

# Noun Incorporation and Non-canonical Objects

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## 1. Introduction

Noun incorporation in Northern Iroquoian and non-canonical objects in Chinese share many traits. We argue that this is not an accident, but that it is due to Case and theta licensing principles. We show that this has larger implications for the theory of Case and argument licensing in general. We assume, without discussion, that NI is syntactic (see also Barrie). The syntactic nature of NI is underscored by its similarity with non-canonical objects.

This paper will first present the empirical generalization regarding the possibilities and impossibilities shared by noun incorporation and non-canonical object constructions. It will be shown that these properties are due to the availability of an additional argument position and the properties of “object-usurpers”. An account built on the thematic licensing, Case and morphological case markings will be proposed, which can also accommodate similar facts in English compounding and the lack of non-canonical objects in many other languages such as Korean, which allows a double accusative construction.

## 2. The Empirical Generalization

This section discusses some intriguing similarities between noun incorporation (NI) in polysynthetic languages and non-canonical objects in Mandarin Chinese. Note that while the properties of NI discussed below are attested cross-linguistically, we restrict ourselves mostly to Northern Iroquoian (Mohawk, Cayuga, and Onondaga in particular).

### 2.1. Noun Incorporation

NI is attested in numerous languages around the world (Mithun "The Evolution of Noun Incorporation"; Massam; Gerdts). In many languages with NI, the incorporated variant exists alongside an analytic variant.<sup>1</sup> The nominal root *nakt* ('bed') has been incorporated into the verbal complex in (1b).

- (1) a. Wa'-k-hnúnu-'            ne ka-**nákt**-a'.                            [Mohawk, Iroquoian]  
      FACT-1.SG-buy-PUNC NE 3.SG.NT.AG-bed-NFS  
      'I bought a/the bed.'
- b. Wa'-ke-**nákt**-a-hnúnu-'  
      FACT-1.SG-bed-JOIN-buy-PUNC  
      'I bought a/the bed.'                            (Baker: 279)

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<sup>1</sup> Glosses from Iroquoian examples have been altered to be uniform with the rest of the text here. Glosses from examples from other languages are retained in their original forms. The following non-obvious abbreviations are used. AG = agent (S in Baker); CIS = cislocative; FACT = factual; JOIN = joiner vowel (an epenthetic vowel in NI constructions in Iroquoian languages); LV = light verb; NE = ne' (a nominal particle); NFS = noun forming suffix; NT = neuter (N in Baker); PAT = patient (O in Baker); PUNC = punctual.

NI has been shown to exhibit several properties cross-linguistically. First, NI constructions typically have non-compositional, idiomatic, or institutionalized meanings (Mithun "The Evolution of Noun Incorporation"; Dayal). Note the idiosyncratic and institutionalized readings in the following Onondaga examples (Woodbury).

- (2) a. wa<sup>?</sup>gɔya<sup>?</sup>dahdó<sup>?</sup>da<sup>?</sup>  
 wa<sup>?</sup>- kɔ- ya<sup>?</sup>t- ahtɔ- ʔt- a<sup>?</sup>  
 FACT- I:you- body- disappear- CAUS- PUNC  
 'I lost you (e.g. in a crowd).'
- b. hathwisdanu<sup>?</sup>hna<sup>?</sup>  
 ha- at- hwist- a- nu<sup>?</sup>hn -a<sup>?</sup>  
 3.SG.M.AG- SRFL- money- JOIN- guard -STAT  
 'He is a treasurer.'

Second, NI constructions are typically not fully productive (cf. *at school* or *at church* but not *\*at airport*, Stvan) See (Mithun "The Evolution of Noun Incorporation") for a discussion on the range of productivity of NI in Northern Iroquoian and other languages. The next property is discussed less frequently; however, it is pervasively noted in the literature. NI in many languages typically illustrated with a canonical direct object – a theme – as the incorporated noun (IN). Nonetheless, NI not restricted to direct objects. Instruments, paths and locatives often productively incorporate (Mithun "The Evolution of Noun Incorporation"; Mithun "The Non-Universality of Obliques"; Spencer; Muro). We illustrate this with Onondaga (Woodbury, p. 282, 928, respectively), (3); Chukchi (Spencer, ex (58a)), (4); and Southern Nahuatl (Merlan), (5).<sup>2</sup>

- (3) a. honathahidákhe<sup>?</sup>  
 hon- at- hah- idakhe -<sup>?</sup>  
 3.PL.M.NOM- SREFL- path- run -PUNC  
 'They are walking on a path.'
- b. wa<sup>?</sup>hage<sup>?</sup>nhyayé<sup>?</sup>hda<sup>?</sup>  
 wa<sup>?</sup>- hak- ʔnhy- a- yéhd -da<sup>?</sup>  
 FACT- 3.SG.M.AG:1.SG.PAT- stick- JOIN- hit -PUNC  
 'He hit me with a stick.'
- (4) gɔtɔg=əlqɔt-gʔe walwəŋɔn  
 lake=go-3.SG.S raven.ABS.SG  
 'Raven went to the lake.'
- (5) ya<sup>?</sup> kikočillotete<sup>?</sup>ki panci  
 3.SG3.SG-it-knife-cut bread  
 'He cut the bread with the knife.'

Note, however, that comitatives, benefactives and recipients cannot undergo NI in virtually any language. We illustrate this with Mohawk (Baker: 207): (6), which is ungrammatical on the intended reading, but possible with the nonsensical reading in square brackets. Observe also the data from Onondaga (Gloria Williams, Nora Carrier, speakers), and Cayuga (Barb Garlow, speaker).

<sup>2</sup> We have found very few examples of the incorporation of true temporals in Northern Iroquoian. We attribute this gap to the fact that many of the nouns relating to time in Northern Iroquoian are not of the right shape morphologically to be incorporated.

- (6)\* t- a'- ke- wir- u- ' ne athvno  
 CIS- FACT- 1SS- baby- give- PUNC NE ball  
 ('I gave the ball to the baby.') [ok as, 'I gave the baby to the ball.']
- (7) a. ɛkhwihsa:tha:s ne<sup>?</sup>Meri  
 ɛ-khe-wihsa:th-aR-s-Ø ne<sup>?</sup> Mary  
 FUT-1SG:3FEM.INDEF-butter-apply-ben-punc ne Mary  
 'I will butter it for Mary.'
- b. wa<sup>?</sup>hetcihsa<sup>?</sup>hgwa<sup>?</sup>  
 wa<sup>?</sup>- he- atci- hsR- a- k<sup>?</sup>hkw -a<sup>?</sup>  
 FACT- I:him- friend- NZRL- JOIN- hit -PUNC  
 'I hit my friend.'
- c. \* ɛkhetcihsa:sne<sup>?</sup>owihsa<sup>?</sup>  
 ɛ-khe-atci-hsR-aR-s-Ø ne<sup>?</sup> o-wih-s-a<sup>?</sup>  
 FUT-1SG:3FEM.INDEF-friend-NZLR-apply-BEN-PUNC NE butter  
 'I will butter it for my friend.'
- d. \* ɛkhetcihsa:kne<sup>?</sup>owihsa<sup>?</sup>  
 ɛ-khe-atci-hsR-aR-k ne<sup>?</sup> o-wih-s-a<sup>?</sup>  
 FUT-1SG:3FEM.INDEF-friend-NZLR-apply-PUNC NE butter  
 'I will butter it for my friend.'
- (8) a. John tóhháhe:<sup>?</sup>Ganáthae:<sup>?</sup>  
 John toh he-a<sup>?</sup>-ha-e:<sup>?</sup> Ganáthae:<sup>?</sup>  
 John there TRANSLOC-FACT-3.SG.M.AG-go-PUNC Brantford  
 'John went to Brantford.'
- b. John ne<sup>?</sup>hni<sup>?</sup>honatsihGanáthae:<sup>?</sup>tóhha<sup>?</sup>héné<sup>?</sup>  
 John ne<sup>?</sup> hni<sup>?</sup> honatsih Ganáthae:<sup>?</sup>toh he-a<sup>?</sup>-héné<sup>?</sup>  
 John NE and his.friend Brantford there TRANSLOC-FACT-3.PL.M.AG-go-punc  
 'John went to Brantford with his friend.'
- c. \* John tóhhatsihę:<sup>?</sup>Ganáthae:<sup>?</sup>  
 John toh ha-tsi-hę:<sup>?</sup> Ganáthae:<sup>?</sup>  
 John there 3.sg.m.ag-friend-go-punc Brantford  
 ('John went to Brantford with a friend.')

This is our first puzzle. Why is NI available to direct objects, instruments, paths, and locatives, but not to comitatives, benefactives or indirect objects?

## 2.2. Non-Canonical Objects in Mandarin Chinese

Oblique arguments typically introduced with a preposition can appear in the position of the direct object without its associated preposition (see also Guo; Lin). Interestingly, non-canonical objects exhibit the same range of (im)possibilities NI(Li "Case and Objects"). Consider the following non-canonical objects and compare them to the preverbal PPs found below.

- (9) a. ta xihuan zuo **baitian** -temporal  
 he like do daytime  
 'He likes to work in the daytime'

- b. ta xihuan chi **haohuacanting**. -locative<sup>3</sup>  
 he like eat fancy restaurant  
 ‘He likes to eat at fancy restaurants.’
- c. ta xihuanxie **zhe-zhi maobi**. -instrument  
 he like write this-CL brush.pen  
 ‘He likes to write with this brush pen.’
- (10) a. ta xihuan **zaibaitian** zuo(shi)  
 he like at daytime do work  
 ‘He likes to work in the daytime’
- b. ta xihuan **zai haohua canting** chi fan.  
 he like at fancy restaurant eat meal  
 ‘He likes to eat at fancy restaurants.’
- c. ta xihuanyong **zhe-zhi maobi** xie (zi)  
 he like use this-CL brush.pen write word  
 ‘He likes to write with this brush pen.’

Non-canonical objects are also subject to productivity constraints and have similar idiosyncratic and institutionalized meanings as described for NI above (see Lin 2001 for “conventionalized” meanings). (11b) below is worse than (11a) because the Chinese convention is to eat with chopsticks, not forks.

- (11) a. ni chi zhe-shuangkuaizi ba!  
 you eat this-CL chopsticks particle  
 ‘You eat with this pair of chopsticks!’
- b. ??ni chi zhe-ba chazi ba!  
 he eat this-CL fork particle  
 ‘You eat with this fork!’

Also, as with NI above, non-canonical objects are not found with benefactives, comitatives or recipients.<sup>4</sup>

- (12) a. wo **gen** hao wuban tiao wu.  
 I with good dance.partner dance dance  
 ‘I dance with good dancing partners.’
- b. \* wo tiao hao wuban.  
 I dance good dance.partner  
 intended to mean (‘I dance with good dancing partners.’)

<sup>3</sup> A locative expression can be interpreted as path or destination, depending on the types of verbs: *woguo zhe-tiaomalu* ‘I crossed this road’, *woqu shudian* ‘I go (to) the bookstore’.

<sup>4</sup> If recipients are the indirect objects of the lexically specified double object verbs, then, a verb followed by the recipient indirect object is possible because the direct object can be deleted:

- (i) wo song haopenyou (haoliwu)  
 I give good friend good present  
 ‘I give good friends good presents.’

- (13) a. wo **wei** luke kan xingli.  
I for travelers watch luggage  
'I watch luggage for travelers.'
- b. \* wokan luke.  
I watch traveler  
intended to mean ('I watch (luggage) for travelers.')
- (14) a. wo ji liwu gei pengyou  
I send present to friend  
'I sent presents to friends.'
- b. \* wojipengyou  
I send friend  
intended to mean ('I sent to friends.')

This is our second puzzle. Why does the set of objects available to NI seem identical to the set of objects that can appear as non-canonical objects? We propose the following 'Object Usurper Generalization':

- (15) ***Object Usurper Generalization***  
Paths, locatives, instruments, and temporals can behave as a direct object syntactically. Benefactives, recipients, and comitatives cannot.

To recap, the following can be object usurpers: instruments, locatives (including paths, destinations, see note 3), temporals, while the following cannot: benefactives, recipients, comitatives. The patterns of NI in Northern Iroquoian (and other languages) and of non-canonical objects in Chinese have many interesting similarities beckoning a unified explanation.

### 3. Discussion

We begin this discussion with the following questions.

- (16) a. Why is it that some adjuncts seem to be able to take the object position (object usurpers) but not some others?
- b. What is common to NI in Northern Iroquoian languages and non-canonical objects in Chinese such that they show the same behavior with respect to (a)?

We propose that what is common to these patterns is the availability of an argument position and the object usurper's ability to take advantage of the opportunity because they do not have to be licensed by Ps (or applicatives) thematically.

#### 3.1. Available Argument Position

In Northern Iroquoian it is generally possible to incorporate a noun to a verb. The verb can be intransitive and therefore does not have a canonical object. The verb can also be a transitive and the canonical object occurs in a non-incorporated, verb-external object position. In either of these two cases, there is no object incorporated to the verb and another noun can take advantage of the vacancy and be incorporated. Consider the following examples.

- (17) a. honathahidákhe?  
 hon- at- hah- idakhe -?  
 3.PL.M.NOM- SREFL- path- run -PUNC  
 ‘They are walking on a path.’
- b. wa<sup>?</sup>hage<sup>?</sup>nhyayéhdá?  
 wa<sup>?</sup>- hak- <sup>?</sup>nhya- a- yéhd -da?  
 FACT- 3.SG.M.AG:1.SG.PAT- stick- JOIN- hit -PUNC  
 ‘He hit me with a stick.’

In Mandarin Chinese, the postverbal object position does not have to be occupied by a canonical object. When there are two nominals in the postverbal position, there can be two copies of a verb to license each of the two nominals:

- (18) a. ta meitian **kan** shu **kan** san-ge xiaoshi.  
 he everyday read book read three-CL hour  
 ‘He read books for three hours every day.’
- b. ta laoshi **chi**rou **chi** da-kuai, **he** tang **he** xiao-wan  
 he always eat meat eat big-piece drink soup drink small-bowl  
 ‘He always eats big pieces of meat, drinks small bowls of soup.’

The canonical object can also be a topic (with a verb or without).

- (19) a. (**kan**) shu ta meitian **kan** san-ge xiaoshi.  
 read book he everyday read three-CL hour  
 ‘(Reading) books, he read for three hours every day.’
- b. (**chi**) rou ta laoshi **chi** da-kuai  
 eat meat he always eat big-piece  
 ‘(Eating) meat, he always eats big pieces.’

In a word, the postverbal object position in Chinese and the incorporated nominal position are possible positions for nominal phrases which are not the canonical objects of verbs.

### 3.2. Object Usurpers vs. Object Non-Usurpers

We propose that there are certain prepositions that carry only a case-assigning function and do not assign thematic roles to their objects. This includes temporals and locatives in the following examples.

- (20) a. zai zhuo-shang            zai xuexiao-waimian  
 at table-top                at school-outside  
 ‘on the table’                ‘outside the school’
- b. zai zhuo-xia                zai xuexiao-limian  
 at table-under              at school-inside  
 ‘under the table’              ‘inside the school’

A localizer combines with a (common) noun to become a locative nominal. Together they can be the object of *zai* ‘(be) at’. The need of the preposition *zai* depends on where the locative nominal appears. It is needed when the expression is a preverbal adjunct. If it occurs in the postverbal object position, the preposition *zai* does not occur. Thus, the preposition *zai* is responsible only for Case assignment.

- (21) a. women yixiang \*(zai) xuexiao-waimian chi fan.  
we always at school-outside eat meal  
'We always eat outside the school.'
- b. women yixiang chi (\*zai) xuexiao-waimian .  
we always at at school-outside  
'We always eat outside the school.'
- (22) a. women yixiangzai wanshang zuo shi.  
we always at evening do work  
'We always work at evenings.'
- b. women yixiang zuo (\*zai) wanshang.  
we always do at evening  
'We always work at evenings.'

This is akin to bare NP adverbs in Larson , which are nominal phrases with a feature that allows the nominals not to need prepositions for Case assignment. What we have here is a nominal phrase that does not need a P for thematic assignment. Observe also that an instrumental P is not always needed to express the instrumental interpretation in English.

- (23) a. This pen generally writes smoothly.  
b. That knife cuts beautifully.  
c. A sharp knife cuts better than a dull knife.

The examples above show that temporals, locatives and instruments can be object usurpers. In contrast, it seems difficult to find any examples using a nominal as a comitative without any comitative marking (marking by a distinct comitative Case or P, or an applicative). We refer to this type as "object non-usurper" based on the observations in the previous section. These elements require some marking to make a nominal phrase obtaining the intended adjunct interpretation. Another example is benefactive. Unless there is an applicative morpheme or a benefactive marking by Case or P, it seems impossible to find an instance with a bare nominal interpreted as benefactive. Recipients seem to generally require some marking as well, applicative, (inherent) Case or a special preposition.

Such a distinction between object usurpers and object non-usurpers may be understood in terms of our world knowledge of how participants are related to events or activities (Borer). Generally, an activity such as writing, cutting etc. is impossible without an instrument. An activity is situated in a time and place. Accordingly, temporal and locative phrases are typically associated with activity verbs. In contrast, an event or activity does not need to have a comitative nor a benefactive. The same reasoning can apply to how a locative nominal phrase is associated with a verb. In Chinese, a directional verb like *qu* 'go' or *lai* 'come' can be followed by a locative nominal phrase directly to express the destination of the movement and such a locative nominal phrase must be interpreted as the destination point.

- (24) a. quxuexiao/jiaotang/yiyuan  
go school/church/hospital  
'go to school/church/hospital'
- b. laixuexiao/jiaotang/yiyuan  
come school/church/hospital  
'come to school/church/hospital'
- (25) a. qu ta nali  
go him there  
'go to him'

- b. lai wo zher  
come me here  
'come to me'

In contrast, the locative nominal phrase in the object position of a non-directional activity verb can only mean the locative where the activity takes place as in the ones below.

- (26) a. ta xihuan pao gongyuan.  
he like run park  
'He likes to run in the park'
- b. qing ni xie zhe-zhimaobi.<sup>5</sup>  
please you write this-CL brush.pen  
'Please write with this brush pen.'

In brief, the contrast between object usurpers and object non-usurpers is responsible for the question in (16a-b). We propose that the answer to these problems lies in the notion of Case, case morphology, and theta-roles. We discuss these topics next; but first, we introduce an additional fact about English.

### 3.3. *More on English*

In English N-V-*er/ing* compounding patterns, the nominal portion is prototypically the direct object of the underlying verb. However, many obliques can be found in this construction, except for benefactives, recipients and comitatives.

- (27) a. truck-driver/driving, apple-picker/picking, stamp-collector/collecting, dishwasher/washing, lawn mower/mowing, ice-breaker/breaking, etc.
- b. axe-murderer/murdering, street-walker/walking, Sunday driver/driving, bed-hopper/hopping, church-goer/going, etc.
- c. \*child-giver/giving; \*friend-goer/going (someone who goes places with friends); \*elderly-worker/working (someone who does work for the elderly), etc.

Like NI and non-canonical objects, these forms are somewhat less productive and typically have an institutionalized meaning. The following naturally occurring examples showing that the forms do exhibit some degree of productivity.

- (28) a. Is that the kind of mother you want? Some boring, old, normal, old toilet-goer? [heard on a British sitcom]
- b. The gear necessary for night hunting is often cumbersome and it is sometimes awkward to carry afield. [from a website for a hunting club in the US]

To conclude, we have seen that NI constructions allow the same range of elements as non-canonical objects in Chinese and compounds in English. In addition to this generalization, we also have to explain why non-canonical objects are not found in English (apart from compounds – that is, why can't we say \**John eats restaurants* while *John is a restaurant-eater* is fine. The next section addresses these questions, relating the facts to Case and its morphological realization.

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<sup>5</sup> This sentence is three-way ambiguous because 'this brush pen' can indicate a locative, instrument and theme: write on this brush pen, write with this brush pen, write the words 'this brush pen'.

## 4. Proposal

### 4.1. Case and overt Case morphology

Let us begin this section by briefly considering the following Korean data. Korean allows two nominal phrases with the accusative Case marking before a verb.

- (29) a. John-i ch'aek-ul se sigan-ul ilg-eoss-da  
 John-NOM book-ACC three hours-ACC read-PST-DECL
- b. John-i se sigan-ul ch'aek-ul ilg-eoss-da  
 John-NOM three hours-ACC book-ACC read-PST-DECL  
 'John read the book for three hours.'

However, despite the availability of two instances of accusative marking within one VP, Korean does not allow the type of non-canonical objects as we saw in Chinese.

- (30) John-un nac-ey/\*ul ca-ko siphe-ha-n-ta.  
 John-TOP daytime-at/\*ACC sleep-COMP want-LV-PRS-DECL  
 'John wants to sleep in the daytime.'

This can be due to a requirement that instruments, locatives etc. in Korean be licensed by functors. We propose that there is a morphological clue to the functor requirement: morphological case. Korean exhibits overt, and crucially distinct morphological case markings for nominative and accusative. Chinese does not. We do not wish to claim, as has been done in the literature (Hu), that Chinese does not have Case at all. Rather, as Li (*Order and Constituency in Mandarin Chinese*) demonstrates, the notion of Case is crucial in Chinese for capturing word order facts regarding arguments. Thus, a non-canonical object only occurs in the postverbal position where a canonical object occurs. A canonical and a non-canonical object do not co-occur after the same verb. The Case-marker P does not occur with a non-canonical object.

Markman ("The Syntax of Case and Agreement: Its Relationship to Morphology and Argument Structure"; "On the Parametric Variation of Case and Agreement") links abstract Case and case morphology. She proposes that the absence of case morphology implies the absence of abstract Case. Thus, Case and agreement features are not universal. She argues specifically that Chinese, as a language without agreement, lacks Case. This position is claimed to be supported by the rigidity in word ordering in this language: "...word order is a way to preserve thematic relations at PF in the absence of case and/or agreement marking...Case and agreement morphemes can be viewed as the PF reflexes of thematic relations that hold within the vP between the verb and at least one of its arguments. However, in the absence of Case and agreement features, thematic relations at PF can be preserved via a rigid relative word order of constituents within the vP." (p. 417) Specifically, Markman proposes the following types of languages according to their Case and agreement properties.

Type A: Northern Iroquoian	Agreement marking, no Case; NP dislocation obligatory
Type B: Indo-European	both Agreement and Case; NP dislocation available
Type C: Japanese	Case, no Agreement; NP dislocation available.
Type D: Chinese	no Agreement nor Case; NP-dislocation highly restricted

However, contrary to the claim by Markman, English (Markman's type B language) is actually more rigid in word order than Chinese. In contrast to the more rigid SVO word order in English, Chinese has the following word orders, in addition to SVO.

- (31) a. niurou, ta bu chi. ---OSV  
 beef he not eat  
 'Beef, he does not eat.'
- b. ta niurou bu chi. ---SOV  
 he beef not eat  
 'He does not eat beef.'

Chinese also has some common pairs of reversible word orders.

- (32) a. xiao bei he lücha.  
small cup drink green.tea  
'Use the small cup to drink the green tea.'
- b. lücha he xiaobei.  
green.tea drink small cup
- (33) a. ni-de keren shui na-zhang chuang ba.  
your guest sleep that-CL bed SFP  
'Let your guest sleep on that bed.'
- b. na-zhang chuang shui ni-de keren ba.  
that-cl bed sleep your guest SFP
- (34) a. jieriliwudougei-le pengyou-men le.  
holiday gift all give-le friend-plSFP  
'Holiday gifts were all given to the friends.'
- b. pengyou-men dou gei-le jieri liwu le.  
friend-pl all give-le holiday gift SFP  
'Friends were all given gifts.'

#### 4.2. Default Case

We propose instead that Chinese does indeed have Case (Li *Order and Constituency in Mandarin Chinese*), but that it has *undifferentiated Case*. Unlike Northern Iroquoian, English, and Korean, there is no morphological reflex of accusative versus other Cases in Chinese. More specifically, we propose that *differentiated Case* (that is accusative versus nominative versus instrument versus locative, etc.) is correlated with particular semantic properties (Kiparsky; Mithun "Active/Agentive Case Marking and Its Motivations"; Kratzer). As such undifferentiated Case is not associated with any particular semantic property. It functions purely to license the presence of overt DPs. Furthermore, the semantic properties associated with accusative Case discussed in the literature<sup>6</sup> do not play a role in Chinese syntax, suggesting the absence of a distinct accusative Case.

- (35) a. Chinese verbs/*v* assign [+Case]  
b. English/N. Iroq. verbs/*v* assign [+Accusative]
- (36) a. [+Case] is related to any argument that needsCase  
b. [+Accusative] is related to the direct object.

## 5. Conclusions

Chinese has similar possibilities and constraints in licensing non-canonical objects as in NI in Northern Iroquoian languages. NI and non-canonical objects allow themes, locatives, temporals, instruments and path, but do not allow benefactives, recipients, or comitatives. English compounds were also shown to exhibit the same restrictions. We proposed that these striking similarities can be traced to Case properties. Overt morphological case specifies that Accusative Case is assigned to the direct object. Absence of morphological case indicates that either no Case is assigned as in the compounding

<sup>6</sup> Cf. the proposal by Larson (1988) that all verbs in English assign both inherent and structural case. The accusative marking of an argument that is not the thematic object of the verb in an Exceptional Case Marking structure in English would need to be stipulated.

and incorporation cases or undifferentiated Case is assigned to any argument that needs Case. An argument with accusative Case is more limited in interpretation than an argument with undifferentiated Case, in line with earlier work on Case and its semantic correlates. Incorporated nouns in Northern Iroquoian and nominals inside English compounds are less restricted in interpretation, as there is no functor supplying the interpretation between verb and argument. Following Borer, we assume that the interpretative possibilities are supplied by real world knowledge/pragmatics. Non-canonical objects, NI and compounds are subject to cultural and institutionalized norms within their various languages. Being conventionalized or institutionalized means that the verb and the DP can be directly related without a functor.

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