huí guo tóu
turn around head
'When he turned his head'

f. lái kàn kan miáo,
come look look plant
and looked at the plants'

g. dìquè bǐ yuánlái gāo le bu shǎo,
indeed compared.to original high CRS not little
'they had indeed grown quite a bit'

h. xīn li shífen gāoxing.
heart in very glad
'and he felt very glad'

i. Huí dào jiā li,
return arrive home in
'He returned home'

j. tā duì jiā li rén shuō: ...
3sg to home in person say
'and said to his family: ...'

Below, the text has been charted preserving the order in which the elements occur in the Chinese text. Omitted pronouns or NPs are indicated with a zero. Those NPs which are overtly expressed appear in columns showing their function:

(124)

	topic	subject	preposed	predicate	object/NP-2
a.				existed	one day
b.	he			came to think	of a good idea
c.	0			ran	to the field
d.	0		every plant	pulled upward	
e.	0			turned	his head
f.	0			looked	at the plants
g.		0		had grown	
h.	0	heart inside		very glad	
i.	0			returned	home
j.	0			said	

The main character of the text is the impatient man who is referred to by means of the pronoun *tā* in (124b). The missing pronouns in the subsequent clauses (124c-f) are coreferential with this pronoun. In (124g) the reference is interrupted; now the antecedent is *miáo*, 'the plants' which in the previous clause occurred in the object position. From (124h) on, however, each missing NP is again traced back to the pronoun *tā*. This example suggests that topic is the preferred, but not the only, function monitored in Chinese discourse. For my analysis of participant reference in Chinese, see 4.5.2.2.

3.2.4.3.2. Anaphoric devices

At the same time, semantic factors also play a role in Chinese anaphora. Li and Thompson provide the following example (1989: 660-661) illustrating how the assignment of anaphora does not necessarily need to be to the closest topic.

(125) A. **Wǒmen** dǎsuàn zuò shénme ne?
we plan do what REx

B. **0** Xià chē yǐhòu,
descend vehicle after

0 xiàn dào Dàhuá Fàndiàn,
first arrive Dahua Hotel

yàoshi **0** yǒu fángzi,
if have room

0 dāngrán hěn hǎo.
of course very good

A. 'What shall we plan to do?'
B. 'After (we) get off the train, first (we)'ll go to the *Dahua* Hotel. If (the hotel) has rooms, of course, (that) would be good.'

The first and the second zero pronoun in B's response refer back to the topic 'we', but the third and the fourth one do not. At this point, we must use semantic and pragmatic clues to deduce that the third zero refers to the *Dahua Hotel* and the fourth one to the idea of there being rooms. An important source of information is the semantics of the predicates. The verb *yǒu* can mean either that something exists in general, or that there is something in a place. In the present context, the latter sense is more appropriate. In that case, an NP that would tell us what the place is must be missing from the surface structure. With our real-world knowledge, we know that this zero is best interpreted as referring to the *Dahua Hotel*. Similarly, we know that there is a slot open in the semantic structure of the predicate *hǎo* and that this slot can be filled with an element like 'this' or 'that'.

3.2.4.3.3. Concluding remarks

The Government and Binding theory proposes an explicit model for handling anaphora, seeking to define it in exact syntactic terms. A problem we encounter in East-Asian languages is that their anaphoric systems may be restricted by semantico-pragmatic inferences rather than by grammatical rules. As illustrated by the examples, this kind of anaphora does not lend itself to formal definitions. Huang (1994: xiii) claims that, in Chinese, "the contribution of pragmatics to anaphora is much more fundamental than has been commonly believed, even at the very heart of intrasentential anaphora." It seems that the formulation of the GB theory reflects the not-so-central role pragmatics plays in English. A truly language-independent model needs to use semantic and pragmatic concepts as well as syntactic rules when investigating how the different domains interact carrying the function of reference tracking in a particular language.

3.2.4.4. Comparison: antecedent identification in English, Korean, and Chinese

The table below summarizes the discussion on basic characteristics of reference tracking in English, Korean, and Chinese. In the task of identifying the correct antecedent, the speakers of these languages rely on the following factors:

	English	Korean	Chinese
the monitored element	subject	neither subject nor topic	topic (preferred)
agreement	gender and number	honorifics	none
other factors	contrastive stress	semantic and pragmatic inference	semantic and pragmatic inference

Table VI. Antecedent identification in English, Korean, and Chinese

3.3. CASE GRAMMAR

3.3.1. Introduction

Case grammar was originally developed by Fillmore (1968, 1977) as a semantic complement to transformational grammar. It is not a full grammar but a theory of predicates and their arguments. Fillmore, who was dissatisfied with Chomsky's treatment of grammatical relations, preferred to describe clauses as consisting of a verb and one or more case-labeled NPs. These case labels are semantically defined and they express what kind of relationship the NPs have to the verb.

The basic idea is co-occurrence. Certain predicates are frequently found to combine with certain types of NPs, so-called arguments. For example, the verb *laugh* usually appears with an NP expressing *who* is laughing. Semantically the one who performs an action is an agent. We can thus say that the verb *laugh* combines with an argument which is in Agentive case. Other verbs are associated with other types of combinations. Case grammar specifies what kinds of arguments the predicates of a language combine with by describing these NPs with semantic case labels.

3.3.2. On predicates and their arguments

Semantically, a word in a certain position can reflect several different types of relationships:

(126) a. **John** opened the door. **subject = agent**
b. **The door** was opened. **subject = object**
c. **The key** opened the door. **subject = instrument**

In all the three clauses (126a-c), the first NP is outwardly the subject of the sentence. Semantically, however, it has a different relationship to the verb in every clause. In (a) the subject of the verb *open* is associated with an Agent, in (b) it is an Object, and in (c) an Instrument.

In case grammar, the case roles are purely semantic and not deduced from outward coding patterns. In the next pair of clauses, the surface structures and grammatical relations are formally different but the semantic content is basically the same. Both in (127a) and (127b), *the box* is the location for the books. What distinguishes these clauses is that they differ in subject choice.

(127) a. **My books** / are / in that box. **semantically: location**
Objective V Locative **formally: prepositional phrase**

b. **That box** / contains/ my books. **semantically: location**
Locative V Objective **formally: subject**

Initially Fillmore (1968) identified six cases: Agentive, Instrumental, Dative, Factitive, Objective and Locative. These are characterized as below:

(128) A = the Agentive case: refers to a typically animate instigator of the action.
I = the Instrumental case: an inanimate force or object which is causally involved in the situation
D = the Dative case: usually an animate being affected by the state or action
O = the Objective case: the semantically most neutral case, affected by the verbal action and identified by the semantic interpretation of the verb itself
F = the Factitive case: the object resulting from the situation
L = the Locative case: identifies the location or spatial orientation of the situation

The result of a case-grammar analysis is a lexicon where verbs are listed with the cases that their nominal NPs take. Such specifications are called case frames and look like the following (see the lexicon for English in Fillmore 1968):

(129)	be hot	___L	
	be sad	___D	
	build	___A, F	
	break (intr.)	___O	(*The window broke.*)
	break (ins.)	___I, O	(*The hammer broke the window.*)
	break (agt.)	___A, O	(*John broke the window.*)
	break (agt./ins.)	___A, I, O	(*John broke the window with a rock*).

As can be seen, the verb *break* has been given four different case frames representing four different deep structures. These correspond to the intransitive (intr.) versus transitive (tr.) use of the verb, and to its use with agent (agt.) or instrument (ins.) subjects. The frames can be conflated into a single case frame, which represents the different structures: ___(A), (I), O.

There are no hard and fast rules for establishing and distinguishing different cases from each other. Because the cases are semantic in nature, different case grammarians have had different opinions about the appropriate number of cases. Localistic models (e.g. Anderson 1971; Pike and Pike 1977) can do with four or five cases, while less abstract systems can postulate up to a dozen. Fillmore himself, who initially proposed six cases, later in a revised model (1977) increased the number to nine: Agent, Experiencer, Instrument, Object, Source, Goal, Location, Time, and Benefactive.

Most case grammar models contain some kind of derivational system. An often employed system is that of Chafe (1970). With a set of derivational units, inchoative, resultative, causative and decausative, he links verbs which share the same meaning except for one component. For example, the different senses of the English verb *open* can be presented as below:

(130)	**process:**	=	*open*	intransitive
	process + causative:	=	*open*	transitive (derived action)
	process + resultative:	=	*open*	stative (derived state)

An attractive aspect of case grammar is that it can relate not only different structuring options, but also morphologically different verbs. Pairs such as *like/please* and *buy/sell* are semantically felt as belonging together (and in some languages they

do morphologically), even though they represent completely different lexical roots. Earlier theories are unable to express these relationships. In case grammar, such pairs can be described as having the same case frame but differing from each other in choice of subject and object or other case-related features. (Cook 1989: 33.)

(131)	a. I / liked / the play. E V O	**case frame:** ___E, O **subject:** E
	b. The play / pleased / me. O V E	**case frame:** ___E, O **subject:** O

In case grammar, only propositional cases, i.e. cases essential to the proposition, are included in the case frames. Optional adjuncts are called modal cases and are not taken up in verb classification. For example, a locative phrase is an essential part of a locative clause. Hence, the phrase *in the kitchen* represents a propositional case in *He is in the kitchen.* In contrast, the same phrase does not constitute a propositional case in a clause like *He is eating potatoes in the kitchen*, because the locative does not spring from the meaning of the verb *eat.*

As a semantic theory, case grammar does not depend on particular structuring patterns or outward manifestations. It focuses on the semantic meanings of the NP arguments, no matter what the linguistic form is in a particular language. In the following two sections, I continue to discuss typical problem areas in Korean and Chinese grammar, now from the case grammar perspective.

3.3.3. Case grammar and Korean

3.3.3.1 A matrix model

While the traditional notion of transitivity fails to capture verbal behavior in Korean, case grammar has been seen as an approach which may provide a more accurate subcategorization of predicates (e.g. Sohn 1994: 222). A work claiming to present the first full scale model by a native speaker is Lee Kay Won's dissertation "Semantics of the Korean Verb: A Case Grammar Approach" (1984). It uses the so-called matrix model where verbs are classified in terms of twelve case frames (see Cook 1979, 1989). In one dimension the frames are based on the five cases which are Agent (A), Experiencer (E), Benefactive (B), Object (O or Os = object of state) and Locative (L). The other dimension includes a three-way distinction of State, Process, and Action-Process. The matrix looks like this:

(132)					
	State	**Os**	**E, Os**	**B, Os**	**Os, L**
		be true	*know*	*have*	*be at*
	Process	**O**	**E, O**	**B, O**	**O, L**
		die	*amuse*	*acquire*	*move*
	Action-Process	**A, O**	**A, E, O**	**A, B, O**	**A, O, L**
		kill	*say*	*give*	*bring*

Using this matrix Lee analyzes some three hundred and sixty Korean verbs to see if they fall within these categories. He finds that every single verb fits in Cook's matrix and concludes that the case grammar model seems to offer an ideal approach to predicate classification (Lee Kay Won 1984: 184).

Now, matching verbs with a set of case frames does not really test a model. Verbs are versatile and frequently exhibit more than one use. Even if every verb investigated has one sense that falls within the matrix frames, there may still be other uses which are not accounted for. The crucial question is how does the model handle polysemy and the relationship between the different senses. This question does not receive much attention in Lee's work.

3.3.3.2. Polysemy and derivation

Lee Kay Won (1984) takes up only two homonymous pairs as possibly problematic. They are the two readings of the predicates *pota* 'see / look at' and *tutta* 'hear / listen'. Out of context, they can be ambiguous, as in:

(133) Cyon-un kulim-ul po-ass-ta.
John-TOP painting-ACC see/look-PAST-DEC
'John saw the painting.' Or: 'John looked at the painting.'

Lee resolves the ambiguity by testing whether a manner adverbial meaning 'enthusiastically' can be inserted in the clause. As a result he then separates a State verb having the case frame ___E, Os and an Action-Process verb with the frame ___A, *E, O / A = E (where the Experiencer is deletable and can be suppressed by an Agent). (Lee Kay Won 1984: 83-86.) Besides these two verbs, Lee seems to assume that verbs, in general, belong to one category only, and if there is a change of category this is visibly marked (Lee Kay Won 1984: 180-181).

That category change is marked holds for a certain type of category change. There are derivative suffixes which turn states to processes or to actions. For ex-

ample: *nelp-ta* 'be wide', *nelp-ecita* 'widen, become wide', and *nelp-key hata* 'widen, make wide'. The derivation can also proceed in the opposite direction from action towards states: *yel-ta* 'open (tr.)', *yel-li-ta* 'open (intr.)', and *yel-lie issta* 'be open'. But, as in English, a change between states, processes, and actions is not necessarily marked in the verb root. Although this kind of unmarked derivation seems to be less frequent in Korean than in English, it still occurs. Below is an example of a descriptive verb which Lee Kay Won (1984) treats as if it had one sense only.

(134) a. Yengswu-nun **khu-ta.**
Yengswu-TOP big-DEC
'Yengswu is big.'

b. Yengswu-nun manhi **kh(u)-ess-ta.**
Yengswu-TOP much big-PAST-DEC
'Yengswu has grown a lot.'

The adjectival verb *khuta* is usually classified as having the basic meaning 'be big', the case frame of which is ___Os. However, besides this stative meaning, it may also designate the process of growing as in (134b). Hence, we need to specify it for another case frame too which, if we stick to the matrix, would be ___O = object of process.

Some verbs in Lee Kay Won's (1984) corpus exhibit more than one sense, but the difference in meaning is hard to capture by different case frames. One of these is illustrated in the next example.

(135) a. Pelsse **nuc-ess-ta.**
already late-PAST-DEC
'It is already late.'

b. Way tasi **nuc-ess-ni?** Nayil **nuc-ci ma!**
why again late-PAST-Q? tomorrow late-NML do.not!
'Why did you again come late? Tomorrow don't be late!'

The adjectival verb *nucta,* meaning, 'be late' is a stative predicate that can be described with the case frame ___Os. As a state, it is not supposed to appear in the imperative form. But when the subject is understood to be human, as in (135b), it may be used in contexts that assume a willful control of the situation. The question is how to account for this sense in a case-grammar approach. The relationship between 'be late' as a condition, and 'be late' as a willful act deals with agentivity.

Agentivity cannot be derived with an inchoative, causative, or decausative derivation. Nearly any predicate may refer to volitional or unvolitional situations at least in some contexts. What would be needed is the possibility to make an additional distinction, namely that between an agentive and a non-agentive reading of predicate, no matter whether a state, process, or action.

There are also other types of differences between two readings of a predicate which can be difficult to describe with case grammar. The Korean verb *chacta* can illustrate the point. Depending on the context, it can mean either 'search' or 'find'.

(136) a. Na-nun nay chayk-ul **chac-ko.iss-ta.**
I-TOP my book-ACC search-PROG-DEC
'I'm looking for my book.'

b. Nanun nay chayk-ul **chac-ass-ta.**
I-TOP my book-ACC search-PAST/PFV-DEC
'I found my book.'

Described with case frames, we could separate the two senses but could not relate them adequately. Both (136a) and (136b) have the same ___A, O frame, both clauses represent actions and both of them have the A as the subject. There is, however, a crucial difference between the clauses. In (136a) the searching does not reach its endpoint, whereas clause (136b) includes the endpoint, i.e. finding, beyond which the activity cannot continue. The former reading is brought about by the progressive form of the verb, and the latter by the past tense/perfective aspect suffix.

3.3.3.3. Accommodating topics

It is usually said that cases spring from the meaning of the verb. This may be a valid general principle but not the whole picture. Factors contributing to the emerging of certain cases include NP semantics and structure. The same predicate may be interpreted differently depending on the type of NPs it appears with, or depending on the construction it is placed into. The effect of these factors is illustrated below:

(137) a. **Paym-i** mwusep-ta. 'snake' = Os
snake-NOM frightful/frightening-DEC **characterizing**
'Snakes are frightening.'

b. **Na-nun** mwusep-ta — 'I' = E
I-TOP frightful/frightening-DEC — **experiential**
'I'm afraid.' or 'I'm frightful.'

c. **Na-nun** **paym-i** mwusep-ta — 'snake' = Os
I-TOP snake-NOM frightful/ frightening-DEC — 'I' = ?
'I'm afraid of snakes.' — **experiential**
or 'To me snakes are frightening.'

Some descriptive predicates in Korean exhibit two different senses. An attributive sense describes what the subject is like, as in (137a); this sense is at the fore with non-human subjects. The other sense refers to an emotion perceived by an experiencer (137b); the experiential sense requires an animate NP.[19] An amalgamation of these two types of readings can occur in sentences with an animate topic and a distinct subject (137c). A case grammar analysis of this sentence would capture only the comment part 'snakes are frightening'. This is because, the topic 'I' does not directly spring from the meaning of the verb. It is therefore viewed as an optional element and is not case-labeled (see, for example, Lee Kay Won 1984 where predicates of this type are listed as having one propositional case only). The consequence of this is that what appears to be an experiencer-NP cannot be labeled as such. An experiential sentence must be analyzed as if it was a simple attributive clause.

In English, case grammar can account for clause pairs like *I fear it / It frightens me*, or *I like it / It pleases me*. Both options are expressed with transitive structures that differ in subject choice. In Korean, the equivalents may be a transitive clause (*Na-nun paym-ul mwusewe hanta* 'I fear snakes') and a topic-subject construction. These two structures cannot be related. Case grammar is supposed to describe the meaning, no matter how it is manifested on the surface, but it assumes that topics are only optional extras and not a vital part of the proposition.

For a further example, consider the following. Various types of mental experiences in Korean exhibit two basic options: a transitive structure and a topic-subject construction. Each type has its typical syntactic and semantic characteristics. The topic-subject option tends to describe situations that are portrayed as originating from outside of the experiencer.

(138) Moca cangsa-**nun** talun sayngkak-**i** na-ss-ta.
hat seller-TOP other thought-NOM occur-PAST-DEC
'The hat seller got another thought.'

If we, in contrast, would like to picture the hat seller as an active part in the situation (i.e. 'He was thinking of something'), the natural choice would be to use transitive clause. This point is missed unless we identify the topic as an experiencer and consider the structure as a whole.

These considerations lead us to the question of what is the relationship between clause types and predicate meaning. The reason why subcategorization of verbs is such a central issue in grammatical models is the observation that verbal meaning largely predicts what kind of clauses can be formed with a certain verb as the predicate. This is also why case grammar distinguishes between propositional cases, which are essential to the meaning of the verb, and modal cases which are considered optional extras. In English, it seems that this results in a close correlation with clause types and case frames. The propositional cases reflect the basic clause structure while the modal cases just add elements which are not characteristic for that particular clause type. In East-Asian languages, in contrast, some of the so-called "optional" elements appear to be the very characteristics of certain clause types. In Korean, possession is typically expressed with a topic-comment construction. Hence, we could count this as a basic structure for possessive clauses.

(139)

topic:	**comment part:**	
a. Yengswu-**nun**	palun phal-**i** epst-a.	**comment: existential**
Yengswu-TOP	right arm-NOM not.exist	**the whole: possessive**
'Yengswu	does not have right arm.'	
b. Yengswu-**nun**	ton-**i** manh-ta.	**comment: attributive**
Yengswu-TOP	money-NOM much-DEC	**the whole: possessive**
'Yengswu	has a lot of money.'	

To me it seems that this is where case grammar meets its limits in Korean. Because it derives the case roles from predicate meaning, it cannot adequately account for some basic clause types. In the next chapter, I advocate another approach that is based on the classification of situation types. Different situation types can then be related to actual predicates that are used to describe them. The capacity to describe both experiential and attributive situations is a characteristic of a subset of adjectival verbs in Korean. For example, *cohta* 'be good', 'like', *silhta* 'be unpleasant', 'dislike', *philyohata* 'be necessary', 'need', *mipta* 'be ugly', 'hate', can be used either way. Others like *khuta* 'be big', *ttokttokhata* 'be smart', and *alumtapta* 'be beautiful', cannot. Similarly, only certain action verbs are frequently found to describe experiential situations: For example, *nata* 'occur', 'come out' and *tulta* 'enter' can

function in topic-subject constructions describing experiential situations: *hwa-ka nata* 'get angry', *cam-i tulta* 'fall asleep'.

3.3.3.4. Concluding remarks

Case grammar is a step forward in the area of verb classification, but it is not the solution to the problems related to predicate meaning and clause structure in Korean. Verbs can be ambiguous in many different ways and some of the different senses are not accounted for by common sets of case frames. Derivation is also a more complex issue than that between causative, inchoative, and stative frames.

Polysemy is not confined to exceptionally ambiguous verbs. With any type of predicate we have to acknowledge that the exact meaning emerges only in context. Croft (1990) has pointed out that it is, in fact, a systematic feature that languages employ structure to convey verbal meaning. Some languages place verbs (or adjectives) in causative, inchoative or stative frames to achieve a causative, inchoative or stative interpretation of the event in question (Croft 1990: 55). Other languages may use other types of structure, such as topic-comment constructions, locative constructions, etc., to bring forth senses that are not explainable in terms of common derivational units. At the same time, NP semantics can be a factor contributing to the exact sense a predicate acquires in a particular context.

3.3.4. Case grammar and Chinese

3.3.4.1. Matrix and other models

Case grammar approaches to Chinese discuss problems that are in many ways similar to those in Korean. The major themes include the questions i) what is the appropriate number of cases and how should these be distinguished? ii) how to handle derivation? and iii) how to accommodate topic in case grammar?

The first application of the standard case grammar model in Chinese is the Ph.D. dissertation of Li Ying-che (1971). He mainly concentrates on the question of the type and number of cases and how they can be identified. He posits eight cases: Agentive, Objective, Dative, Locative, Instrumental, Factitive, Benefactive, and Comitative (Li Ying-che 1971: 51-58). Another analyst, Tang Ting-chi (1972), proposes ten cases including such cases as Temporal, Comitative, Comparative, and Essive (Tang 1972: 110-111). He also takes up some aspects of the topic problem. Astor (1976) describes Chinese with Cook's twelve-cell matrix (see Cook 1979, 1989). He finds it useful especially in the area of derivation, which received little attention in earlier works.

3.3.4.2 Polysemy and derivation

The questions of polysemy and derivation are especially relevant in Chinese where category change without outward morphological marking is a common phenomenon. For example, the word *rè* can appear in the senses 'be hot', 'become hot', and 'make hot', without any alterations in the predicate form. To this case grammar offers a solution by describing each sense with a different case frame:

(140) a. Jīntiān tiānqì hěn **rè**. **State**
today weather very hot **case frame:** ___Os
'The weather is very hot today.'

b. Tiānqì **rè** yǐqián yīnggāi mǎi xīn yīfu **process, iv**
weather hot before should buy new clothes **case frame:** ___O
'Before it gets hot, we should buy new clothes.'

c. Xiān **rè** tāng ba. **action, tv**
first heat soup SA **case frame:** ___A, O
'Let's heat the soup first.'

The different senses are related with derivation. For Astor, the goal is that all the different senses of predicates, which manifest themselves as different case frames, should be linked with derivational units (1976: 138, 141). He discusses ways of dealing with this (cf. Teng 1975), and the method he prefers is a three-way distinction of states, processes, and actions which are linked with the inchoative, resultative, causative, and decausative derivations. These form a closed system where the derivations can proceed in either direction, i.e. from states towards action or the other way round (Astor 1976: 139):

(141)

With this approach a natural candidate for the basic meaning is the state predicate 'be hot'. It can be related to the other senses of *rè* as follows:

(142) **state:** 'be hot' = basic meaning **case frame:** ___Os
process: 'become hot' = basic meaning + inchoative **case frame:** ___O
action: 'heat up' = basic meaning + causative **case frame:** ___A, O

Astor (1976) finds this system combined with Cook's matrix model to be sufficient for his data. The only type of category change he takes up is the one between states, processes, and actions. This, even though it covers a large bulk of Chinese verb lexicon, is not exhaustive. The predicate *rè*, for example, has at least one more possible use. This sense can be described with a case frame but it is not derivable with the derivational units.[20]

(143) **Wǒ** hěn **rè**, **nǐ** bu **rè** ma? **case frame:** ___E
I very hot you not hot Q
'I feel very hot; don't you feel hot?'

The experiential sense 'feel hot' is stative. So is also the basic meaning 'be hot'. The derivational cycle Astor uses only works between states, processes, and actions, not from state to another type of state. Variation between two types of state is not uncommon in Chinese:

(144) a. **Tiānqi** hěn shūfu. **case frame:** ___Os
weather very comfortable
'The weather is very pleasant.'

b. **Wǒ** hěn shūfu. **case frame:** ___E
I very comfortable
'I feel very comfortable.'

(145) a. **Tā de fāyīn** hěn qīngchu. **case frame:** ___Os
3sg GEN pronunciation very clear
'His pronunciation is very clear.'

b. Zhè ge wèntí **wǒ** bu tài qīngchu. **case frame:** ___E
this CL question I not very clear
'I don't quite understand this question.'

The examples so far have illustrated instances of polysemy where the case assignment is clear either because of the structure the predicate appears in, or because of the type of NP that it appears with. The next example will take up another issue dealing with polysemy. Within verbs there may be subgroups, some of which are polysemous while others are not and these behave differently when placed in similar constructions. For example:

(146) a. Mén yǐjīng **kāi**-le.
door already open-process
'The door has already (been) opened.'

b. Tā yǐjīng **kāi**-le - mén.
3sg already open-process door
'He has already opened the door.'

(147) a. Tā (de) fùqin **sǐ** le.
3sg GEN father die PFV/CRS
'His father died.'

b. Tā **sǐ** le fùqin.
3sg die PFV father
'He lost his father.' lit. 'He died the father.'

This pair of examples is adapted from Astor (1976: 148-149) who, using the matrix model, fails to capture the semantic difference between (146b) and (147b).[21] Superficially, the two sentences are structured like transitive clauses and appear to have an A and an O argument. Semantically, however, they differ in a crucial point. The NP *tā* in (146b) is an instigator that causes the door to open, whereas the NP *tā* in (147b) does not cause but is affected by the death of his father. Why does the same outward structure yield a causative reading for one verb but not for another? The explanation is found in their different semantics. The verb *kāi* has two senses, one non-causative and another causative. Therefore it can be interpreted either as 'open (spontaneously)' or as 'cause to open'. The clause structure and the NP semantics help to determine which sense applies in a particular context. The verb *sǐ*, in contrast, lacks a sense where causation would be a component of its meaning. Hence, it does not allow for a causative reading (i.e. 'He killed his father') but retains its non-causative sense even in transitive-like constructions. Both of the sentences (147a, b) state the death of the father; the (b) sentence only adds an element expressing who is related or concerned with this event. A rather literal translation could be something like 'From him died the father'. The first NP specifies the scope or range within which the proposition is relevant. Compare with the following sentence where the scope is inanimate entity.

(148) **Zhè ge cūnzi** sǐ le sān ge rén.
this CL village die PFV three CL person
'(From) this village, three persons died.'

Case grammar, even though it reveals more about verbal semantics than earlier approaches, still does not go deep enough. The examples (146a-b) and (147a-b) demonstrate the need to isolate and identify the components of a predicate's meaning.

3.3.4.3. Accommodating topics

Finally, let us add some brief remarks to the problem of surface structuring vs. semantic meaning. Tang (1972), in his analysis of Chinese comes to the conclusion that topic is a grammatical rather than a semantic relation. It is a pure surface-structure phenomenon and can be created by a transformational rule. (Tang 1972: 26.)[22] Now, if this is the case, the surface form should not prevent us from recognizing the real semantic content of a sentence that happens to be structured as a topic-subject construction. When comparing languages, we should be able to relate the different ways of expressing the same semantic content no matter what the actual outward form is. Consider the example below, contrasting the English expression *I am hungry* with its equivalents in Chinese, Korean, and Finnish.

(149) a. **I** am hungry. **subject**

b. **Na-nun** **pay-ka** kopu-ta. **topic + subject**
I-TOP stomach-NOM hungry-DEC

c. **Wǒ** **(dùzi)** è le. **topic (+subject)**
I (stomach) hungry CRS

d. **Minu-lla** on nälkä.
possessive/locative
I-on is hunger

Semantically we can identify an experiencer in each of these sentences. In English it is the subject of the sentence. In Korean it is the topic in a topic-subject construction. Chinese can express it as a subject or as a separate topic, while in Finnish the experiencer is portrayed as a location. This poses a problem for a unified analysis of these sentences. An ordinary case grammar approach takes a separate topic to be outside the proposition. Creating a topic-subject construction with a transformational rule would also seem artificial. In Korean, this is the basic way of expressing the semantic content other languages package differently.

But where does the case-like meaning of the topic come from, if it is not clearly attributable to the predicate? I argue that the ultimate origin of the semantic cases is the type of situation we are dealing with. Verbs are used to convey this

meaning, but they are just a representation of it, not the meaning itself. When we are talking about a situation we also are thinking in terms of a potential set of semantic participants. These participants are expressed with NPs that appear in various kinds of constructions. The semantic cases emerge when the situation is prompted by a predicate, by a structure, by the type of NP participants, or by a combination of factors. The next examples illustrate a cluster of factors contributing at the same time:

(150) a. **Zhèxiē xuéshēng**, yǒude chī ròu, yǒude chī yú.
these student some eat meat some eat fish
'Some of these students eat meat, some of them eat fish.'

b. **Zhèxiē shūcài**, yǒude chì gēn, yǒude chī yèzi.
these vegetable some eat root some eat leaf
'In some of these vegetables (we) eat the stalk, in some of them (we) eat the root.'

Both sentences are formed with the same predicate and they appear to have the same outward structure, but they assign cases quite differently. The verb 'eat' evokes the roles of an agent and a patient. If there is an animate NP in the subject slot, this NP is likely to be an agent. Now, we do not know that *yǒude* in (150a) refers to an animate entity until we look at the topic. As this topic forms a suitable whole which the subject can reasonably be a part of, we can conclude that the NP 'some' must be an animate agent. Similarly, in (150b), we need to check the topic before we know that *yǒude* in this context is inanimate. The typical case for an inanimate subject would be patient, but this is already assigned to the postverbal NPs 'root' and 'leaf.' Hence, we must search for a case that is neither agent nor patient and compatible with an inanimate NP. Of those in Cook's matrix, the one that makes most sense is the Locative case.

3.3.4.4. Concluding remarks

My conclusion is that case grammar does not penetrate deep enough in the predicate meaning to determine the crucial meaning components conditioning predicate behavior. Causation and agentivity are two examples of such components. A further problem is how to deal with topics. To consider them outside the proposition is unsatisfactory when the topic NP clearly seems to acquire a propositional case role. The predicate meaning together with other factors, such as various types of structures and NP semantics, results in an interpretation of clause structure and case assignment.

3.3.5. Comparison: category change without morphological marking in English, Korean, and Chinese

The tables below compare how English, Korean, and Chinese predicates differ regarding category change without outward morphological marking. The first one ranks the three languages according to the number of predicates that would be ambiguous in isolation. The result is based on the same sample texts that are used in the earlier comparisons. For every text, I have considered the predicates that can have more than one of the following senses: stative, inchoative, causative, attributive, experiential, possessive, identificational, and existential.

	most	> > >	least
Ambiguous predicates	English	Chinese	Korean

Table VII. Ambiguous predicates in the corpus

The second table presents the preferred methods for ambiguity resolution. For each ambiguous predicate, I have identified the main factor that allows the reader to know which of the multiple senses is intended. The options are: a stative/inchoative/causative frame, another type of structure, a topic-subject construction, and element semantics.

	most favored	> > >	> > >	least favored
English:	stative/inchoative/ causative frame	other structure	element semantics	(topic-comment structure: nil)
Korean:	other structure	stative/inchoative/ causative frame	topic-comment structure	element semantics
Chinese:	stative/inchoative/ causative frame	element semantics	other structure	topic-comment structure

Table VIII. Relative preference for a particular method as the primary device for disambiguation

As the tables are based on a small sample, the results should be considered tentative only. The texts, however, gave consistent results in that each text showed a pattern that was in tune with the overall pattern for that particular language.