Non-Canonical Objects as Event Kind-Classifying Elements

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Abstract   Non-canonical objects in Mandarin Chinese denote instrument, time, manner, and so on, instead of theme. The predicates that contain such objects show properties of unergative predicates. The paper thus claims that the syntactic position of such objects is the complement of a verb in the unergative use. The semantic function of such objects parallels that of classificatory adjectives in the nominal domain, and that of pseudo-incorporated nominals in the verbal domain. Such objects denote properties, and restrict, rather than saturate, predicates. Non-canonical objects are thus identified as event kind-classifying elements. Four properties of such objects motivate this analysis. They are never in the form of a pronoun, and never admit comparison; their hosting predicate encodes a subclass of an event kind, and the event is subject to an institutionalization constraint. Such objects are thus not arguments or adverbials. The paper further claims that since these properties are also found in cognate objects and weak definites in English, these two types of nominals are also event kind-classifying elements. These different types of nominal event kind-classifying elements are all complements of their associated verbs.

Keywords: non-canonical object, kind-classifying element, unergative, classificatory adjective, incorporation, weak definite, cognate object

1. Introduction

This paper studies the syntax and semantics of non-canonical objects (NCOs) in Mandarin Chinese (e.g., Lin 2001; Sun & Li 2010; Li 2014). A NCO follows a verb, like a direct object, but it does not denote a theme, as shown by the italic part of the examples in (1) through (9). The verbs in the a-examples and (9) may be followed by a theme and thus used as transitive verbs in other contexts, but they are followed by a NOC here; and the verbs in the b-examples in (1) through (8) are intransitive verbs, but they are also followed by a NCO here. NCOs may encode various non-theme roles, as labeled in (1) through (9).[1,2]

(1) a. xie   *mao-bi*   b. shui *shui-dai*   [Instrument]
         write brush-pen   sleep sleep-bag
         'write with a brush-pen'   'sleep in a sleeping bag'
(2) a. chuan *kuanshi*   b. tiao *balei*   [Manner]
         wear   style   dance ballet
         'wear clothes stylishly'   'dance in the style of a ballet dancing'

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[1] Abbreviations: CL: classifier; BA: causative; DE: modification/nominalization; EXP: experiential; PRF: perfective; PRG: progressive; PRT: sentence-final aspect/mood particle; RED: reduplicant; YA: empty morph between a monosyllabic verb and its RED.

[2] The examples in (1) through (9) do not exhaust the semantic types of NCOs. But there is no comitative NCO (Barrie & Li 2015a, b). One account could be that a comitative is not base-generated separately from the associated agent (Kayne 1994; Zhang 2007), and thus syntactically is different from other arguments. Barrie & Li (2015a.b) claim that there is no benefactive NCO, but (9) and the underlined parts in (i) falsify the claim.

(i) a. Women zai   jiao   shui. Lili   jiao   <u>hua</u>   wo   jiao   <u>shucai</u>.
         1PL   PRG   water   water Lili   water flower 1SG   water   vegetable
         'We are watering plants. Lili waters flowers and I water vegetables.'
     b. cun   <u>ziji</u>   (*Lianhe Bao* 'United Daily News', July 7, 2016, Sec. D)
         deposit self
         'save money for oneself'

(3) a. chi *canting*   b. shui *diban*   [Location]
       eat restaurant   sleep floor
       'eat in a restaurant'   'sleep on the floor'

(4) a. jiao *wanshang*   b. xiu *libaisi*   [Time]
       teach evening   rest Thursday
       'teach in the evenings' 'rest on Thursdays'

(5) a. du *xingqu*   b. gei bieren ku-guo *sang* [Reason]
       read interest   for   other cry-EXP lost
       'read because of one's interest' 'cried for others' death'

(6) a. mai *gongyi*   b. pai *dianying-piao*   [Purpose]
       sell charity   queue movie-ticket
       'sell something for charity' 'queue for a movie-ticket'

(7) a. chi *fumu*   b. wan *gong-kuan*   [Financial source]
       eat parents   play public-funds
       'live on the parents'   'play paid by the public funds'

(8) a. ti *qianwei*   b. ku *qiong*   [Functive³]
       kick forward   cry poverty
       'play the forward role in soccer' 'cry to show one's poverty'

(9) Li-Qi gei   tongxue   jian-fa, ta zhi jian *nan-sheng*. [Benefactive]
    Li-Qi for   classmate cut-hair 3SG only cut male-student
    'Li-Qi cuts hair for his classmates. He does so only for male students.'

The semantic role of an NCO can be expressed by a preverbal PP adverbial, e.g., (3a) and (3b) can be expressed by (10a) and (10b), respectively.

(10) a. [zai canting]   chi   b. [zai diban-shang] shui
        at   restaurant eat   at   floor-on   sleep
        'eat in restaurants'   'sleep on the floor'

Like a verb that takes a canonical object, a verb that takes an NCO may have various aspect markers (Li 2014: 305), such as the perfective -*le*, as in (11a), the progressive -*zhe*, as in (11b), and the experiential -*guo*, as in (11c).[4]

(11) a. Li-Qi zhi   ti-le   shang-ban-chang.
        Li-Qi only kick-PRF   first-half-session
        'Li-Qi played only in the first half session of the football match.'
     b. Li-Qi hai   zai   chi-zhe   shi-tang.
        Li-Qi still PRG   eat-PRG   dining-hall
        'Li-Qi still eats in a dining-hall.'
     c. Li-Qi mei   chi-guo   [zhe ge   da   wan].
        Li-Qi not   eat-EXP   this CL   big   bowl
        'Li-Qi has never eaten with this big bowl.'

Like canonical objects, NCOs may have various forms (Li 2014). They not only can be bare nouns, as in (11a,b), but also nominals with a demonstrative, as in (11c), proper

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³ See Creissels (2014) for the term functive. The PP *as a negotiator* in *I was sent as a negotiator* is a functive.
⁴ Pre-NCO verbs are usually monosyllabic (Sun & Li 2010), but longer ones are possible (also Lin 2001: 218).
(i) a. xiaofei haohua   fandian   b. tong-ku shuang-qin
       spend   luxurious hotel   pain-cry both-parent
       'spend money in luxurious hotels'   'cry at the loss of the parents painfully'

names, as in (12a), nominals with a modifier, as in (12b), and nominals with a bound possessive pronoun, as in (12c).

(12) a.   Li-Qi zhunbei   you   Dongjing.
             Li-Qi prepare   travel Tokyo
             'Li-Qi is preparing to travel in Tokyo.'

      b.   Li-Qi zai   kuang [na   jia   [gang kaizhang]   de   shangdian].
             Li-Qi prg   stroll that CL   just   open   DE   shop
             'Li-Qi is strolling in that shop which just opened.'

      c.   Women-xi   meige yanjiusheng dou   chi   ta-fumu.
             2PL-department   every graduate   all   eat   3SG-parents
             'Every graduate in our department lives on his parents.'

However, I have observed that an NCO is not allowed to be a pronoun, and is not allowed to be classifier-initial, either. In (13), the pronoun NCO *tamen* 'they' makes the second clause unacceptable, and in (14), *zhi mao-bi* 'CL brush-pen' can be the canonical object in (14a), but not the NCO in (14b). The intended meaning of (14b) is expressed in (14c), where the NCO is a bare noun, *mao-bi* 'brush-pen.'

(13) A-Qi hai   zai   chi   fumu, *[ta-didi   ye   zai   chi <u>tamen</u>].
       A-Qi still   PROG   eat   parents 3SG-brother also   PRG   eat   3PL
       Intended: 'A-Qi is still living on his parents, and so is his brother.'

(14) a.   Lili   yao   mai   <u>zhi   mao-bi</u>.
             Lili   want   buy   CL   brush-pen
             'Lili wants to buy a brush-pen.'

      b.   *Lili   yao   xie   <u>zhi   mao-bi</u>.
              Lili   want   write   CL   brush-pen

      c.   Lili   yao   xie   <u>mao-bi</u>.
             Lili   want   write   brush-pen
             'Lili wants to write with a brush-pen.'

The use of NCOs is productive (Lin 2001: 221; Sun & Li 2010: 22). For instance, the verb *hua* 'slide, skate' can not only take the NCO *han-bing* 'roller-skate, lit.: dry-ice', but also *shou-ji* 'smartphone', as seen in (15a) and (15b), respectively. Thus, NCOs are not historical relics.

(15) a.   hua   han-bing   b.   hua   shou-ji
             skate   dry-ice   skate   hand-machine
             'roller-skate'   'swipe on a smartphone'

Lin (2001) is the first systematic study of NCOs. He proposes that an unpronounced light verb (*USE, AT,* and *FOR*, for instrument, location/time, and reason NCOs, respectively) takes an NCO as specifier and a VP as complement. The non-light verb moves from the VP to the light verb, and the verb cluster formed in this way moves to the subject-selecting little v, leaving the NCO in the post-verbal position, as if it were an object of the verb (Lin 2001: 201). I use English words to illustrate his analysis of (1a) in (16):

(16)   [$_{vP}$ Agent [$_{v'}$ v [$_{VP2}$ brush-pen^{NCO} [$_{V2'}$ USE [$_{VP1}$ write]]]]]

Another study of NCOs is Sun & Li (2010). They claim that in Chinese, it is a root, rather than a verb with its theta role-selecting property, that is merged with an argument; thus any nominal that is semantically relevant can be selected by the root. In other words, the selection of objects is free.

A similar proposal of free combination of a verb and its object is made in Li (2014). She proposes that an NCO is base-generated as the specifier of a light verb (Lv) projection. For example, temporal NCO is the specifier of Lv-tem, and a locative NCO is the specifier of Lv-loc. (17) illustrates her analysis (Li 2014: 321). In Barrie & Li (2015a,b), the thematic freedom of NCOs is claimed to correlate with the lack of morphological case in the language.

(17)   [Agent v [$_{VP}$ Time^{NCO} Lv-$_{tem}$ [Location^{NCO} Lv-$_{loc}$ [Instrument^{NCO} Lv-$_{inst}$ [Theme V]]]]]

In order to understand NCOs, one needs to answer three questions, regarding their position (Qa), their semantic function (Qb), and the constraints on their forms (Qc):

(18)   Qa: Why does a non-theme nominal show up in an apparent direct object position?
        Qb: Semantically, does an NCO behave the same as a canonical object and an adverbial that encodes the same theta role? If not, why not?
        Qc: Why can an NCO not take the form of a pronoun or the form that starts with a classifier?

The scholars of the previous analyses did not address Qb and Qc, and their answers to Qa are not satisfactory, since none of them notices the systematically shared constraints on the verb that takes an NCO and a verb in its unergative use, to be presented in Section 2.

I answer Qa in Section 2, arguing that a NCO is the complement of the verb of an unergative predicate. I answer Qb in Section 3, claiming that an NCO plays the semantic role of an event kind-classifying element. In Section 4, I identify more types of such elements. Qc is answered in Section 5, where I claim that since an NCO does not saturate a predicate, a classifier-initial NCO fails to get licensed by Existential Closure. Section 6 concludes.

I do not discuss post-verbal numeral expressions, as in (19a,b), since they can be resultative secondary predicates, according to Zhang (2017). Her evidence comes from the syntactic similarities and interactions between such a numeral expression and the resultative in a VV resultative construction in Chinese. I also do not discuss nominals following a resultative verb-cluster, as in (19c). In an example like (19c), the higher verb denotes an activity, the lower verb denotes a result, and the post-verbal nominal is the subject of the secondary predicate (e.g., Sybesma 1999: 15). Thus, in (19c), *na ba dao* 'that knife' is the subject of *dun* 'blunt'.

(19)   a.   A-Qi   chi-le   liang   wan   fan.
              A-Qi   eat-PRF two   bowl   rice
              'A-Qi ate two bowls of rice.'
        b.   chi-le   liang   jia   canting
              eat-PRF two   CL   restaurant
              'ate in two restaurants'
        c.   A-Qi   qie-dun-le   na   ba   dao.
              A-Qi   cut.with.knife-blunt-PRF   that   CL   knife
              'A-Qi cut something so much such that that knife got blunt.'

If the post-verbal nominals in (19) are hosted in a predicate different from the main predicate, their syntactic positions are different from that of a canonical object or NCO.[5]

2. The unergative properties of NCO constructions

Although NCOs enjoy thematic freedom, the hosting constructions are subject to the same constraints found in unergative constructions.

Verbs such as *swim, sleep, walk* head unergative predicates. They have no theme object. Verbs such as *eat*, when they occur with a theme object, as in *John ate a banana*, are used as transitives, but when they occur without a theme object, as in *John usually eats late*, they are used as unergatives.

Considering that NCOs do not encode themes and unergatives do not have a theme argument, I claim that all NCO constructions are unergative constructions, including those in the a-examples in (1) through (8) and (9), and that an NCO is similar to a non-theme nominal that is found in an unergative predicate, as in *She slept the sleep of the just*. One fact that is expected from this claim is that an NCO never occurs with a theme object, regardless of the order (Lin 2001: 207; Sun & Li 2010: 25; Li 2014: 305), as seen in (20).

(20) a. *xie   mao-bi   xin
          write   brush-pen   letter
      b. *xie   xin   mao-bi
          write letter   brush-pen
          Intended (a & b): 'write letters with a brush-pen'

Semantically, the patient of the verb in an NCO construction can be expressed by a topic, as seen in (21). This fact indicates that the restriction in (20) is not semantic.

(21) Zaofan,   wo   chi   shi-tang.
      breakfast   1SG   eat   dining-hall
      'As far breakfast, I eat in the dining-hall.'

A classic account for the constraint in (20) is that a verbal phrase allows only one object to get a structural Case, and thus in an NCO construction, a canonical theme object is not allowed (Lin 2001: 238). The same account could explain the fact that an NCO is not allowed to occur with another NCO in the same predicate, as shown in (22) (cf. (4) and (9)).

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[5] Another issue I do not discuss is so-called noncanonical subjects, which are not agents, such as the underlined parts in (i) (Li 2014). Such nominals can be topics, rather than subjects (Hsuan-Hsiang Sam Wang, p.c.). For instance, *xiao bei* in (ia) might be in the position of a clause-internal topic, preceded by a *pro* subject, as in (iia). Clause-internal-topic is available cross-linguistically (Uriagereka 2000; Paul 2002). As for *lü-cha* in (ib), it can be a clause-edge topic, immediately followed by a *pro* subject, as in (iib). An agentive adverb such as *guyi* 'deliberately' or a purpose adverbial is rejected in such constructions (Li 2014: 303–304), because it is licensed in a thetic judgement, which is narrative, describing an event. Topic sentences express a categorical judgment instead (Ladusaw 1994).

(i)   a.   Xiao   bei   he   lü-cha.
           small   cup   drink green-tea
           'The small cup is for drinking the green tea.'
      b.   Lü-cha   he   xiao   bei.
           green-tea   drink small   cup
           'Green tea is drunk with small cups.'
(ii) a.   {pro/Lisi} [^Topic xiao   bei]   he   lü-cha.
           pro/Lisi   small   cup   drink green-tea
      b.   [^Topic Lü-cha],   {pro/Lisi}   he   xiao   bei.
           green-tea   pro/Lisi   drink small   cup

(22)   a.   *Wo jian   shangwu   nan-sheng.
           1SG cut   morning   male-student
      b.   *Wo jian   nan-sheng   shangwu.
           1SG cut   male-student morning
           Intended (a & b): 'I cut hair for male students in mornings.'

The unergative claim is also able to explain the ungrammaticality of (22), since an unergative is never followed by two nominals (*She lives [a life of scholarship] [a life of love]). My claim that all NCO constructions are unergative constructions is supported by four arguments (2.1– 2.4).

2.1 A NCO never occurs with an unaccusative verb

No NCO may occur with an unaccusative verb (Sun & Li 2010: 26; Li 2014: 301). For instance, in (23), the unaccusative verb *lai* 'come' is not allowed to be followed by the intended instrument-denoting NCO *huoche* 'train'. The constraint is expected if NCOs occur in unergative predicates only.

(23)   *Li-Qi lai   huoche.
        Li-Qi come   train
        Intended: 'Li-Qi came by train.'

2.2 A NCO is never an agent

The agent argument of an unergative predicate is never postverbal in Chinese (Li 1990: 136), as shown in (24b).

(24)   a.   Yahui youyong-le.   b.   *Youyong-le Yahui.
           Yahui swim-PRF   swim-PRF   Yahui
           'Yahui swam.'

A NCO, which is post-verbal, is also never an agent (Sun 2011: 79 and the references cited there; Li 2014: 309, 311), as shown in (25).

(25)   a.   *kai   laonian-ren.
          drive old-person
          Intended: 'Old people drive (cars).'
      b.   *xie   laonian-ren.
          write old-people
          Intended: 'Old people write.'

The constraint could be explained by a theta-role hierarchy, in which an agent if it appears must be mapped to a position higher than any other role, and thus is disallowed to be the object of a verb, which is lower than the subject. This constraint is also expected if NCOs occur in unergative predicates only.[6]

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[6] The post-verbal nominal in examples like (i) is not an agent NCO. In such an example, a quantity-denoting object occurs in a predicate headed by a modal or a bare verb, which also allows a modal reading in Chinese, and a capacity/accommodation reading emerges (Li 2014: (42)).
(i)   Zhe   wan   fan chi liang   ge   ren.
        this   bowl   rice eat two   CL   person
        'This bowl of rice is for two people.'

2.3 The subject of an NCO construction must be an agent

The subject of an unergative predicate, which denotes an activity, must be an agent, rather than a causer. An agent is animate and volitional, whereas a causer does not have to be animate and is not volitional. The former licenses agent-oriented adverbials, whereas the latter does not. See Alexiadou & Schäfer (2006), Alexiadou (2014), and Legate (2014) for extensive discussion of morphosyntactic distinctions between an agent and a causer. In (26), *dizhen* 'earthquake' is a causer subject, and *na zuo qiao* 'that bridge' is a canonical object of *hui* 'destroy'. The agent-oriented *guyi* 'deliberately' is disallowed here.

(26)   Dizhen   (*guyi)   hui-le   na   zuo   qiao.
        earthquake   deliberately   destroy-PRF   that   CL   bridge
        'The earthquake destroyed that bridge.'

In (27a), the unergative predicate headed by *paobu* 'jog' licenses the agentive adverb *guyi* 'deliberately', and in (27b), the same adverb is also licensed in the NCO construction.

(27)   a.   Li-Qi   guyi   zai   yuanzi-li   paobu.
              Li-Qi   deliberately   at   yard-in   jog
              'Li-Qi jogs in the yard deliberately.'
        b.   Li-Qi   guyi   shui   men-ban.
              Li-Qi   deliberately   sleep   door-board
              'Li-Qi sleeps on a door-board deliberately.'

On the other hand, an intended causative meaning is never expressed by either an unergative or NCO construction. In (28a), the verb *pao* 'run' heads an unergative predicate, and the subject is the inanimate *dizhen* 'earthquake'; the sentence does not encode the meaning that the earthquake caused something (e.g., rats or skateboards) to move around. Similarly, the causer cannot be the subject of the predicate *shui shui-dai* 'sleep in a sleep bag' in (28b), where *shui-dai* 'sleep-bag' is an NCO. The same point is shown in (28c), where *leng shui* 'cold water' is an NCO.

(28)   a.   *Dizhen   dachu   pao.
               earthquake   everywhere   run
               Intended: 'The earthquake made things move around everywhere.'
        b.   *Dizhen   shui   shui-dai.
               earthquake   sleep   sleep-bag
               Intended: 'The earthquake made us to sleep in sleep bags.'

In a capacity/accommodation construction, including those in (ii) (Lu 2004; Ramchand 2008: 192; Her 2009: 1156; Li 2014: 309), a manner-denoting verb may be adjoined to a null capacity/accommodation verb. If this is plausible, the post-verbal nominal is the theme object of the null verb, rather than an agent. If a verb does not express a manner of capacity/accommodation, e.g., *shuo* 'speak', it is not allowed to occur in the construction, as seen in (iiia). See Sun & Pan (2012) for more examples like those in (iii). In such examples, no manner adverbial is allowed and if *zenme* 'why, how' occurs, it has a reason, rather than manner, reading (Wang & Chin 2016: 50), showing that no agent is in the structure, and thus no manner adverbial is licensed.

(ii) a. The cabin slept four adults.   b. The car sits five people.   c. The sofa seats three.
(iii) a. Zhe zhang zhuozi {zuo/*shuo} naxie keren.   b. Zuobian yongchi zhi you   nan-sheng
         this CL table sit/speak those guest   left   pool   only swim male-student
         'This table {sit/*speak} those guests.'   'The pool on the left is for male students to swim.'

c.	*Da-yu	xi	leng	shui.
	big-rain	wash	cold	water
	Intended: 'The heave rain caused a person wash with the cold rain water.'

Thus, as in an unergative predicate, the predicate that has an NCO must have an agent subject. In contrast, the predicate that has a canonical object allows a causer subject, as seen in (26). Again, the constraint is expected if NCOs occur in unergative predicates only.

2.4 A NCO construction denotes an activity
There is a close relation between unergative predicates and activity, which is unbound and thus atelic (Tenny 1987, Grimshaw 1993: 2, Kuno & Takami 2004: 15, van Hout 2004, among others). A predicate that has an NCO also denotes activity. Three signs for this are shown in 2.4.1 through 2.4.3.

2.4.1 A NCO is not compatible with a result-durative
Neither an unergative predicate nor a predicate that has an NCO is compatible with a post-event result durative. Generally, a durative such as *san nian* 'three years' can be either an event durative, encoding the time span of an event, or a post-event result durative, encoding the time span of a consequent state after an event (Moens & Steedman 1988). The latter is licensed in a telic predicate only (Chen 1988: 410; Ma 1992: 3–5; Lin 2008), which has a natural ending. For the event expressed by (29), when the whole package of medication is finished, the event reaches its end. Thus, this sentence expresses a telic event. The sentence-final *san nian* has two readings, shown by the two translations. The object *na he yao* 'that package of medication' is a canonical object.

(29)	Li-Qi	chi-le	na	he	yao	san	nian	le.
	Li-Qi	eat-PRF	that	package	medication	three	year	PRT
	'Li-Qi has taken the medication from that package for 3 years and he is still doing so.'
	(event durative)
	'Li-Qi finished taking that package of medication 3 years ago.' (result durative)

In contrast, the durative does not have a result time reading either in the unergative construction in (30a) or in the NCO constructions in (30b) and (30c).

(30)	a.	Li-Qi	hunshui-le	san	xiaoshi le.
		Li-Qi	sleep-PRF	three	hour	PRT
		'Li-Qi has slept for three hours.'
		Not: 'Li-Qi stopped his sleeping three hours ago.'
	b.	Li-Qi	xie	mao-bi	san	xiaoshi le.
		Li-Qi	write	brush-pen	three	hour	PRT
		'Li-Qi has written with a brush-pen for three hours.'
		Not: 'Li-Qi stopped his writing with a brush-pen three hours ago.'
	c.	Li-Qi	shui	na	zhang	shafa	san	xiaoshi le.
		Li-Qi	sleep	that	CL	sofa	three	hour	PRT
		'Li-Qi has slept on that sofa for three hours.'
		Not: 'Li-Qi stopped his sleeping on that sofa three hours ago.'

If a durative surfaces between a verb and its object, it has no result time reading, as seen in (31a). As expected, a pre-NCO durative has an event time reading consistently, as seen in (31b) (cf. Li 2014: (22a)).

(31) a.   Wo   chi-le <u>san   tian</u>   na   bao   shuiguo.
             1SG   eat-PRF three   day   that   bag   fruit
             'I ate that bag of fruit every day for three days.' (The fruit may or may not be
             eaten up.)
             Not: 'I finished eating of that bag of fruit three days ago.'
      b.   Wo   chi-le <u>san   tian</u>   fandian.
             1SG   eat-PRF three   day   restaurant
             'I ate in restaurants every day for three days.'
             Not: 'I stopped eating in restaurants three days ago.'

Second, an NCO is not compatible with a temporal expression that anchors the onset of a consequent state. The temporal expression *zicong ... yilai* 'from the time when' may anchor either the onset of an event, or the onset of a consequent state of an event. The predicate *chi na he yao* 'take that package of pills' in (32) is the same as the one in (29), which is telic. This example is ambiguous, as shown by the two translations.

(32) zicong Li-Qi chi   na   he   yao   yilai
      since Li-Qi eat   that   package   pill   since
      'since Li-Qi started to take that package of pills'
      'since the time when Li-Qi finished that package of pills'

In contrast, the temporal expression does not anchor the onset of a consequent state in either the unergative construction in (33a) or in the NCO construction in (33b).

(33) a.   zicong Li-Qi shuijiao   yilai
             since Li-Qi sleep   since
             'since the time when Li-Qi started to sleep'
             Not: 'since the time when Li-Qi stopped his sleeping'
      b.   zicong Li-Qi shui   na   zhang shafa yilai
             since Li-Qi sleep   that   CL   sofa since
             'since the time when Li-Qi started to sleep on that sofa'
             Not: 'since the time when Li-Qi stopped his sleeping on that sofa'

The consistent rejection of a consequent reading of temporal expressions in both an unergative and an NCO construction suggests that the latter patterns with the former in denoting activities.

2.4.2 A NCO is not compatible with a low reading of *you* 'again'

Neither an unergative predicate nor a predicate that has an NCO is compatible with a low reading of *you* 'again'. If the adverb occurs in a predicate that expresses a telic event, it can be interpreted either as a modifier of the action conducted by the agent, a high scope reading, or as a modifier of the result of the action, a low scope reading (i.e., a restitutive reading). In the latter reading, whether the two results are related to the same agent is irrelevant. In (34), in the high reading of *you*, the sentence implies that Li-Qi did it for the second time, but in its low reading, the sentence allows the reading that he was the second person to do so.

(34) Li-Qi you   ca   na   zhang zhuozi le.
      Li-Qi again   wipe   that   CL   table PRT
      'Li-Qi is wiping that table again.'

High: Li-Qi did so before, and this is his second time to do so.
Low: Possibly, someone has wiped it, and Li-Qi is the second person to do so.

In contrast, the adverb does not have a low reading in either the unergative construction in (35a), or the NCO constructions in (35b) and (35c).

(35)   a.   Li-Qi   you   shuijiao   le.
                 Li-Qi   again   sleep   PRT
                 'Li-Qi is sleeping for the second time.'
                 Not: 'Someone slept before and Li-Qi does it.'
      b.   Li-Qi   you   xi   leng   shui   le.
                 Li-Qi   again   wash   cold   water PRT
                 'Li-Qi washes with cold water for the second time.'
                 Not: 'Someone washed with cold water before Li-Qi does it.'
      c.   Li-Qi   you   shui   na   zhang   da   chuang le.
                 Li-Qi   again   sleep   that   CL   big   bed   PRT
                 'Li-Qi sleeps on that big bed for the second time.'
                 Not: 'Someone slept on that big bed before Li-Qi does it.'

The absence of a low reading of *you* in both an unergative construction and an NCO construction again suggests that the latter patterns with the former in denoting an activity.

2.4.3 A NCO is not compatible with an IN-temporal adverbial

If a predicate is incompatible with an IN-temporal adverbial, e.g., *in ten minutes*, it is atelic. This test can also be used to show that both unergative and NCO constructions are atelic. For example, *zai shi fengzhong zhinei* 'in ten minutes' is not allowed to occur in either the unergative construction in (36a), or the NCO construction in (36b). (Note that no post-verbal numeral occurs; see my comment on (19a, b).)

(36)   a.   *Li-Qi [zai   shi   fenzhong   zhinei] hunshui-le.
                 Li-Qi at   ten   minute   in   sleep-PRF
      b.   *Li-Qi [zai   shi   fenzhong   zhinei] chi-le canting.
                 Li-Qi at   ten   minute   in   eat-PRF restaurant

A similar English example is seen in (37). (37a) has an unergative predicate, and it is incompatible with *in five minutes*, indicating that it is atelic. In (37b), however, the phrase *the mile* occurs, and the predicate is compatible with *in five minutes*, indicating that it is telic (Rosen 1999). Borer (2005: 47) states that addition of a direct object gives rise to telicity. But she also mentions that native speakers report that (37c) is possible with an atelic construal (i.e., *for five minutes* may occur) if *the mile* is understood as a particular stretch, rather than defining the length of running. In order words, if *the mile* denotes a location, functioning as an NCO, (37c) can be atelic. We thus see that if an NCO occurs in an unergative predicate, the predicate is still atelic.

(37)   a.   Bill ran {for five minutes/*in an hour}.
      b.   Bill ran the mile {*for five minute/in five minutes}.
                                         (*the mile*: the length of running)
      c.   Bill ran the mile for five minutes.   (*the mile*: a particular stretch)

Summarizing, I have claimed that it is unergative predicates that take NCOs. In addition to the fact that NCOs do not encode themes, this claim is supported by four arguments: an NCO does not occur with an unaccusative verb (2.1); it is never an agent (2.2); the subject of an NCO construction must be an agent (2.3); and an NCO construction denotes an activity (2.4). In the following two subsections, I answer the questions why an apparent transitive verb is allowed to appear without a theme object (2.5), and how it is syntactically possible for an unergative predicate to host a non-theme object (2.6).

2.5 The missing of the theme: intransitivization?

We have shown that in the absence of a theme object, a verb has an unergative use. The predicates in the a-examples in (1) through (8) and (9) behave like the unergative predicates in the b-examples. As we mentioned before, verbs such as *eat*, when they occur with a theme object, are used as transitive verbs; but when they occur without a theme object, they are used as unergative verbs. The close relation between transitive and unergative uses of verbs is discussed in Chomsky (1962; see Chomsky 1986: 14), among others. Mittwoch (2005) lists quite a lot of English verbs that have these two uses. In the resultative construction (38a) and *the way* construction in (38b) (Mittwoch 2005: 241), no theme object occurs.

(38)   a.   He knitted his fingers stiff.
         b.   He knitted his way through five balls of wool.

Also, in German, verbs that can be used transitively have intransitive variants when they are reduplicated to produce an iterative interpretation (Kratzer 2005: 186; see Mittwoch 2005: 248 for the same effect in a plurationality context in English). The same phenomenon is seen in the V-*ya*-V and AABB reduplication constructions in Chinese (Huang et al. 2009: 26; Zhang 2015a: 10). In (39), *xie-ya-xie* 'write-YA-write' rejects an object. In (40a), the verb *feng-bu* 'sew-mend' may be followed by *yifu* 'clothes', but in (40b), the correlated AABB verb *fengfeng-bubu* rejects an object.

(39)   Li-Qi   xie-ya-xie   (*yi   feng   xin).
        Li-Qi   write-YA-write   one   CL   letter
        'Li-Qi wrote and wrote.'
(40)   a.   A-Gui   jingchang   feng-bu   yifu.
              A-Gui often   sew-mend   clothes
              'A-Gui often mends clothes. '
         b.   A-Gui   jingchang   fengfeng-bubu (*yifu).
              A-Gui often   RED.sew-mend   clothes
              'A-Gui often keeps mending something.'

Therefore, NCO constructions are not the only ones in which apparent transitive verbs are used as intransitive verbs.

A related fact is that a transitive verb may be translated into an intransitive verb in another language. For example, *marry* can be transitive in English, but *jiehun* 'marry' is intransitive in Chinese (the marriee must be introduced by a preverbal PP). Citing Hawkins (1986), Haspelmath (2015: 131) points out that "verbs like 'help' and 'follow' are encoded transitively in English, but not in German, where the helpee and followee arguments are in the Dative (rather than the Accusative) case", as seen in (41) and (42). Haspelmath (2015) reports quite a lot of similar contrasts in many other languages, asserting that although transitivity is often understood as a semantic concept of some kind, semantics is quite irrelevant to our understanding of transitive encoding (p. 131).

(41) a.   He helped her.
     b.   Er   half   ihr.   [German]
         3SGM.NOM   helped 3SGF.DAT
         'He helped her.'
(42) a.   They followed them.
     b.   Sie   folgten   ihnen.   [German]
         3PL.NOM   followed   3PL.DAT
         'They followed them.'

All of these language-internal and cross-linguistic alternation possibilities simply show that there is no one-to-one relation between the form or semantics of a verb and a fixed argument structure. Transitive encoding can be construction-specific and language-specific. One might claim that the intransitive version is derived by the deletion of the object (cf. Chomsky 1965: 87), e.g., the word *things* could be deleted in (43). If so, in (44b), *them* should be able to take the object in the first clause as its antecedent, as in (44a), before the object is deleted, contrary to the fact (cf. Mittwoch 2005: 247).

(43)   I usually buy in that shop.
(44)   a.   He often buys things here and sells them there.
        b.   *He often buys here and sells them there.

The deletion claim also needs to stipulate that in the constructions like (38), (39), (40b), and all NCO constructions, the deletion is obligatory, and the intransitive uses of the verbs in (41b) and (42b) need some other account (also see den Dikken 2015: 86 and Kratzer 2005: 194 for other facts that are incompatible with the deletion analysis). One might also claim that there is a null *pro* for the missing theme object in the intransitive version (Mittwoch 2005), but *pro* is not obligatory, and thus the problems mentioned above remain.

Alternatively, one can assume that verbs have no intrinsic or lexically specified argument structure (Borer 2005, 2013, Lohndal 2014, among others), and they may instantiate various event structures in syntax (e.g., Ramchand 2008, 2014). Then, the apparent transitive-intransitive alternation is expected. As for verbs that are exclusively used as transitive ones (e.g., *John devoured *(his lunch)*; Dowty 1989: 90), it is possible that the requirement of the theme argument comes from the selection of the verbs (see Lohndal 2014 for other possible analyses). Thus there is no operation to remove the assumed theme when a verb occurs in an unergative predicate. I apply Ramchand's theory to my syntactic analysis of NCO constructions, to be elaborated in 2.6.

2.6 The syntactic position of an NCO

Traditional syntactic theories do not recognize an object position for an unergative, but Hale & Keyser's (1993, 1998, 2002, 2005) works show this possibility. Hale & Keyser (2002: 47) claim that *laugh*, for instance, has a [ᵥVN] structure. In this structure, *laugh* is base-generated under N, but pronounced under V. The complementation structure of unergative constructions can be seen in examples such as (45) (Hale & Keyser 2002: 71), where the root of a verb and that of its object are the same. Such a cognate object exhibits properties of complements, instead of adverbials (Massam 1990; Hale & Keyser 2002: 103).[7]

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[7] The following facts also show that unergatives may have an object. In the Navajo unergative verbs in (i), the presence of the object is signaled by the indefinite third person object prefix *'-* (Hale & Keyser 2002: 117). In the Basque examples in (ii), the unergative light verb *egin* 'do' consistently follows an action noun, which

(45)   She slept the sleep of the just.

If an unergative predicate has a complement position, and if the verb that takes an NCO heads a unergative predicate, an NCO must be in the complement position. Let us specify the syntactic position of an NCO. Depending on one's syntactic framework, this nominal should be represented wherever the complement of an unergative verb is. In this paper, I use Ramchand's (2008) argument structures, which is compatible with other approaches to argument structures (e.g., Pustojevsky 1991, Ritter & Rosen 1998, Borer 2005, Travis 2010). In her theory, there are three basic layers of projections: initP (InitiationP), procP (ProcessP), and resP (ResultP), as shown in (46) (Ramchand 2008: 39). According to Ramchand (2014: 22), "The highest specifier is the 'holder' of a property which 'leads-to' the change occurring." This is another way of saying initiator. "The middle specifier is the 'holder of a changing property.' This is just an undergoer. The lower predication expresses a property that comes into being/ is caused or led to by the central dynamic event. It is thus a 'result' and the 'holder' of that result property is the 'holder of result', or resultee."

(46) $[_{initP}\ DP_3^{subj\ of\ 'cause'}\ init\ [_{procP}\ DP_2^{subj\ of\ 'process'}\ proc\ [_{resP}\ DP_1^{subj\ of\ 'result'}\ res\ XP]]]$

Canonical direct objects are base-generated in either DP_1, if the predicate is telic, or DP_2, if the predicate is atelic. For instance, the telic (47a) has the structure (47b), where *the sandcastle* is base-generated in resP (Ramchand 2008: 60, 71 and 2014: (32); any element that is not in its surface position is in angle brackets; ResP also hosts a quantized object in Zhang 2017). The atelic (48a) has the structure (48b) (Ramchand 2008: 65), where *the cart* is base-generated in spec of procP. There is no resP in (48b).

(47)   a.   John destroyed the sandcastle.
         b. $[_{initP}$<John>$[_{init'}$ destroy$[_{procP}$ the sandcastle$[_{proc'}$ <destroy>$[_{resP}$**<the sandcastle>** $[_{res'}$<destroy>]]]]]]
(48)   a.   John pushed the cart.
         b. $[_{initP}$ <John> $[_{init'}$ push $[_{procP}$ **the cart** $[_{proc'}$ <push>]]]]

As in Pustejovsky (1991: 33), activity is called process in Ramchand (2008), and her procP is the locus of activity. The structure of (45) is (49) (adapted from Ramchand 2008: 97 (66)), where *the sleep of the just* is the complement of proc, and the subject *she* is base-generated as Spec of procP. The subject moves to Spec of initP, and then to the Infl domain (not shown in (49)). There is no resP in (49).

(49) $[_{initP}$ <she> $[_{init'}$ sleep $[_{procP}$ <^{DP}she> $[_{proc'}$ <sleep> $[_{DP}$ **the sleep of the just**]]]]]

If an NCO is the complement of an unergative, an NCO construction should have a structure similar to (49). Specifically, the verb heads procP in its base position, its subject is base-generated as Spec of proc, and the NCO is the complement of proc, as in (50). In other

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specifies the content of the activity (Hale & Keyser 1998:115; 2002:117). A similar pattern is seen in the Jemez examples in (iii), where an action noun is incorporated into a light verb (Hale & Keyser 1998:115).

(i) a.	'-ł-hosh	b.	'-ł-háá̧'	c.	'-ł-kǫǫ́h	d.	'-zhish
	'sleep'		'snore'		'swim'		'dance'
(ii) a.	barre	egin	b.	negar	egin	(iii) a.	hiil-'a	b.	shil-'a
	laugh	do		cry	do		laugh-do		cry-do
	'laugh'			'cry'			'laugh'		'cry'

words, the position of an NCO is the complement of proc in (49), rather than DP$_1$ and DP$_2$ in (46), which are possible positions for canonical objects.

(50)   [$_{initP}$ <DP$^{external\ argument}$> [$_{init'}$ V [$_{procP}$ <DP$^{external\ argument}$> [$_{proc'}$ <V> [$_{DP}$ **NCO**]]]]]

For example, the structure of (51a) is (51b), and the structure of (52a) is (52b).

(51)   a.   Li-Qi   xie   mao-bi.
              Li-Qi   write   brush-pen
              'Li-Qi writes with a brush pen.'
        b.   [$_{initP}$ <Li-Qi> [$_{init'}$ xie [$_{procP}$ <Li-Qi> [$_{proc'}$ <xie> [$_{DP}$ **mao-bi** ^{NCO}]]]]]
(52)   a.   Li-Qi   shui   diban.
              Li-Qi   sleep   floor
              'Li-Qi sleeps on the floor.'
        b.   [$_{initP}$ <Li-Qi> [$_{init'}$ shui [$_{procP}$ <Li-Qi> [$_{proc'}$ <shui> [$_{DP}$ **diban** ^{NCO}]]]]]

Since proc allows only one complement position, ungrammatical examples such as those in (22) are ruled out.

In this approach, a NCO is not introduced by any light verb, unlike in Lin's (2001) structure in (16) and Li's (2014) structure in (17). Also, the merger of a verb and a NCO is not in the root domain. None of the previous analyses has linked NCOs to unergative predicates. In contrast, the unergative complementation structure in (50) captures all of the unergative properties of NCO constructions introduced above. First, no unaccusative verb may have an NCO (2.1). Unaccusative verbs are result verbs, which lexicalize a change. In Ramchand's theory, they head resP, and their unique arguments are base-generated in resP. For example, the unaccusative construction (53a) has the structure in (53b) (Ramchand 2008: 79), where *arrive* is base-generated in resP. In (50), there is no resP in the atelic structure.

(53)   a.   Michael arrived.
        b.   [$_{initP}$<Michael>[$_{init'}$arrive[$_{procP}$<Michael>[$_{proc'}$<arrive>[$_{resP}$<Michael>
              [$_{res'}$ <arrive>]]]]]]

Second, an NCO cannot be an agent (2.2). In (50), the complement of proc, like the complement of proc in (49), is not for an agent. In Ramchand's structures, an agent never occurs in the complement of proc. Instead, an agent of an unergative predicate is base-generated in the Spec of proc, as an external argument.

Third, the subject of an NCO construction must be an agent, rather than a causer (2.3). As shown by Folli and Harley (2005), Alexiadou & Schäfer (2006: 46), Travis (2005), and Alexiadou, Anagnostopoulou, and Schäfer (2015: 43), the causer role must be connected to the composition of the resultative event structure. In Ramchand (2008), there is no resP in the structure of an atelic predicate, including that of an unergative predicate. The subject of the unergative structure in (49), as mentioned above, is base-generated at Spec of procP. In contrast, a causer is base-generated at Spec of initP.[8] The absence of a causer subject in NCO constructions is captured in the unergative structure in (50).

Fourth, the absence of resP in (50) also captures the atelic properties of NCO constructions (2.4). Specifically, an NCO is not compatible with a consequent reading of temporal expressions (2.4.1). Different readings of the same adverbial are licensed at

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[8] InitP can be further specified, and a causer is the Spec of one version of initP. See Alexiadou & Schäfer (2006), Alexiadou et al. (2015), and Legate (2014). But this detail does not affect the discussion here.

different levels of syntactic structures. For a temporal expression such as *san tian* 'three days', its consequent time reading is licensed by resP, and its event duration reading is licensed by a higher projection. The absence of resP in (50) captures the absence of a consequent reading for temporal expressions in NCO constructions. Moreover, an NCO rules out a low reading of *you* 'again' (2.4.2). Syntactically, the high reading of the adverb can be represented by the structure in which the adverb is attached to initP, c-commanding the base-position of an agent, and the low reading can be represented by the structure in which the adverb is attached to resP, not c-commanding any copy of an agent. The absence of resP in (50) captures the absence of a low reading of *you* in NCO constructions (see von Stechow 1996 for another compatible structural analysis of *wieder* 'again' in German). Also, an IN-temporal adverbial is licensed by resP (2.4.3). (50) does not have resP, and thus *zai shi fengzhong zhinei* 'in ten minutes' is not allowed to occur in an NCO construction, as seen in (36b).

In this section, I have answered Qa in (18): an NCO shows up in an apparent object position because it is the complement of the verb in an unergative predicate. Instead of introducing many new unpronounced functional categories (cf. Lin 2001, Li 2014), I have identified the position of NCOs with the available complement position in the unergative structure, and thus explained a series of unergative predicate properties of NCO constructions. We now move to Qb in the next section: semantically, does an NCO behave the same as a canonical object and an adverbial that encodes the same theta role? If not, why not?

3. The semantic function of an NCO: event kind-classifying element (KCE)
Why may a verb in an unergative predicate be combined with an NCO, which is not selected by the verb? Is the combination free? The literature and my observations give a negative answer to the latter question. Investigating the constraints on the combination also leads to an answer to the former question. In this section, I argue that NCOs are event kind-classifying elements, similar to classificatory adjectives and (pseudo) incorporated nominals.

3.1 The parallelism between NCOs and classificatory adjectives
One type of relational adjective is classificatory, e.g., *electric* in (54a) and *medical* in (54b). They specify what kind of entity or event is being denoted by the modified noun. They contrast both with thematic adjectives (the other type of relational adjective), e.g., *presidential* in (55a), *car* in (55b), and with non-relational (i.e., qualifying) adjectives, e.g., *old* in (56a), *long* in (56b). Classificatory adjectives have been studied by many (e.g., Bally 1932, Bolinger 1967, Vendler 1968, Postal 1969, Levi 1974, Ronat 1974, Bartning 1980, Warren 1984a,b, Bosque & Picallo 1996, McNally & Boleda 2004, Fábregas 2007, Rijkhoff 2008, Alexiadou & Stavrou 2011, Marchis 2015).

(54) a. an <u>electric</u> train   b. a <u>medical</u> examination
(55) a. a presidential election   b. car production
(56) a. an old lawyer   b. a long trip

There are many shared properties between classificatory adjectives and NCOs. First, they do not saturate the relevant head element. A classificatory adjective "does not absorb a lexically licensed theta role but it introduces a domain in relation to which the object denoted by the head noun is classified" (Bosque & Picallo 1996: 352). In this respect, classificatory adjectives are different from thematic adjectives. The word *presidential* in *a presidential election* saturates the role of theme lexically licensed by the noun *election*, but the word *medical* in *a medical examination* does not have a thematic relation with the noun *examination*. Similarly, an NCO does not have any thematic relation with the relevant verb, which heads an unergative predicate, in contrast to canonical objects.

Second, they both classify kinds. Classificatory adjectives "serve to relate the noun to a domain according to which the NP is classified and its denotation restricted (see Bolinger 1967)." (Bosque & Picallo 1996: 361) McNally & Boleda (2004: 189) also state that such adjectives "restrict the kind described by the modified noun to one of its subkinds." We will see the same semantic function of NCOs in 3.3.1.

Third, they both can have a wider range of semantic links to the relevant head than the range of thematic roles. Bosque & Picallo's (1996: 361) examples of Spanish classificatory adjectives include: *acrobacias AEREAS* 'air acrobacies' (Path); *calor SOLAR* 'solar heat' (Source); *viaje ESTELAR* 'star trip; lit. trip starly' (Goal); *poblado LACUSTRE* 'lake town; lit. town lascustrian' (Place); *crema DENTAL* 'toothpaste; lit. cream dental' (Benefactive); *curacion MANUAL* 'manual cure' (Instrumental); *material QUIRURGICO* 'surgical material' (Purpose), and *analisis SINTACTICO* 'syntactic analysis' (With respect to), among many others. The "with respect to" relation, for example, is not a recognized theta role. The interpretations of such adjectives "can be extremely varied" (p. 362). See Marchis (2010: 207) for a parallel list in Romanian. Similarly, various semantic links between NCOs and verbs are seen in (1) through (9), including "financial source" (see (7)), which is also not a theta role.

Fourth, both are productive in the relevant language families. Bosque & Picallo (1996: 362) point out that classificatory adjectives are very productive in Romance languages. As shown in Section 1, NCOs are also very productive in Chinese. This is also true in some other Sino-Tibetan languages. NCO examples in Vietnamese include *ăn nhà-hàng* 'eat in a restaurant; lit. eat restaurant' (Place); *viết bút-lông* 'write with a marker; lit. write marker' (Instrument); *mặc thời-trang* 'wear clothes stylishly'; lit. wear fashion' (Manner); *dạy tối* 'teach in the evening; lit. teach evening' (Time) (Vithong Nguyen, p.c.). Many NCOs examples in Miao (Spoken in Hunan, China) can be found in Luo (1990: 147, 155).

I call an element that classifies kinds, such as a classificatory adjective, a kind-classifying element (KCE). If a KCE classifies event kinds, such as *medical* in (54b), it is an event KCE; otherwise, it is a non-event KCE, e.g., *electric* in (54a).

3.2 The parallelism between NCOs and pseudo-incorporated nominals
In addition to adjectival event KCEs, nominal event KCEs can be found in various incorporation or "incorporation-like structures" (Carlson's 2003: 199 term; Mithun 1984, Massam 2001, Chung & Ladusaw 2004, Dayal 2004, 2011, 2015, among others). (Pseudo) incorporated nominals typically denote the themes of transitive verbs and are typically in a root-like form. For instance, Mithun (1984: 849) states that "[i]n *He is off berry-picking*, the word *berry* does not refer to a specific berry, nor to a particular bushful of berries: it qualifies the V, describing the type of picking in progress". Similarly, Rijkhoff (2008: 813) points out that in the Kusaiean example (57a) (cited from Gerdts 1998: 94), *mitmit sac* 'the knife' is a free-standing "dressed" argument, as seen in the presence of *sac* 'the' and its separation from the verb; in (57b), however, "*mitmit* 'knife' is a stripped noun that serves as a classifying satellite. Instead of a general 'sharpening action' we are now dealing with a special kind of sharpening: knife sharpening."

(57) a. Sah   el   twem   upac   mitmita   sac.   [Kusaiean]
          Sah   he   sharpen   diligently knife   the
          'Sah is sharpening the knife diligently.'
      b. Sah   el   twetwe   mitmit upac.
          Sah   he   sharpen   knife diligently
          'Sah is diligently knife-sharpening.'

Bare singular count nouns also seem to classify events when they occur as direct objects in English (see Stvan 2009: 319 for a list of examples).[9] According to Stvan, *school* is the location object of the verb *attending* in (58a) (Stvan 2009: 325), and *prison* is the location object of the verb *enter,* or *face*, or *flee,* in (58b). In (58c), *piano* is the object of *playing*. In Dutch, bare singular objects are syntactically productive with musical instruments (de Swart & Zwarts 2009: 280, 283). In addition to English and Dutch, such objects are also found in other languages that usually require singular count nouns to have a determiner (see Carslon 2003, de Swart & Zwarts 2009, and the references therein).

(58)   a.   Children ruined their health in ghastly sweatshops instead of attending <u>school</u>
        b.   {enter/face/flee} <u>prison</u>
        c.   She is playing <u>piano</u> for the choir.

(59) Ik   hoor   dat   Peter <u>piano</u> speelt.   [Dutch]
       I   hear   that   Peter piano   plays
       'I hear that Peter plays/is playing the piano.'

Thus, in various incorporation or incorporation-like structures, a sub-type of the event denoted by the verb is expressed (e.g., Mithun 1984: 849; Dobrovie-Sorin et al., 2006: 59; Dayal 2011: 146). Dayal (2015: 56) states that for an incorporated nominal, "instead of representing a theme argument, it simply modifies the verb. Incorporation is restricted to those that are appropriately classificatory, that is, those that are name-worthy." This means that incorporated nominals play the role of event KCEs.

According to Chung & Ladusaw (2004: 5), unlike a canonical object, an incorporated nominal and the incorporating verb undergo a semantic operation, Restrict, which composes a predicate directly with a property to yield a predicate without changing the degree of unsaturation (similar theories are seen in van Geenhoven 1998 and Farkas & Swart 2003). Carlson (2003: 201) also states that "[v]erbs and verbs plus their incorporated arguments denote exactly the same sort of thing; verbs are not an n-place functions that are reduced to an n-1-place functions upon addition of an argument, at this level of structure." On the same page, he further states that arguments added at this level modify the verb's denotation to create a more specific event kind.

Cross-linguistically, pseudo-incorporated nominals may take various forms. In addition to bare forms, they may contain a plural marker, as in Hindi (Dayal 2015: 50), a case marker, as in Hungarian (Farkas & De Swart 2003), an indefinite article, as in Maori (Chung & Ladusaw 2004), and a definite article, as in English (see 4.2).

Non-theme nominals may also be incorporated (Mithun 1984; Spencer 1995; Muro 2009). In the Chukchi example in (60a) (Spencer 1995: 458, cited from Skorik 1961: 101), for instance, the location-denoting *ralko* 'tent' is incorporated into the verb *waŋerkən* 'sew'. In the Southern Nahuatl example in (60b) (Merlan 1976: 185), the instrument-denoting *kocillo* 'knife' is incorporated into the verb *teteʔki* 'cut'.

(60)   a.   tə-ralko=waŋerkən.   b.   Yaʔ   ki-kocillo-teteʔki   panci.
            1SG-tent=sew   3.SG   3.SG.it-knife-cut   bread
            '1 am sewing in the tent.'   'He cut the bread with the knife.'

Gehrke (2015) also shows that in pseudo-incorporation, a participant in an event names the subkind of the event, and the participant does not have to be the theme. The

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[9] According to Stvan (2009: 319), the construction [V + bare singular count noun] is not very productive, and such nouns also have a deictically definite use in English.

existence of non-theme event KCEs is expected. Event kinds can be classified along various dimensions, thus theoretically any semantic role may be qualified to be an event KCE. This is similar to non-event KCEs, which can classify entities along various dimensions, e.g., *trains* can be classified as *electric trains*, *high-speed trains*, *local trains*, by the KCEs *electric*, *high-speed*, and *local*, respectively.

NCOs in Chinese can also be non-theme event KCEs, and they can denote various event-relevant information, including the financial source of an activity, which lies out of any thematic system recognized so far. Since an NCO does not denote a theme, it does not reduce the degree of unsaturation of a property. I have shown that the predicate that has an NCO is unergative, which is saturated by an external (i.e., agent) argument only. The occurrence of an NCO does not change this saturation pattern. In this sense it is similar to an incorporated nominal. Also, because the verb that takes an NCO is used as an unergative verb, no other object may occur (see (20)). This is different from the Chamorro noun incorporation discussed in Chung & Ladusaw (2004). In this language, a structure like 'I pet-have a cat' is seen (p. 76). In this structure, the incorporated nominal (pet) co-occurs with the object (a cat), because the verb is transitive, rather than unergative.

Obviously, there are differences between NCOs and (pseudo) incorporated nominals. For example, the former may take demonstratives (see (11c)), whereas the latter may not (e.g., Chung & Ladusaw 2004: 87); the former may have possessors (see (12c)), whereas the latter may not (e.g., Chung & Ladusaw 2004: 88); the former may include proper names (see (12a)), whereas the latter may not (e.g., Carlson 2003: 202; but see Gehrke 2015: 930 and the references cited there); the former may have a token-level modifier (12b)), whereas the latter may not (Massam 2001: 168). Incorporated nominals always have a narrow scope with respect to another quantifier (e.g., Bittner 1987, van Geenhoven 1998) and they are claimed to lack discourse references (Mithun 1984; see Dayal 2015: 71 for challenging examples), but, as observed by Barrie & Li (2015b: 172–173), NCOs do not show exclusive narrow scope and do not lack discourse reference. Barrie & Li (2015b: 159) state that "What is unique about non-canonical objects from the perspective of (P)NI is that they are not structurally deficient." ((P)NI = (pseudo)-noun incorperation) Nevertheless, like incorporated nominals, an NCO always denotes a property, and it is, or has been type-shifted to, a type <e,t> element (See 3.3.1). Thus, like the former, an NCO is qualified to undergo Chung & Ladusaw's (2004) Restrict operation with the associated verb.

A KCE may share its form with a non-KCE. For example, *presidential* is a KCE in *presidential limousine* (classificatory adjective), but not in *presidential election* (thematic adjective; see 3.1). Similarly, a pseudo-incorporated nominal may share its form with a canonical object; and an NCO may share its form with a canonical object (e.g., both can be proper names).

Pseudo-incorporated nominals show properties different from both canonical objects and compound components, with respect to aspects such as name-worthiness (e.g., Dayal 2015; Carlson 2006: 44). Similarly, NCOs also show properties different from both canonical objects (also adverbials) and compound components, to be elaborated in 3.3. Moreover, incorporating verbs tend to be phonologically light (Borik & Gehrke 2015: 4), as do the verbs that take NCOs (see footnote 4). Also, classificatory adjectives are productive (3.1), incorporation is productive (Chung & Ladusaw 2004: 82), and so are NCOs (Section 1).

In this paper, I am concerned with whether an element is a KCE, rather than whether it is incorporated. Also, I am not concerned with whether all types of (pseudo) incorporated nominals are event KCEs. Instead, I discuss whether NCOs and certain elements in other constructions are event KCEs.

3.3 Basic KCE properties of NCOs

If x is a KCE, it should exhibit properties directly related to the function of distinguishing different kinds. I consider four such properties. First, it is able to distinguish one subclass from another subclass of a general entity class or event class denoted by a noun or verb. Second, it is able to combine with a verb or noun to denote a constitutionalized entity kind or event kind. Third, it is never a pure functional category such as a pronoun; instead, it must have root features (i.e., lexical semantic features), in order to indicate the constitutionalized contrastive subclass. In other words, a KCE must provide some semantic content to restrict a more general property. Fourth, it does not admit comparison, since it distinguishes one property from another in quality, rather than in quantity or degree.

The subclass requirement has been mentioned by Bosque & Picallo (1996) and McNally & Boleda (2004), among others, in the study of classificatory adjectives, and by Carlson (2003), Dayal (2011: 146), Gehrke (2015), among others, in the study of (pseudo) incorporation. The institutionalization property is covered by the well-recognized name-worthiness property of incorporation. For example, Mithun (1984: 848) observes that while *berry-picking* can be an institutionalized activity, *ladder-climbing* is not. For the latter, "If I did say it, you might suspect that ladder-climbing must refer to an activity recognized in some context – perhaps a new sport, or a test for joining the fire department." Similar constraint is seen in pseudo-incorporation (e.g., Dayal 2011; 2015: 54; see Carlson 2006: 44–47 for a literature review). Furthermore, the no-pronoun property, i.e., the root-feature presence property, has also been recognized in studies on incorporated nominals (e.g., Postal 1969). Finally, the incomparability property has also been recognized in the study of classificatory adjectives in Fábregas (2007: 19) and Rijkhoff (2008), and is implied by the impoverished functional structures of (pseudo) incorporated nominals. Thus, the link of classificatory adjectives to KCEs is clear, and although "a clear, universal set of defining properties of semantic incorporation [= pseudo-incorporation] does not exist" (Barrie & Li 2015b: 159), the link of some types of (pseudo) incorporation to event KCEs is also clear.

In 3.3.1 thorough 3.3.4, I use the four diagnostics to identify NCOs as event KCEs: the subclass requirement, institutionalization, root-feature presence, and incomparability.

3.3.1 The Subclass requirement

A NCO must name a distinctive property of an activity subclass. This is a general property of KCEs. A classifying element designates a subtype of the type that is denoted by a noun or verb (Bosque & Picallo 1996; McNally & Boleda 2004; Taylor 1996: 293; Rijkhoff 2008: 792). For instance, the KCE *syntactic* in *syntactic analysis* distinguishes the analysis from other kinds of analysis, such as stylistic analysis (Bosque & Picallo 1996: 361).

Likewise, an NCO must serve to distinguish a subclass of an activity from other parallel subclasses of the activity. This property of NCOs is mentioned in Sun & Li (2010: 22), but no contrastive examples are given to show the point. In my a-forms in (61) through (63), the NCO signals a type of activity distinguished from other types of activities expressed by the same verb. In contrast, in the associated b-forms, the NCO fails to do so, and the examples are unacceptable. In Chinese, *qie* means 'cut with a knife'. If one cuts things with a pair of scissors, the action is called *jian* 'cut with scissors' (see (9)), but not *qie*. Thus, the meaning of knife is contained in the lexical meaning of the verb *qie*. In (61a), with respect to cutting instruments, a big knife contrasts with a small one; in (61b), however, the *qie*-action with a knife does not contrast with any other types of *qie*. A similar contrast is seen in (62) and (63). The unacceptability of the b-forms does not come from the co-occurrence of the nominal with the verb, since, as seen in the c-forms, the intended meaning can be expressed if the nominal occurs in an adverbial PP, rather than in an object position (The derivational suffix *-zi* is added in (61b) and (61c) to show that the contrast is not phonological: *da-dao*

'big knife' in (61a), and *dao-zi* 'knife' in (61b) and (61c) are all disyllabic, but the acceptability contrast remains.).

(61) a. qie   da   dao   b. *qie   dao(zi)
          cut.with.knife big knife   cut.with.knife knife
          'cut with a big knife'
      c. yong   dao(zi) qie
          with   knife   cut.with.knife
          'cut with a knife'
(62) a. jiao   shangwu   b. *jiao shijian c. yong shijian jiao
          teach   morning   teach time   with time   teach
          'teach in the mornings'   'teach with time'
(63) a. xi   leng   shui   b. *xi   shui   c. yong shui xi
          wash   cold   water   wash   water   with water wash
          'wash with cold water'   'wash with water'

The contrast between (63a) and (63b) is addressed in Lin (2001: 205). He notes that if one finds a contrastive context, (63b) should be acceptable (e.g., some other liquid in contrast to water; see also Barrie & Li 2015a: 181). Finding a contrastive context means finding a licensing condition for an NCO. For (63), cold water contrasts with hot water, in a washing activity. For (61), big knives contrast with small knives, in a cutting activity; and for (62), morning contrasts with afternoon and evening, in a teaching activity. A NCO thus serves to classify events, by naming a contrastive property of events. Therefore, it is an event KCE.

A demonstrative NCO also helps the whole predicate to denote an event subclass. (64) is acceptable, since the contrastive reading is encoded by the demonstrative *zhe* 'this'.

(64) Wo   shui   zhe   zhang chuang.
      1SG   sleep this   CL   bed
      'I sleep on this bed.'

The contrastive reading of the demonstrative NCO is attested by the fact that (64) can be followed by (65a), where *na zhang chuang* 'that bed' contrasts with the NCO in (64), but not by (65b), where the subject is focused by the contrastive focus marker *shi* 'be'. (64) contrasts with another event kind with respect to the location, rather than the agent. Thus, (65b) is not compatible with (64), and thus it cannot follow the latter immediately.

(65) a. Ni shui   na   zhang chuang.   b. Shi ni   shui   na   zhang chuang.
         2SG sleep that   CL   bed   be 2SG sleep that CL   bed
         'You sleep on that bed.'   'It is you who sleeps on that bed.'

The contrastive subclass reading supported by the context is also seen in definite singular kind terms in English. In (66a), *the coke bottle* may refer to a certain type of bottle (Carlson 1977). In (66b), however, *green* is not a classifying modifier (or KCE, in my term), and the definite article does not induce a kind reading for the DP *the green bottle*. In (66c), however, the context supports a kind reading of *the green bottle* (see Dayal 2004; 2015: 57).

(66) a. The coke bottle has a narrow neck.
      b. #The green bottle has a narrow neck.
      c. We manufacture three types of bottles at this plant, green, blue and clear. The
          green bottle is our particular specialty. It has a long neck.

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Similar to definite singular kind terms in English, the subclass reading of a NCO in Chinese, as shown above, can be supported by a demonstrative, which is always discourse-linked, although the relevant class is that of event, e.g., the type of sleeping with respect to location in (64).

Treating a demonstrative NCO as a KCE means treating it as a property. It is classically assumed that definites can be type-shifted to the type of predicates (Partee 1987: 362, the *indent* shift). Von Prince (2012: 33) applies this type shift to definite nominals under contrastive focus in Mandarin Chinese, changing them from <e> to <e,t>. A similar semantic operation is also seen in Schwarz (2014: 223), where a definite nominal in a weak definite reading (see 4.2) undergoes the same type shift, changing into a property. Once a demonstrative NCO has been shifted to a property, it is ready to undergo Chung & Ladusaw's (2004) operation Restrict, functioning as a KCE.

In the c-examples in (61) through (63), I have shown that the subclass requirement is not seen in adverbials. The constraint is not seen in canonical objects either. In (67a), *shui* 'water' is the default theme of the verb *jiao* 'sprinkle liquid, typically water, over something'. Note that the default water meaning is contained in the lexical meaning of the verb *jiao*. If one sprinkles something that is not liquid, say, sand, the action is called *sa*, rather than *jiao*. Similarly, in (67b), the object *hua* 'picture' is the only possible theme of the verb *hua* 'draw or paint pictures'. Thus, canonical objects are not KCEs.

(67)   a.   Li-Qi   gei   hua   jiao-le   shui.
                  Li-Qi   for   flower sprinkle.water-PRF   water
                  'Li-Qi watered the flowers.'
    b.   Li-Qi   hua-le   hua.
                  Li-Qi   draw-PRF   picture
                  'Li-Qi drew the pictures.'

This contrastive subclass requirement is also not seen in compounds. For instance, to fry something needs oil, and thus *you* 'oil' does not signal a distinctive way of frying in (68). In this example, there is no NCO. The verb compound *you-zha* 'oil-fry' is formed by the merger of the two roots, *you* and *zha* directly. The compound verb selects the free-standing theme object, *na tiao yu* 'that fish'.

(68)   Wo   yao   you-zha   na   tiao   yu.
          1SG   want   oil-fry   that   CL   fish
          'I want to fry that fish with oil.'

Chinese has many such root compounds, in which the entity-denoting root does not signal a distinctive event class. In (69a,b), the entity-denoting root precedes the action-denoting one; and in (69c,d), the order is reversed.[10]

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[10] According to Downing (1977: 832), in an English compound noun, no semantic redundancy is allowed (e.g., **head hat*, **book-novel*) (cf. Meyer 1993: 102 and Bauer 1978: 86). Compounds like those in (68) and (69) show that this type of compound allows semantic redundancy. Some such compounds may be used as nouns:

(i)   A-Qi   ba   hua-hua   dang   zhiye.
            A-Qi   BA   draw-picture   regard   career
            'A-Qi treats drawing pictures as his career.'

(69)	a.	huo-shao	b.	yan-kan	c.	hua-hua	d.	jiao-ke
		fire-burn		eye-see		draw-picture		teach-class
		'burn'		'see'		'draw pictures'		'teach'

Unlike the verb in (68) and (69), a verb may be separated from an NCO by an aspect marker and thus the combination is not in the root domain (contra Sun & Li 2010; the ellipsis possibility in examples like (79) in 3.3.3 also falsifies the root merge approach to NCOs).

In this subsection I have shown that NCOs serve to represent a contrastive subclass of certain general event expressed by the verb, in contrast to adverbials, canonical objects, and compound-internal elements.

3.3.2 Institutionalization

A NCO must name a property of a stereotypical or institutionalized subclass of an activity (Barrie & Li 2015a: 190). This is also a general property of KCEs. For example, the classifying modifier *brown* in *brown sugar* specifies a type of sugar (i.e., unrefined or partially refined sugar), but the qualifying modifier *dirty* in *dirty sugar* does not. As for event KCEs, we have seen Mithun's observation that *berry-picking* denotes an institutionalized activity, but *ladder-climbing* does not. NCOs behave like these KCEs in this respect. In other words, a NCO must show that the coming about of the activity is crucially dependent on characteristics contributed by the NCO, such that the activity can be classified as a certain type of event. Thus, a KCE expresses an "essential" property of an event kind, rather than an "accidental" property of an episodic event (cf. Krifka et al. 1995: 13). For instance, neither of the NCO examples in (70) is acceptable, but their intended meaning can be expressed by the adverbial constructions in (71). The grammaticality contrast is noted in Lin (2001: 211, 212, 217). If NCOs are event KCEs, one can see that the ungrammaticality of the NCOs in (70) comes from their inability to encode a defining property of an event class. A library does not contribute any defining characteristics to an eating type, since eating in a library does not exhibit a prototypical eating property different from eating in another accidental place, say, a classroom. The forms in (72) show that even a contrastive focus does not rescue the examples in (70). Thus, contrastive focus alone is not enough for the grammaticality of an NCO. Moreover, the fact that the corresponding adverbial constructions in (71) are fine again indicates that the constraint correlates with the syntactic position of an NCO, i.e., the complement position. This constraint on NCOs supports my analysis: NOCs classify events.

(70)	a.	*chi	(na	ge)	tushuguan		b.	*xiao	xiawu	
		eat	that	CL	library			laugh	afternoon	
(71)	a.	zai	(na	ge)	tushuguan	chi	b.	zai	xiawu	xiao
		at	that	CL	library	eat		at	afternoon	laugh
		'eat in {that/a} library'						'laugh in the afternoon'		
(72)	a.	*Li-Qi	chi	tushuguan,	bushi	chi	shi-tang.		
		Li-Qi	eat	library	not	eat	dining-hall		
	b.	*Li-Qi	xiao	xiawu,	bushi	xiao	shangwu.		
		Li-Qi	laugh	afternoon	not	laugh	morning		

In compounds, we also see a similar institutionalization condition. Eating in a restaurant, in contrast to taking out, is institutionalized; but eating on a hill is not. Thus, (73a) is acceptable, and (73b) is not.

(73)   a.   tang-chi   b.   *shan-chi
            restaurant-eat   hill-eat
            'eat in a restaurant'   intended: 'eat on a hill'

However, no institutionalization condition is seen in canonical object constructions, which may denote any uninstitutionalized eventualities, subject to pragmatic felicity, e.g., *Bill hit John* (cf. sentences like *Bill hit libraries* are pragmatically odd).

Thus, in addition to the subclass requirement, the institutionalization condition is also a necessary condition for the grammaticality of NCO constructions. The condition is not seen in either the constructions in which the same theta roles are expressed by adverbials, or canonical object constructions.

3.3.3 Root-feature presence

A NCO is never an overt pronoun. Pronouns are functional elements that have no lexical semantic or root features. Unlike a qualifying element, a KCE must have root features, to encode a property that is different from another class, and thus it never occurs in the form of an overt pronoun. In (74a), A's utterance tells us that the interrogative pronoun *whose* in B's utterance is not a KCE. In (74b), however, A's utterance tells us that *whose* in B's utterance is intended to be a KCE, but the sentence is not acceptable (Taylor 1996: 291).

(74)   a.   A: I found [that woman$_i$]'s magazines.
               B: Whose$_i$ magazines did you say you had found?
       b.   A: I found those [woman$_i$'s magazines].
               B: *Whose$_i$ magazines did you say you had found?

Rijkhoff (2008: 821) discusses the ambiguity of the phrase *a woman's hat*. It means either 'the hat of an un-identified woman', in which *woman* is not a KCE, or 'a particular kind of hat', in which *woman* is a KCE. One can see that in the former reading, the phrase may correlate with *her hat*; whereas in the latter reading, there is no correlating form that has a pronoun. Incorporated nominals also cannot be pronouns (Postal 1969) or interrogative pronouns (Chung & Ladusaw 2004: 87). Thus, no KCE is in the form of a pronoun.

The same constraint is seen in NCOs, in contrast to canonical objects. In (75), *na liang che* 'that cart' is a canonical object of *tui* 'push'. In B's answer to A's question, the object is the pronoun *ta* 'it', taking the object in A's sentence as its antecedent.

(75)   A: Wo   xiang   tui   na   liang che, ni   ne?
               1SG   want   push   that CL   cart 2SG Q
               'I want to push that cart. How about you?'
       B: Wo   ye   xiang   tui   ta.
               1SG   also   want   push   3SG
               'I also want to push it.'

Different from (75), the NCO in B's sentence in (76a) may not be *ta*, taking the NCO *na ge shafa* 'that sofa' in A's sentence as its antecedent. In (76b), the NCO refers to human beings, giving the same acceptability contrast, (76c) shows the same constraint, and in (76d), the pronoun *shenme* 'what' also fails to play the role of an NCO. Thus, NCOs, as event KCEs, are subject to the same constraint seen in the non-event KCEs in (74b) above.

(76) a. A: Wo shui   na   ge   shafa, ni ne? B: *Wo   ye   shui   <u>ta</u>.
          1SG sleep that CL   sofa 2SG Q   1SG   also sleep   3SG
          'I sleep on that sofa, and how about you?'

      b. A-Qi hai   zai   chi   fumu, *ta-didi   ye   zai   chi <u>tamen</u>.
          A-Qi still PROG   eat   parents 3SG-brother also   PRG   eat 3PL
          Intended: 'A-Qi is still living on his parents, and so is his brother.'

      c. A-Qi xie   na   zhi   mao-bi,   *wo   ye   xie   <u>ta</u>.
          A-Qi write that   CL   brush-pen   1SG   also   write 3SG
          Intended: 'A-Qi writes with that brush-pen, and so do I.'

      d. A-Qi xie   mao-bi,   *Lili xie   <u>shenme</u>?
          A-Qi write brush-pen   Lili   write what
          Intended: 'A-Qi writes with a brush-pen. What does Lili write with?'

Unlike personal pronouns and *shenme* 'what', the forms *shenme shijian* 'what time', *sheme didian* 'what place', and nominals with *na* 'which' may occur as NCOs, since they contain time, location, or other root features. The NCO *shenme shijian* in (77) is fine.[11]

(77) A-Qi jiao   shenme   shijian?
      A-Qi teach what   time
      'In what time does A-Qi teach?'

The above discussion is restricted to the issue of whether a KCE can be in the form of an overt pronoun. This issue is different from the issue of whether such an element can be the antecedent of a pronoun that is not used as a KCE. In fact, an NCO can be picked up by a pronoun in the discourse, as seen in (78). In these examples, the pronouns are in the subject position and thus they are not NCOs.

(78) a. Wo   shui   na   ge   shafa. Ta   hen   xiao.
          1SG   sleep that   CL   sofa   3SG   very   small
          'I sleep on that sofa. It's very small.'

      b. A-Qi hai   zai   chi   fumu. Tamen yijing   tuixiu-le.
          A-Qi still PROG   eat   parents 3SG   already   retired-PRF
          'A-Qi is still living on his parents. They are already retired.'

Note that in (76), the unacceptable examples become acceptable if the pronoun is removed (Hsuan-Hsiang Wang, p.c.). In other words, unlike the pronoun constructions, their corresponding ellipsis constructions are well-formed. (79), where *shui* 'sleep' in B's sentence is not followed by any overt nominal, is acceptable. We thus see that ellipsis is different from proforms (Van Craenenbroeck 2010: 135–141). In Mandarin Chinese, object ellipsis is possible (e.g., Bošković 2017 for a recent account of this possibility). NCOs behave like other types of objects in this respect (see Barrie & Li 2015a: 186 for more such examples).

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[11] A reviewer mentions that in *My neighbor, who is a hairdresser, cuts me as well*, the pronoun *me* should be a canonical object, involving metonymy. This is different from benefactive NCOs. In (i) (= (9)), if the NCO is replaced with a pronoun, e.g., *tamen* 'they', the sentence becomes unacceptable:

(i)   Li-Qi   gei   tongxue   jian-fa,   ta   zhi   jian   {nan-sheng/*tamen}.
      Li-Qi   for   classmate   cut-hair   3SG   only   cut   male-student/3PL
      'Li-Qi   cuts hair for his classmates. He does so only for male-students.'

(79)   A: Wo   shui   na   ge   shafa, ni   ne?
              1SG   sleep that CL   sofa   2SG   Q
              'I sleep on that sofa. How about you?'
     B: Wo   ye   shui.
              1SG   also   sleep
              'I sleep like that, too.'

Like canonical objects and unlike NCOs, nominals in adverbials may be pronouns. In (80a), the object of *yong* 'with' in the PP adverbial is the pronoun *ta* 'it'; and in (80b), the object of *yong* in the PP adverbial is the pronoun *shenme* 'what'.

(80)   a.   Na   zhi   mao-bi,   A-Qi yong ta   xie   shi.
             that   CL   brush-pen   A-Qi with 3SG   write poem
             'That brush-pen, A-Qi writes poems with it.'
     b.   A-Qi yong mao-bi   xie,   Lili   yong   shenme   xie?
             A-Qi with   brush-pen   write Lili   with   what   write
             'A-Qi writes with a brush-pen. What does Lili write with?'

As for compound components, *himself* contains the pronoun *him* and *whatever* contains the pronoun *what*. They are thus different from KCEs.

Having discussed the root feature constraint on KCEs, I want to emphasize that unlike pronouns, proper names of famous places and people can be event KCEs, as seen in the NCOs in (81) (Simmons initiated the manufacturing of woven wire mattresses and *Wangfujing* refers to a famous commercial street in Beijing; also see *Dongjing* in (12a)):

(81)   a.   shui   Ximengsi   b.   guang Wangfujing
             sleep   Simmons   stroll   Wangfujing.street
             'sleep on a Simmons mattress'   'stroll on the Wangfujing street'

Proper name NCOs denote properties, rather than individuals. For example, (81a) expresses a way of sleeping that contrasts with other ways of sleeping, e.g., in a sleepingbag (see (3b)). Proper names in this property use are <e,t>, qualified to undergo Chung & Ladusaw's (2004) predicate Restrict with the associated verbs. Recall that demonstrative NCOs have been type-shifted to <e,t> (3.2), and so have proper name NCOs.

3.3.4 Incomparability

A NCO rejects comparison. Relational adjectives, which cover classificatory adjectives and thus KCEs, are not gradable (Bally 1944: 96–97, cited in McNally & Boleda 2004: 181; Beard 1991: 199; Fábregas 2007: 19–20), and non-gradable expressions do not admit comparison. In (82a), *famous* is a qualifying modifier, rather than a KCE, and it admits comparison; in (82b), however, *corporate* is a KCE, and it rejects comparison (Quirk et al. 1985: 1339; Rijkhoff 2008: 793). (83) shows the same contrast (Rijkhoff 2008: 794).

(82)   a.   a more famous lawyer   b.   *a more corporate lawyer
(83)   a.   a more careful examination   b.   *a more medical examination

A canonical object allows comparison, as seen in (84).

(84) Lili   zai   ca   zhuozi,ta   hai   hui   ca   gengduo   zhuozi.
      Lili   PRG   wipe table 3SG   still will wipe more   table
      'Li-Qi is wiping a table, and she will wipe more tables.'

However, an NCO does not admit comparison, as seen in (85). (85a) never means 'Lili writes with a brush pen, and she will write with more brush pens.' The only marginally possible reading of this example is 'Lili writes with a brush pen, and she will do so more times.' Similarly, (85b) never means 'Lili sleeps on a sofa, and she will sleep on more sofas.' The only marginally possible reading of the example is 'Lili sleeps on a sofa, and she will do so more times.' In both cases, the marginally possible reading targets the combination of the verb and the NOC, rather than the NCO alone, and it means more instantiations of the event type rather than a higher degree of the property denoted by the NCO itself.

(85) a.   *Lili   xie   mao-bi,   ta   hai   hui   xie   gengduo mao-bi.
           Lili   write brush-pen   3SG   still will write more   brush-pen
      b.   *Lili   shui   shafa, ta   hai   hui   shui   gengduo   shafa.
           Lili   sleep sofa 3SG   still hui   sleep more   sofa

Like a classifying modifier in the nominal domain, an NCO identifies the type of x, rather than the degree of any property x. Different types of activities differ in their categorical properties, rather than in the degrees of any property. This constraint with respect to comparison supports our event KCE analysis of NCOs.

Like canonical objects and unlike NCOs, nominals in adverbials also admit comparison. In the underlined PP in (86), the object of the preposition *yong* 'with' is *gengduo mao-bi* 'more brush-pens', a comparative form.

(86) Lili   hui   <u>yong   gengduo   mao-bi</u>   xie   zi.
      Lili   will   with   more   brush-pen   write character
      'Lili will write with more brush-pens.'

Compound components obviously cannot be targeted by comparison. In (87), for example, *gengduo* 'more' targets the whole compound *shu-bao* 'school bag; lit. book-bag', rather than its component *shu* 'book'.

(87) gengduo   shu-bao
      more   book-bag
      'more school bags'   Not: 'bag(s) with more books'

The reading restriction on (87) may be explained by a rule such as lexical integrity. But such a rule does not apply to NCOs, which are not inside compounds. Instead, the incomparability constraint on NCOs is expected if they are KCEs.

3.3.5 Summary

In this subsection, I have shown that NCOs are subject to the same four constraints seen on KCEs: the subclass requirement, institutionalization, root-feature presence, and incomparability. In contrast, canonical objects do not show any of these constraints, and nominals in the adverbials that express the semantic roles parallel to those of NCOs also do not show these constraints. Compound components, unlike NCOs, do not show the subclass requirement and root-feature presence constraints, although they show the other two

constraints. Thus, NCOs are different from both canonical objects/adverbials and compound components.

NCOs are base-generated in the complement of proc, whereas canonical objects and adverbials are not (2.6). Compounds are formed in a root domain, before getting categorized by a functional head. There is thus a correlation between the semantic constraints and a specific syntactic position in the language.

3.4 The relations between KCEs and kind expressions

If x is a KCE, it denotes a property, but it does not have to denote a kind. It simply contributes its meaning to a larger constituent, making the latter denote an individual kind or event kind. A kind expression may occur without any KCE. In (88a), the subject *lions* is a kind-denoting expression, without any KCE. In (88b), *electric* is a KCE, and *electric train* is a kind-denoting nominal. But when this nominal is combined with the demonstrative *that* in this example, which denotes an episodic event, the resultant nominal instantiates or realizes the individual kind denoted by the contained nominal *electric train*.

(88)   a.   Lions eat raw meat.   b.   That electric train has left.

Similarly, an event kind-denoting expression does not have to contain a KCE. In (89), *dance* denotes an event kind, without any KCE.

(89)   It is easy to dance.

Since NCOs are event KCEs, when they occur, an event kind is expressed by the predicate in the thematic domain by default. This is supported by the fact that expressions such as *jingchang* 'often' and *yici you yici* 'again and again' may always occur with a predicate that has an NCO. However, if an episodic event expression such as a progressive aspect marker (Krifka et al. 1995: 12) or an event-relevant discourse deictic expression such as *zuotian* 'yesterday' is integrated, the resultant construction expresses an episodic event, an instantiation or realization of the default event kind, as seen in (90).

(90)   A-Qi   zuotian   shui-le   na   zhang shafa.
       A-Qi   yesterday   sleep-PRF   that   CL   sofa
       'A-Qi slept on that sofa yesterday.'

An event kind expression, by definition, does not encode an episodic event, and thus does not contain any episodic event expression. Syntactically, *zuotian* is adjoined to a structure that is higher than the thematic domain (Cinque 1999), and thus it is out of the event kind-domain, which is low (Carlson 2003). The NCO *na zhang shafa* 'that CL sofa' in (90) does not denote a kind. However, it is still within the event kind domain. Since we are dealing with event kinds, rather than individual kinds, whether part of an event kind expression denotes an individual kind is irrelevant. In other words, an event kind expression does not require its components to denote individual kinds. In the event kind expression *dizhi Zhongguo* 'boycott China', the canonical object *Zhongguo* 'China' is not a kind nominal, for instance. Thus, when an object is part of an event kind expression, it is property-denoting, but does not need to denote a kind, regardless whether it is a canonical object or an NCO.

Regarding pseudo-incorporated nominals, Dayal (2015: 58) states that "a consensus has emerged in the literature that pseudo-incorporated nominals denote properties, not kinds." If such nominals are event KCEs, whether they denote kinds does not affect their KCE status.

One difference between a KCE and a kind-denoting expression is that although the former may not be in a pro-form (3.3.3), the latter may. In (91a) (Carlson 1977; Krifka et al. 1995: 105, 115; also their German examples on p. 88), the generic pronoun *them* has an anaphoric link to *raccoons*; and similarly in (91b), *zheyang* 'so' has an anaphoric link to the event kind *xi leng shui* 'wash with cold water' in the previous sentence. In (91c), *taman* 'they' takes the kind-denoting bare noun *daxiang* 'elephant' as its antecedent. In all three examples, the pronouns occur in a kind expression position, rather than that of an NCO.

(91)   a.   Raccoons$_i^{existential}$ have stolen my mother's sweet corn every year, so she really hates them$_i^{generic}$ a lot.

       b.   A-Qi   xi   leng   shui. Zheyang   hen   hao   a.

              A-Qi   wash cold   water so   very   good   PRT

              'A-Qi washes with cold water. This way of washing is very good.'

       c.   Daxiang   shi   burudongwu, tamen you   hen   chang de yachi.

              elephant   be   mammal   3PL   have very   long   DE tooth

              'Elephants are mammals; they have very long teeth.'

In this section, I have explained why a nominal is allowed to follow the verb in an unergative predicate: the nominal is an event KCE. Thus my answer to Qb in (18) is that semantically an NCO behaves systematically different from a canonical object and from an adverbial encoding the same theta role. This is because the semantic function of an NCO is to classify events.

4. Some other possible event KCEs

The four properties of NCOs are also seen in other nominals. In this section, I show that certain type cognate objects and weak definites in English have these properties and thus they are also event KCEs.

4.1 Cognate objects

Event KCEs can also be found in cognate objects. Hale & Keyser (2002: 92) state that an unergative verb and its object may establish a "special 'classificatory' selection relation" between certain semantic features of the head and an argument, as seen in (92a) and (92b).[12]

(92)   a.   She slept the sleep of the just.   b.   He danced a jig.

We have introduced (92a) (= (45)) in 2.6. In (92b), the verb takes an object whose denotation bears a subset to superset relation to the nominal concept encoded in the verb (the object is a hyponymous object). The differences between the two types of cognate objects in (92) are discussed in the literature (Massam 1990: 164; Hale & Keyser 2002: 71; Sailer 2010; cf. Ramchand 2008: 48). Sailer's (2010) detailed study also shows that there are several semantic types of cognate objects in English. Two of his claims are as follows. First, in examples like (92b), the object is a canonical direct object. Indeed, such a cognate object may occur in an accomplishment predicate, and it may give rise to telicity, as seen in (93a) (e.g.,

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[12] Hale & Keyser (2002: 92; 2005: 18) seem to be concerned with the specification of the interpretation of a noun by an unergative, not the specification of the event by the noun, in a construction such as *John danced a jig*. The latter specification is my concern. They (2002: 92; also see Ramchand 2008: 98) state that in *They are dancing a Sligo jig*, "the verb itself encourages us to understand *jig* in the sense 'kind of dance' – by comparison with, say, *whistle a jig*, where the verb instead suggest 'kind of tune'." Although the two concerns are not contradictory to each other, (92a) is a better example than (92b) to show the event KCE status of a cognate object, as shown in the text.

Rosen 1999, Borer 2005: 47, and the reference therein). This is different from the unergative constructions such as (93b).

(93)　a.　　　Terry sang a ballad {?for an hour/in an hour}.
　　　b.　　　Terry sang {for an hour/*in an hour}.

　　　Second, the cognate object in examples like (92a) denotes generic event, i.e., event kind. In my standpoint, the PP *of the just* in *the sleep of the just* in (92a) is an event KCE, specifying the class of sleeping. This is similar to the classifying PP *of worship* in the nominal *a house of worship*, discussed in Rijkhoff (2008: 793). Similarly, in (94) (Sailer 2010: 200), the PP *of a slave* is an event KCE, specifying the class of life.

(94)　For two long years I lived the life of a slave.
　　　= For two years I lived the kind/type of life of a slave.

　　　Thus, the type of cognate object represented by (92a) satisfies the subclass diagnosis of KCEs, since it requires a taxonomic specification of the event kind denoted by the verb, e.g., sleep in (92a). This type of cognate object also passes the second diagnosis of KCEs, institutionalization. In (94), *the life of a slave* is institutionalized. However, in order to understand (95), one needs to know the characteristics of the life of a semanticist, which are not clear to many people.

(95)　#For two long years I lived the life of semanticist.

　　　The contrast between the two types of cognate objects represented in (92a) and (92b) is also shown by another contrast: the former may not be a pronoun, as seen in (96), whereas the latter may, as seen in (97) (Hale & Keyser 2002: 71). The cognate objects in (97) can be canonical objects, similar to the one in (98). They all can be pronouns, unlike KCEs.

(96)　a.　　　*John slept the sleep of the just and Bill slept it too.
　　　b.　　　*John slept the sleep of the just and Bill slept the sleep of it too.
(97)　a.　　　John danced the Tango and Bill danced it too.
　　　b.　　　Robin sang the songs of the 60s and Bill sang them too.
(98)　Robin ate pizza and Bill ate it too.

　　　The type of cognate objects represented by (92a) or (94) is also subject to the constraint of incomparability, as seen in (99).

(99)　a.　　　*For two long years I lived more of the life of a slave than my wife.
　　　b.　　　*For two long years I lived the life of more slaves than my wife.

　　　Examples like (92a) and (94) show that in an event-denoting nominal (e.g., *the life of a slave*), there is a KCE (e.g., *of a slave*). Moreover, the whole cognate object is also a KCE, just like an NCO in Mandarin Chinese. Thus, an event KCE is contained in another event KCE in this case, as illustrated in (100).

(100)　I lived [^{KCE} the life [^{KCE} of a slave]]

　　　Therefore, neither of the KCEs may be a pronoun, as seen in (96a) and (96b), and neither of them admits comparison, as seen in (99a) and (99b).

4.2 Weak definite objects

Weak definites in English may also be event KCEs. Carlson (2006: 42) observes that in one reading of (101), it does not matter which hospital was involved, and whether more than one hospital was involved. A definite DP in this reading is a weak definite DP.

(101)   The accident victims were rushed to <u>the hospital</u>.

Carlson & Sussman (2005), Carlson (2006), and Dayal (2015: 72–80) all analyze weak definites as semantically incorporated nominals. Schwarz (2014: 223) claims that the apparent definite nominal in the weak definite reading has been type-shifted into a property, qualifying it to be incorporated. Schwarz (2014: 214) further claims that weak definites "occur in verb phrases which are interpreted as kinds of events". This means that although weak definites are not kind terms themselves (Carlson & Sussman 2005, Carlson 2006, and Dayal 2015: 74), they function as event KCEs. I now use the four diagnostics of KCEs to identify weak definites as KCEs.

First, weak definites are subject to the subclass requirement. In (102a), the weak definite *the radio* distinguishes the specific kind of listening from other kinds of listening. In (102b), however, *the sound* fails to do so, and thus it does not have a weak definite reading. The only possible reading of (102b) is that Martha and Alice listened to the same sound (James Myers, p.c.).

(102)   a.   Martha listened to the radio and Alice did too.   (Aguilar-Guevara 2014: 18)
        b.   #Martha listened to the sound and Alice did too.

Second, weak definites are subject to the institutionalization constraint (Carlson & Sussman 2005: 73; Aguilar-Guevara and Zwarts 2010; Schwarz 2014; Aguilar-Guevara 2014; Dayal 2015: 74–77). The following minimal pairs are given in Aguilar-Guevara (2014: 18; also see Carlson & Sussman 2005: 76 for similar examples). Listening to a radio is obviously more stereotypical than listening to a walkie-talkie, and therefore, (103a) allows a weak definite reading, but (103b) does not. Similarly, to be in a hospital typically means to be sick, but to be in a hotel does not seem to have any stereotypical meaning. Thus, (104a) allows a weak definite reading, but (104b) does not.

(103)   a.   Martha listened to the radio and Alice did too.
        b.   Martha listened to #<u>the walkie-talkie</u> and Alice did too.
(104)   a.   Martha is in the hospital and Alice is too.
        b.   Martha is in #<u>the hotel</u> and Alice is too.

Third, weak definites also pass the root-feature diagnostic, since they are in the form of a definite article and an NP, and are thus not pronouns. Finally, weak definites also pass the incomparability diagnostic: compared to (105a), (105b) does not have a weak definite reading (James Myers, p.c.). The referent of *the stores* in (105b) must be clear to both the speaker and the hearer.

(105)   a.   Mary went to the store.
        b.   #Mary went to more of the stores than Bill.

Importantly, like other types of nominal event KCEs, weak definites occur only in complement positions (Dayal 2015: 79). The subject *the radio* in (106) does not have a weak definite reading (Aguilar-Guevara 2014: 22; see her discussion of exceptions).

(106)   #The radio didn't work this morning.

I conclude that weak definites are event KCEs.

4.3 The complement position of various nominal event KCEs

A KCE expresses a defining property of an entity kind or event kind. Recognizing event KCEs helps us to see the parallelism between individual-denoting expressions and event-denoting expressions. We have kind expressions not only for individuals (Carlson 1977), but also for events (Carlson 2003; Landman & Morzycki 2003, Sailer 2010; Gehrke 2015; Gehrke & McNally 2015, among others); we also have kind-distinguishers (i.e., KCEs) not only for individual kinds, but also for event kinds. KCEs are universal (see Rijkhoff 2008).

For both event and non-event KCEs, cross-categorially, they are base-generated as the closest element to the associated lexical head element, a noun or verb (or preposition). In Zamparelli (1995), classifying adjectives (i.e., adjectival KCEs) are closer to the noun than other types of modifiers in his layered DP structure. As pointed out by Bosque & Picallo (1996: 368), for Spanish, if both a classificatory adjective and a thematic adjective co-occur, the former is strictly adjacent to the noun and is followed by the latter. This is shown in (107) (their (43)). In (107a), *religiosa* is a classificatory adjective, i.e., a KCE, and *fratricida* is a thematic adjective; the former must be closer to the noun than the latter. The reversed order in (107b) is not acceptable (see Fábregas 2007 and Marchis 2010: 208f, among others, for recent syntactic analyses of classificatory adjectives in Romance languages).

(107)   a.   una guerra religiosa fratricida   b.   *una guerra fratricida religiosa
                a   war   religious fratricidal   a   war   fratricidal religious
                'a fratricidal religious war'

Cinque (2010: 29) treats classificatory adjectives as what he calls direct modifiers, in contrast to indirect modifiers; and they are shown to be the closest adjectives to the modified nouns (p. 41). Parallel contrasts in Chinese are discussed in Zhang (2015b) and Liu (2016).

As for nominal event KCEs, we see a similar hierarchy. In Chung & Ladusaw's (2004) research on incorporation in Chamorro, the incorporated nominal, which is a KCE, is closer to the verb than the object of the verb. In (108) (their (29) on p. 89), the incorporated nominal is *ga'* 'pet', and the object is *un ga'lagu* 'a dog' (also see Baker 2014 for a recent syntactic analysis of pseudo noun incorporation).

(108)   Gäi-[ga']   un   ga'lagu   ennao na   patgun.
        Agr.have-pet a   dog   that   L   child
        'That child has a pet dog.'

The closest position to a verb is its complement. NCOs, pseudo-incorporated nominals, cognate objects, and weak definites are not in a subject or adverbial position. Instead, they are all in a verb's complement position in their base-positions, closer to the verb than other elements (arguments or modifiers) of a clause. A nominal event KCE must be merged with the related verb first, to restrict the latter semantically, before the predicate headed by the latter to get saturated (see Carlson 2003: 198). Therefore, KCEs are different from other types of elements both semantically and syntactically.

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Summarizing this section, we have identified two other types of nominal event KCEs: cognate objects and weak definites. They both are subject to the subclass requirement, institutionalization, root-feature presence, and incomparability, and both occur in complement positions. It is thus not surprising that NCOs, as event KCEs, are found in the complement position of verbs, and their thematically corresponding adverbials do not exhibit the properties of KCEs. We thus see that Qa (about the position of NCOs) and Qb (about the semantic function of NCOs) in (18) are related to each other.

5. The ungrammaticality of classifier-initial NCOs

A classifier-initial nominal is singular and indefinite in Mandarin (Li & Liu 1978). It is not a possible form for an NCO. In (109a), the canonical object is the classifier-initial *ge pingguo* 'an apple'. It has a narrow scope, with respect to *meitian* 'everyday', and thus it is nonspecific. But (109b), when the NCO is the classifier-initial *jia canting* 'a restaurant', is not acceptable. The intended meaning has to be expressed as in (109c), where the NCO is a bare noun.

(109) a.   Lili   xiang   meitian   chi   <u>ge   pingguo</u>.
           Lili   want   everyday   eat   CL   apple
           'Lili wants to eat an apple everyday.'   everyday > an apple
       b.   *Lili   xiang   meitian   chi   <u>jia   canting</u>.
            Lili   want   everyday   eat   CL   restaurant
       c.   Lili   xiang   meitian   chi   <u>canting</u>.
           Lili   want   everyday   eat   restaurant
           'Lili wants to eat in a restaurant everyday.'   everyday > a restaurant

Why may a NCO not start with a classifier, compared to a canonical object? This is the second part of our Qc in (18) (the first part, about pronouns, was answered in 3.3.3). Nonspecific nominals denote properties, and as we discussed above, NCOs, as KCEs, also denote properties. Thus, the fact that a nonspecific classifier-initial NCO is not acceptable seems puzzling.

Unlike other kinds of nominals, a classifier-initial nominal always needs to be licensed by a lexical head element that surfaces to its immediate left, being the argument of the element. In (109a), the indefinite *ge pingguo* 'an apple' is licensed by *chi* 'eat', being the internal argument of the verb. In (110a), the classifier-initial *ben shu* 'a book' does not have this relation with the functional element *de*, and thus it cannot follow the latter immediately. The intended meaning is expressed by (110b), where the post-*de* nominal starts with *yi* 'one, a', instead of a classifier.

(110) a.   *Lili   mai   de   ben   shu
            Lili   buy   DE   CL   book
       b.   Lili   mai   de   yi   ben   shu
           Lili   buy   DE   one   CL   book
           'a book bought by Lili'
       c.   Lili   mai   de   shu
           Lili   buy   DE   book
           '{a book/books} bought by Lili'

Bare nouns do not have this constraint, as seen in (110c). Also consider (111) and (112). The bare noun *mayi* 'ant' in its nonspecific reading may either follow or precede its

selecting verb, as seen in (111a) and (111b), respectively. But the classifier-initial *zhi mayi* 'an ant' may follow its selecting verb, as in (112a), but not precede it, as seen in (112b).

(111) a. Wuzi-li   chuxian-le   <u>mayi</u>.
           room-in   appear-PRF   ant
           'Ants appeared in the room.'
       b. <u>Mayi</u> chuxian-le.
           ant   appear-PRF
           'Ants appeared.'
(112) a. Wuzi-li   chuxian-le   <u>zhi   mayi</u>.
           room-in   appear-PRF   CL   ant
           'An ant appeared in the room.'
       b. *<u>Zhi   mayi</u> chuxian-le.
            CL   ant   appear-PRF

The licensing of a nonspecific nominal by its selecting verb in the predicate, as seen in (109a) and (112a), has been assumed to be the effect of Existential Closure (e.g., Cheng 1991 [1997: 109]). Existential Closure is a semantic operation that saturates the predicate, removing semantic incompleteness of the predicate. It binds an argument only. Since NCOs are not arguments, they cannot be bound by Existential Closure. Thus, for a nonspecific NCO, the licensing strategy seen in (109a) and (112a) is not available. The classifier-initial nominal is not left-adjacent to a selecting lexical element in (110a) and (112b), and the same is true of the one in (109b). In these cases, the indefinite nominal is not licensed.[13]

One can see that our answers to Qa (i.e., NCOs are complements of unergatives and thus not selected) and Qb (i.e., as KCEs, NCOs are property-denoting), together with the dependency of nonspecific classifier-initial nominals on Existential Closure, explain the form constraint on NCOs, answering the second part of Qc in (18).

6. Conclusions

I have argued that a NCO is the complement of the verb of an unergative predicate, and it plays the role of event KCE. I have answered three questions that previous analyses did not answer, regarding the position of NCOs, their semantic function, and the constraints on their form.

(113) Qa: Why does a non-theme nominal show up in an apparent direct object position?
       Ans.: It shows up in the complement position of the verb of an unergative predicate.

       Qb: Semantically, does an NCO behave the same as a canonical object and an
              adverbial that encodes the same theta role? If not, why not?
       Ans.: It behaves systematically differently from a canonical object and an adverbial,
              with respect to four constraints: the subclass requirement, institutionalization,
              root-feature presence, and incomparability. This is because an NCO is an
              event KCE. Unlike a canonical object, it is a nonsaturating element, and thus
              its semantic role is to restrict a predicate, in the sense of Chung & Ladusaw
              (2004).

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[13] For a nominal that starts with *yi* 'a, one' with an exclusively non-specific reading, the same constraint is observed, as seen in (ia) (cf. (112b)). Such a nominal is never a NCO, either, as seen in (ib) (cf. (109b)). Since *yi* may have other readings, it is easier to use classifier-initial nominals to show the point.
i. a. *Yi   zhi   mayi chuxian-le.   b. *Lili jingchang xie   yi   zhi   mao-bi.
       one   CL   ant appear-PRF   Lili often   write one   CL   brush-pen

Qc: Why can an NCO not take the form of a pronoun or the form that starts with a classifier?

Ans.: A NCO is not allowed to be a pronoun because a KCE is not allowed to be a pronoun. An existential classifier-initial NP needs the licensing of Existential Closure, which applies only to a theme argument in a predicate and necessarily saturates the predicate; since an NCO does not encode theme, not saturating any predicate, it cannot be such a nominal.

This paper has systematically investigated non-theme event KCEs, showing that they are different from canonical objects, adverbials, and compound components.

The paper has recognized the four constraints mentioned above as general constraints on KCEs, although each of them has been noted for certain constructions separately. It has clarified that KCEs do not have to denote kinds, and that they may be proper names and demonstrative nominals. The paper has also shown that nominal event KCEs must be in complement positions. The paper has further identified weak definites and certain cognate objects as event KCEs.

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